INSTALLATION, OPERATION
and
MAINTENANCE
MANUAL

for

LOW PROFILE SEPARATOR

MODELS: LX18, LX24, LX30, LX40, LX48, LX60 and LX72

We Put Technology In Motion™

NOTE:

If you need assistance in any form regarding the operation of your process equipment, contact your SWECO Representative or the SWECO home office immediately. Constant "Service-After-The-Sale" is the keynote of SWECO.

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Information contained within this publication is subject to change without notice.

FOREWORD
General Safety Practices

There are several forewarnings indicated throughout this manual that may stress a possible unsafe condition or important information regarding the use of this equipment. Read the definitions of DANGER, WARNING, CAUTION and NOTE. Read and understand all instructions before installing, operating, or servicing this machine. Failure to do so could result in severe personal injury or property damage. **Retain this manual for future reference.**

DANGER - Immediate hazards that WILL result in severe personal injury or death.

WARNING - Hazards or unsafe practices that COULD result in severe personal injury or death.

CAUTION - Hazards or unsafe practices that COULD result in minor personal injury or product or property damage.

NOTE - Important information concerning the use of the equipment.

WARNINGS:

1. Unit produces severe vibration and contains rotating parts. Accidental start-up of unit could result in death or serious injury. Turn off and lock-out system power before servicing.
2. When installing or maintaining this separator, shut off and lock out power before removing guards (cover, etc.). Follow all local and national electrical codes. Failure to comply could result in severe personal injury or property damage.
3. Electrocution can occur if water contacts live electrical components. Shut off and lock out power before maintenance or repairs. Failure to comply could result in severe personal injury or property damage.
4. Keep all guards in place at all times to avoid exposure to parts rotating at high speeds. While the power is on, severe injury can occur if hands or feet reach inside the unit.
5. To prevent possible shock, ground machine per local and national electrical codes. A qualified electrician must perform all wiring. Failure to comply could result in severe personal injury or property damage.
6. When maintaining or adjusting eccentric weights, use extreme caution to correctly attach all keys, retainers, and fasteners. Failure to lock weights securely in place can result in parts being thrown from machine at high speed endangering personnel.
7. Do not start and stop your separator more than four times an hour on a continuous basis. Frequent starting can cause heat build-up which will damage the motion generator. Contact your SWECO Representative if your process requires frequent starting and stopping.
8. Higher amplitudes occur during shut down and start-up of unit. Stand clear of unit and keep accessory equipment away during these cycles.
9. Never operate with missing or worn parts. Failure to comply could result in personal injury or property damage.
10. Read and understand this manual in its entirety before installing or operating the machine. Installation, adjustment, repair, and maintenance must be performed by qualified personnel. Do not perform any service other than those contained in this manual unless you are qualified. Failure to follow safe installation and servicing guidelines could result in severe personal injury or property damage.
11. Units are to be lifted using the two (2) lifting brackets with shipping brackets intact. When lifting, be sure lifting device can handle the load. Prior to lifting, make sure area is clear of obstacles or personnel and sufficient room is provided to accommodate parts. Make certain load is balanced and stable. Always use trained personnel for lifting and loading operations. Failure to comply could result in severe personal injury or property damage.
12. If processing hazardous materials, check material safety data sheets (MSDS's) for hazard information and follow necessary procedures prior to servicing equipment.

FOREWORD
General Safety Practices
(continued)

CAUTIONS:

1. This equipment must be installed, operated, and maintained by qualified personnel to avoid personal injury or damage to property.
2. Use caution when loosening clamp bands due to the bands being tensioned. Loosen bolts prior to unlatching clamp band. Failure to comply can cause risk of hand injury.
3. Shipping and lifting brackets must be removed before vibrator hook-up and start-up. Failure to comply can cause damage to unit, vibrators, and possible personal injury.
4. Securely tighten all nuts and bolts on the vibrating unit according to the instructions in this manual. Pay special attention to the motor mounting bolts. If a vibrator (electric vibrating motor) vibrates loose, damage to the power cord and to the structure may result as well as risk of personal injury.
5. Inspect motor weight parts during maintenance. If any structural weakness appears, replace the part.
6. Do not exceed maximum amplitudes shown or damage to equipment can occur.
7. Mains voltage to be same as indicated on vibrator nameplate. Failure to check proper voltage can damage vibrator.
8. As screen life is dependent on a wide variety of issues like mesh size, flow rate, material properties, vibration level, maintenance, etc., we cannot guarantee how long a screen will last. Screens should be frequently inspected to check for wear or damage. Note that if screens continue to vibrate for hours after initial failure (tearing), wire segments may break loose from the mesh and fall into the screened product.
9. If noise level exceeds 70dB in your environment, hearing protection is required to avoid impairment or loss of hearing.
10. Provide proper guarding for personnel against harm from dust, fumes, or hazardous chemicals. Failure to comply could result in personal injury.
11. All persons operating the equipment and working in general area should wear standard safety equipment (i.e. safety glasses, ear protection, steel-toed boots) to prevent risk of personal injury. All safety items must conform to local safety requirements.
12. Avoid pinch points. Failure to comply could result in personal injury.
13. Vibrators cannot be mixed on the same unit due to vibrators having different forces. Mixing of brands can cause damage to vibrators.

NOTES:

1. WARNING and CAUTION labels have been placed on this separator where needed. If these labels become illegible, consult your SWECO Representative for replacement of labels.
2. The foundation must be stiff enough to support twice the separator weight, thereby, minimizing transmitted vibration.
3. Any repairs performed by the customer will void warranty. Any motor that has been opened beyond the removal of the weight covers will not be replaced under warranty.
4. Use only authentic SWECO aftermarket parts to assure proper component fit and function.

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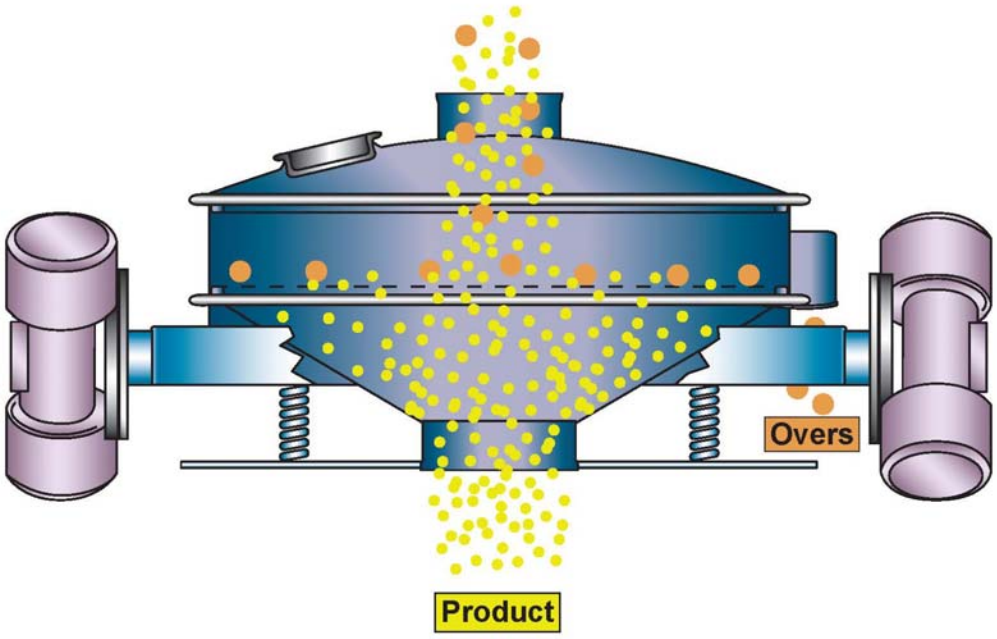
CHAPTER 1
Introduction

INTRODUCTION

This manual pertains to the SWECO Low Profile Separator, model LX, and diameter sizes 18", 24", 30", 40", 48", 60" and 72".

The SWECO Low Profile Separator allows for high capacity wet or dry scalping in a compact, low headroom design. Dual vibrators (electric vibrator motors) are mounted on opposite sides to allow unrestricted flow of material and create a 3D motion that allows oversize material full discharge, keeping the screen clear for maximum product flow.



MACHINE OVERVIEW

Figure 1-1 shows the machine overview of a SWECO Low Profile separator, model LX, indicating some of the main components and optional equipment. Before installing, familiarize yourself with its basic parts.

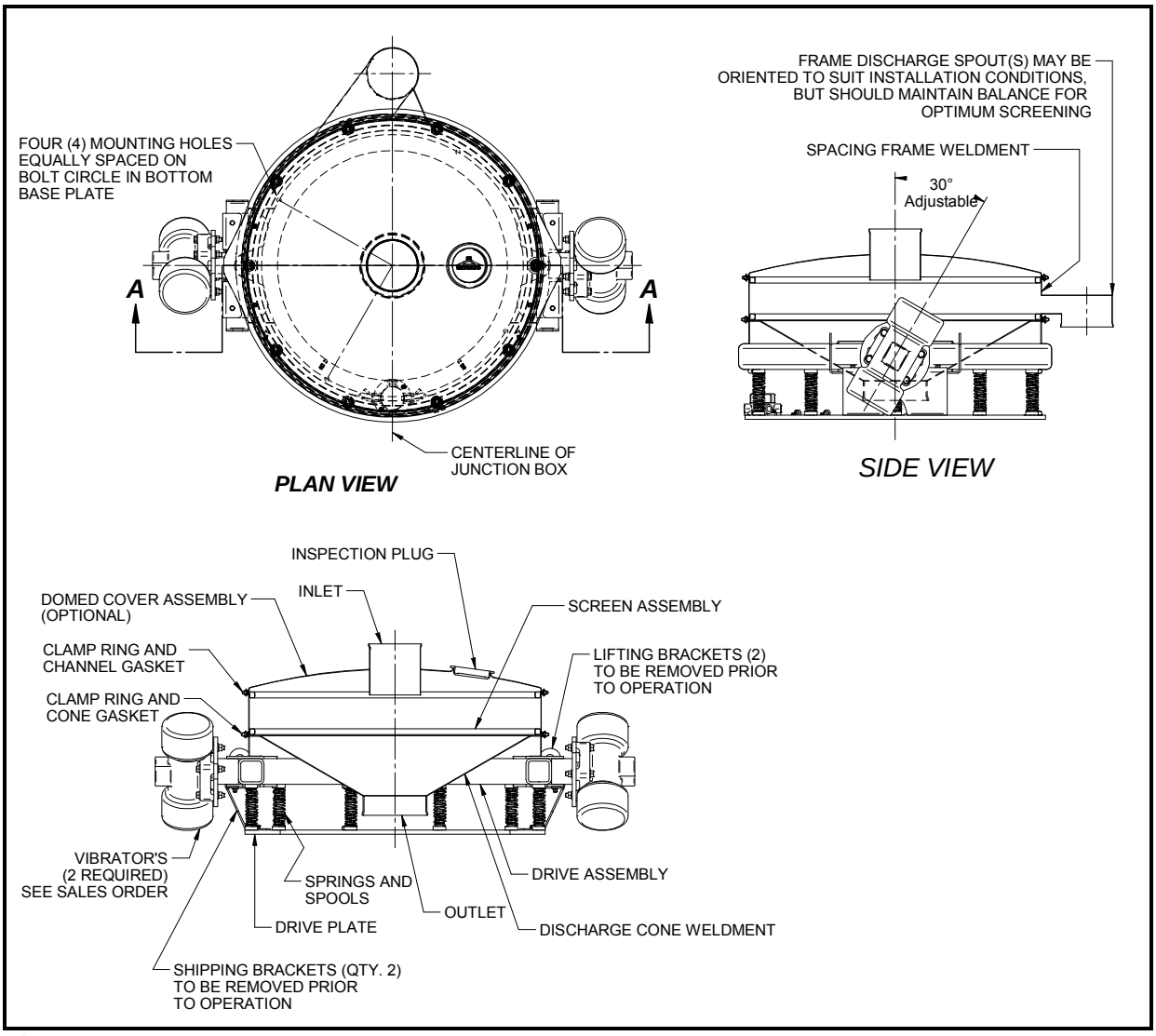


Figure 1-1
Elevation and Plan View

NOTE: Refer to sales drawing (if applicable) for unit illustrations, dimensions and notes specific to your order. In addition, parts listed on the sales drawing are specific to your unit and will take precedence over the parts listed in Chapter 4 of this manual.

CHAPTER 2
Installation and Operation

NOTIFICATION OF DAMAGE

Check packing and machine for damage when the machine is delivered. Notify the carrier and SWECO immediately of any damage to the machine. A relevant certificate from the driver must be supplied. Inform all parties of any damage that becomes apparent when the packing material is removed. Keep any damaged goods subject to examination.

STORAGE

UNIT: Equipment can be stored (upon arrival) in the shipping crate/pallet for a 12 to 24 month preservation period. Always store equipment so it is not exposed to dust, vibration, or extreme weather conditions. If unit has been removed from its original crate/pallet, cover with a tarpaulin during any preservation period.

VIBRATORS: Store vibrators in ambient temperature not less than 41° F (5° C) with a relative humidity not more than 60%. Protect from unfavorable weather conditions and avoid damp and salty environments, if possible. Refer to vibrator manual supplied with unit/vibrator containing technical information.

SCREENS: When screens are shipped loose, store screens in their cardboard container. Horizontal or vertical stacking is permissible. Avoid mechanical damage. Always wash screens prior to using.

CAUTION

This equipment must be installed, operated, and maintained by qualified personnel to avoid personal injury or damage to property.

WARNING

Lifting and shipping brackets must be attached during lifting. Failure to comply could result in severe personal injury or property damage.

WARNING

Lifting devices must be adequate for supporting unit weight. Failure to comply could result in severe personal injury or property damage.

INSTALLATION

This section details the installation of the Low Profile Separator.

1. Position the skidded low profile unit as close as possible to its final location.
2. Unbolt unit from skid.

Read these instructions prior to lifting.

3. Units are to be lifted using the two (2) lifting brackets (see Figure 2-1) and with shipping brackets attached. Clamp rings are not designed to withstand the total machine weight and unit should never be lifted from the top. Using appropriate lifting device, lift and place unit in position. Handle carefully to avoid damage to exterior or internal components. Always use trained personnel for lifting and loading operations. Ensure lifting equipment is suitable for purpose and is certified where necessary. Refer to sales drawing, specific to customer sales order, for unit weight.

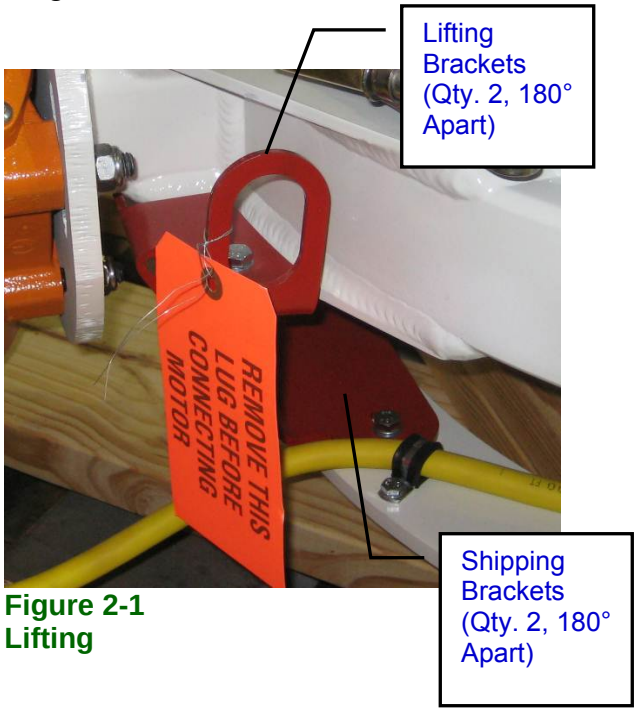


Figure 2-1
Lifting

CAUTION

Provide proper clearance. Failure to comply will result in damage to unit.

4. Once unit is removed, check packing slip. Check that machine and parts are in good condition. Verify what you ordered is what you have received. Contact SWECO or your local representative if anything is missing.
5. Place unit on a firm, level foundation. Operating the separator while placed on a pallet, or similar, will greatly reduce the screening efficiency. The foundation must be stiff enough to support twice the separator weight, thereby, minimizing transmitted vibration. Any questions use local or national codes as a guide.
6. When determining location of separator, be sure to leave adequate clearance for operation, maintenance, removal of parts, cleaning, and shut down motion. Make sure space around machine is sufficient so qualified personnel can work in safe conditions. A minimum clearance of 6 inches (150 mm) in all directions is recommended to ensure adequate clearance between the vibrating unit and any stationary structure. For CE compliant units, a minimum clearance of 20 inches (508 mm) is recommended.
7. Orient sifter to provide easy access to guards and parts.
8. Provide sufficient space between feed source and screening surface for proper material discharging.
9. The unit should be mounted as level as possible or will not operate properly. Level the separator using shims between base and foundation as required.
10. The base plate contains (4) four mounting holes (see Figure 2-2). Use these holes to mount the unit to the firm foundation.

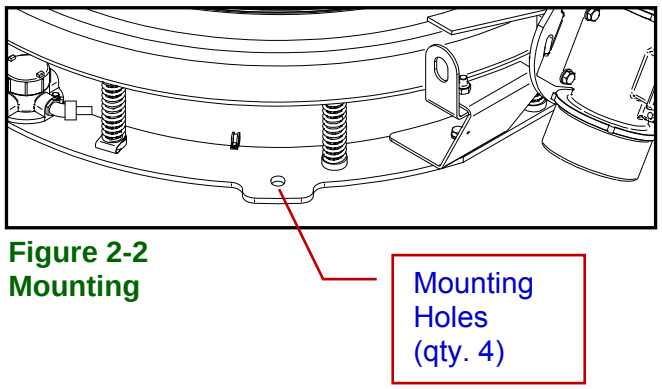


Figure 2-2 Mounting

CAUTION

Shipping and lifting brackets MUST be removed prior to vibrator hook-up and machine start-up. Failure to comply can cause damage to the unit, motor, structure, and possible personal injury.

Installation (continued)

11. Special shipping brackets are used during shipping and should remain secured in position until the unit is placed in its final location. Remove the two (2) **red** shipping brackets and lifting brackets, one at a time, *prior* to vibrator hook-up and machine operation. Retain shipping and lifting brackets and hardware for future lifting, moving or shipping purposes.

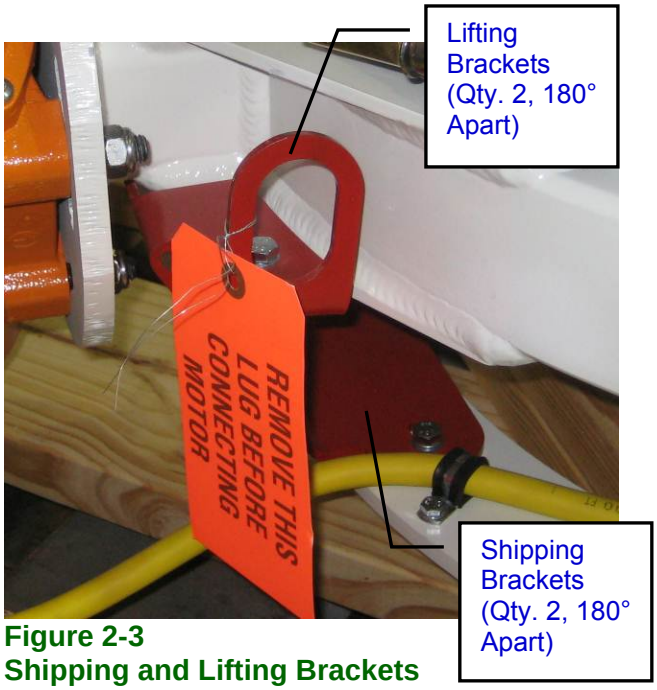


Figure 2-3
Shipping and Lifting Brackets

CAUTION

Use caution when loosening clamp bands due to the bands being tensioned. Loosen bolts prior to unlatching clamp band. Failure to comply can cause risk of hand injury.

12. Clamp rings are used to hold various section of the separator in place (see Figure 2-4) and can slightly loosen during shipping. The 18" clamp ring uses 1/4" hardware. Check and retighten to 5 foot pounds (7 Nm). The 24" through 72" clamp rings use 3/8" hardware. Check and retighten to 32 foot pounds (43 Nm). All clamp rings MUST be properly fastened and tight before beginning operation to prevent frame rotation and damage to gasket, frame, or screen. Re-check torque after one hour of operation.

Figure 2-4
Clamp Rings

CAUTION

Connectors are to be flexible enough so as not to hinder the motion of the separator. Failure to comply can cause damage to connectors or material being processed.

13. Install connectors. Connectors between all inlet and outlet spouts and material conveyors must be flexible so as not to hinder the action of the separator. The connectors should not be compressed and should be installed in a vertical position. Avoid over-stretching of connectors. A guideline for connector length is 1.5 x diameter of inlet or outlet. Fasten each connector to screener with two or three heavy-duty clamp bands per connection point.

14. Check that screens are clean and properly installed.
15. Before start-up, after the first 24 hours of operation and then every week, check that all separator and vibrator nuts, bolts, and fasteners are in place and tightened to proper torque. Tighten 1/2" (M12) vibrator mounting bolts to 58 foot pounds (79 Nm) and 5/8" (M16) vibrator mounting bolts to 137 foot pounds (186 Nm). Refer to vibrator manual supplied containing vibrator technical information. In addition, refer to Figures 4-18 thru 4-20 for vibrator data.

WARNING

Before making any electrical connections, make sure power source is disconnected. To prevent possible shock, ground machine per local and national electrical codes. A qualified electrician must perform all wiring. Wiring and grounding to be in accordance with local and/or national electrical codes. Failure to comply could result in severe personal injury or property damage.

ELECTRICAL CONNECTIONS

For your protection, please read these instructions completely before performing electrical work on the Separator.

- Only properly licensed electricians should perform electrical work on the separator.
- All work must be performed in compliance with the technical specifications and regulations for local and national electrical codes.
- Electrical connections should only be made after electrical personnel have read and understood this section of the manual and section “Wiring Electric Vibrator” in the SWECO-Italvibras LX Vibrator Manual provided.
- The voltage ratings in the wiring diagram must coincide with the supply voltage.
- Assure separator is securely grounded before work begins.

CAUTION

Mains voltage to be same as indicated on vibrator nameplate. Failure to check proper voltage can damage vibrator.

WARNING

To prevent possible shock, ground machine per local and national electrical codes. A qualified electrician must perform all wiring. Wiring and grounding to be in accordance with local and/or national electrical codes. Failure to comply could result in severe personal injury or property damage.

CAUTION

Brand of vibrators cannot be mixed on the same unit; vibrators have different forces. Mixing of brands can cause damage to vibrators.

CAUTION

Do not change the length or position of the power cord from the vibrator to the junction box. In addition, do NOT rotate junction box. These changes can cause interference of the power cord and cause damage to vibrator(s) or unit.

VIBRATOR SPECIFICATIONS

The standard LX Low Profile Separator is equipped with two (2) Italvibras vibrators. Refer to SWECO-Italvibras LX Vibrator Manual for electrical hook-up and technical information of the vibrators. In addition, refer to vibrator nameplate specifying voltage, speed and type of your equipment. Unit needs to be wired by qualified personnel. Before running cord to vibrator(s), make sure cord voltage rating equals or exceeds the voltage at which you will be operating the vibrators.

When connecting the leads located in the junction box, it is recommended to use a control that will serve as a start/stop for both vibrators together but also has an overload designated for each individual vibrator. This control is offered by SWECO. Contact your SWECO Representative for additional information.

Do not change the length or position of the power cord from the vibrators to the junction box (see Figure 2-5). In addition, do NOT rotate junction box.

Figure 2-5
Junction Box

VIBRATOR ROTATION

After all electrical hook-ups have been made, jog the unit and check rotation of the vibrators. **Both** vibrators should rotate in the **same** direction; ***counter-clockwise*** when looking at the vibrators from the top. Refer to label located on both vibrators for correct direction (see Figure 2-6).

If rotation is incorrect shut off and lock out power and interchange any two of the main power leads. Failure to check this will prevent proper separation and can damage the separator.

Figure 2-6
Vibrator Rotation

WARNING

Cleaning of the separator must only be carried out when the machine is switched off, stationary, and isolated from the electrical supply. Failure to comply could result in severe personal injury or property damage.

CLEANING PRIOR TO USE

Prior to dispatch from SWECO the separator will generally be cleaned to remove dirt, dust, and other debris generally associated with the manufacture and assembly of such equipment. Before operation, ensure that the machine is cleaned by suitable means to suit the environment in which you intend it to operate. SWECO does not accept any liability for degradation of your product from contaminants within the sifter.

WARNING

As screen life is dependent on a wide variety of issues like mesh size, flow rate, material properties, vibration level, maintenance, etc., we cannot guarantee how long a screen will last. Screens should be frequently inspected to check for wear or damage. Note that if screens continue to vibrate for hours after initial failure (tearing), wire segments may break loose from the mesh and fall.

Read the following instructions prior to operation of your separator. Improper installation, maintenance, or operation may cause injury to personnel or machine failure. This equipment must be installed, operated, and maintained by qualified personnel.

NORMAL OPERATION

When the separator is running under normal conditions, there are a number of parameters that can be considered or adjusted to optimize performance:

- Screen Selection
- Flow Rate
- Screen Motion
- Vibration Amplitude
- Eccentric Weight Adjustments

SCREEN SELECTION

The selection of the screen mesh will depend on a number of factors, namely flow rate, dry material type and size, percentage of solids present, and rate of penetration (ROP).

To ensure optimum performance, the finest screen size possible should be used with consideration given to the relative screen life. Consult SWECO or your local Representative for the wide variety of screen mesh available.

CAUTION

If processing hazardous materials, check material safety data sheets (MSDS's) for hazard information and follow necessary procedures prior to servicing equipment.

FLOW RATE

The flow rate should be adjusted so that screen flooding does not occur. The material being screened, whether wet or dry, must be fed to the screen in a controlled flow, perpendicular to the screen surface and at a constant, even rate of speed. Flow control devices for both wet and dry screenings must be used to achieve these characteristics. Contact your SWECO Representative concerning the various flow control devices that are available.

DRY SCREENING

If the final distribution is controlled with baffles or other flow control devices, dry material may be fed by any of the commonly used conveyors or feeders to ensure constant, even flow perpendicular to the screen surface (see Figure 2-7).

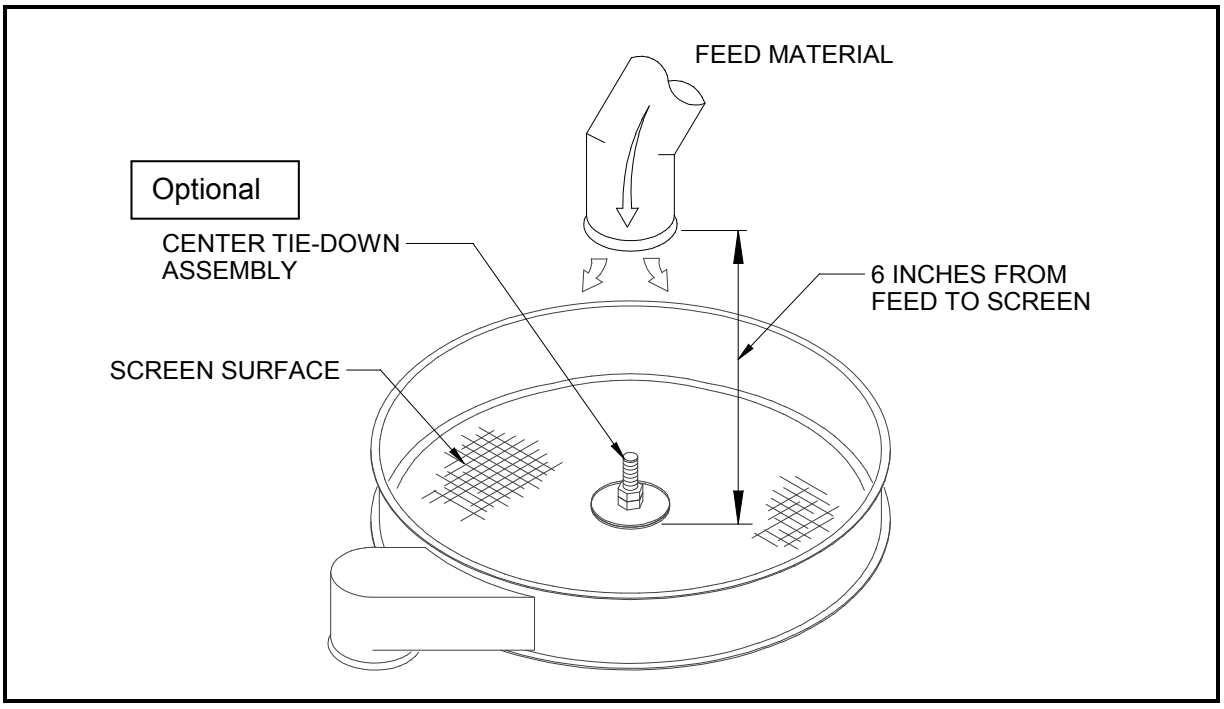


Figure 2-7
Dry Screening Example

WET SCREENING

The wet screening device shown in Figure 2-8 is a velocity reducer recommended for liquid feed to control the velocity and distribution of the material onto the screen.

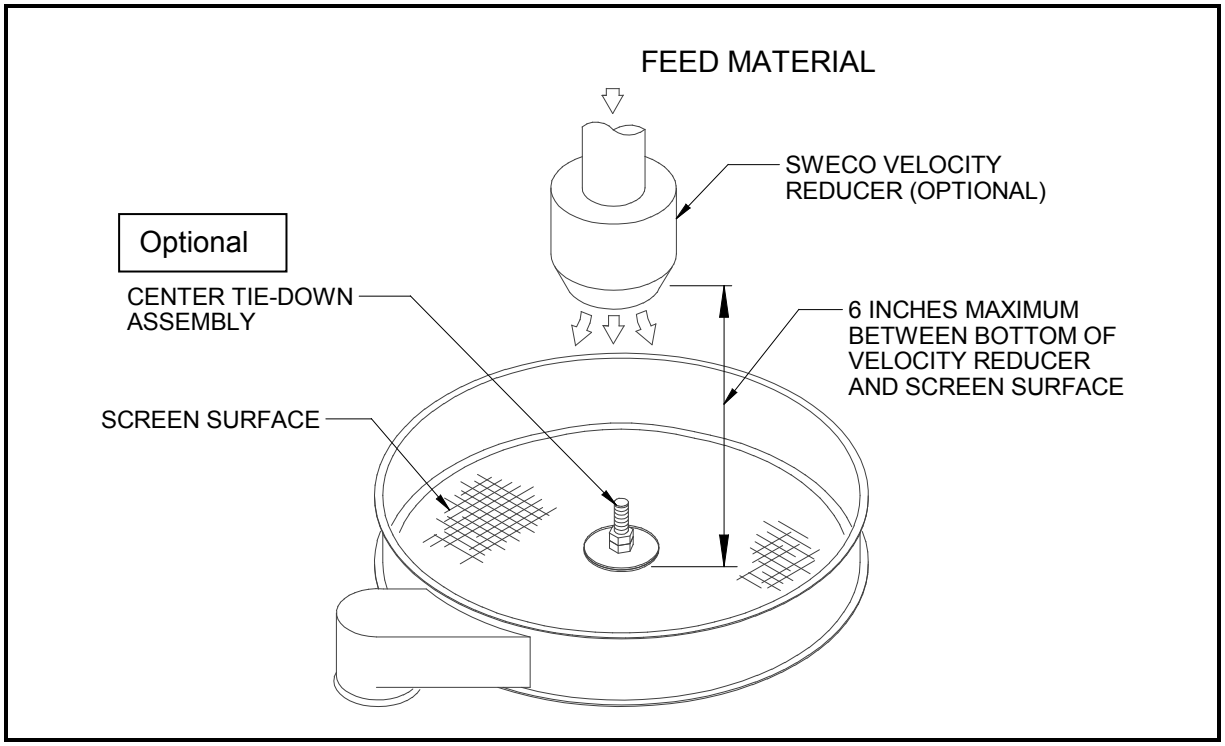


Figure 2-8
Wet Screening Example

SCREEN MOTION

Make adjustments to screen motion as needed. The two vibrators are orientated 30° from vertical at the factory (see Figure 2-9). The range of adjustment is 10° to 50° from vertical. Decreasing this angle (or positioning the vibrators more vertical) will increase the horizontal screen motion. Increasing this angle (or positioning the vibrators more horizontal) will increase the vertical screen motion.

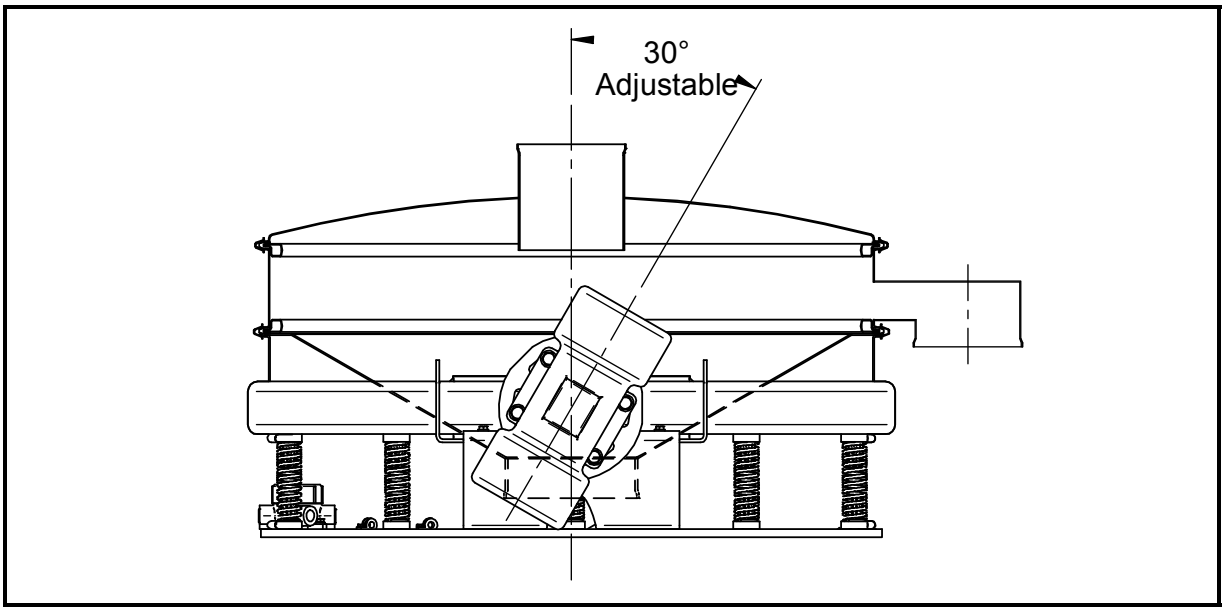


Figure 2-9
Screen Motion

VIBRATION AMPLITUDE

NOTE

Incorrect amplitude can lead to premature screen failure.

Horizontal and vertical amplitudes can be easily measured to evaluate and understand separator performance. To analyze the motion of the separator, a vibration gauge sticker (see Figure 2-10) is provided to help measure vibration amplitude. This sticker is attached to the outside frame diameter of the machine near the screen level. The stationary gauge measures both horizontal and vertical motion independently.

To read the vibration amplitude, while the machine is running, observe where the triangular lines cross. The number closest to the line crossing will be the vibration amplitude in 1/16" increments. If an amplitude sticker is not available, use a felt tip marker to make a dot on the frame. A ruler can then be used to measure the horizontal and vertical amplitude on the motion.

CAUTION

Do not exceed maximum amplitudes or damage to equipment can occur.

Maximum amplitudes are based on motor speed. Check the nameplate of the vibrator (motor) for speed (unless a speed control is used). Maximum vertical or horizontal amplitudes are as follows and should NOT be exceeded:

1200 RPM – 1/4" maximum
1500 RPM – 3/16" maximum
1800 RPM – 1/8" maximum

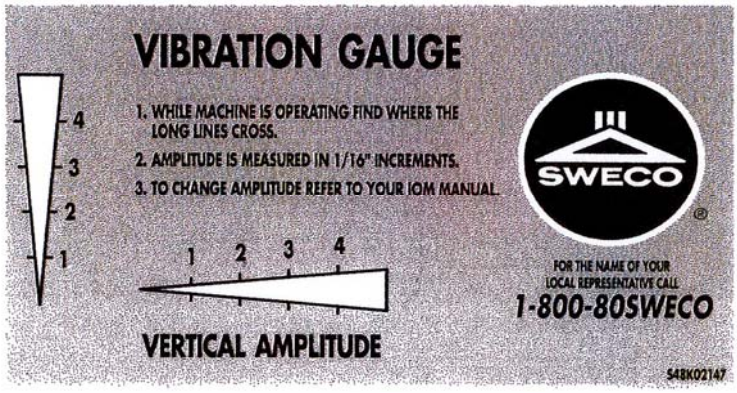


Figure 2-10
Vibration Amplitude Label

WARNING

Eccentric weight adjustments must be performed by qualified personnel. When installing or maintaining this separator, shut off and lock out power. Follow all local and national electrical codes. Failure to comply could result in severe personal injury or property damage.

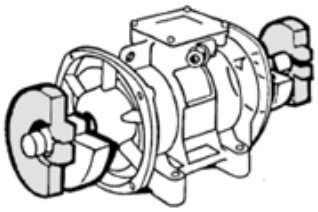
CAUTION

Both replacement and existing vibrators MUST have the weight settings checked after vibrator installation and prior to initial start-up. Eccentric weights must be set for the individual application the unit will be used. *Do not exceed maximum weight settings indicated.* Failure to properly set the weights of the vibrators will cause property and vibrator damage.

ECCENTRIC WEIGHT ADJUSTMENTS

The SWECO separator is a screening device that vibrates on a spring system generating three-dimensional motion. Vibration is accomplished by the eccentric weights located on each end of each vibrator shaft.

The eccentric weights have been pre-set at the factory at 50% force setting for this machine. It is necessary to make sure the weights are adjusted in the same direction at both ends.



For the best screening efficiency, adjustments to the eccentric weights may be necessary. Adjustments will vary with the characteristics of the material and the weight settings.

Before making any weight adjustments, check vibration amplitude per previous section. After vertical or horizontal amplitude have been determined, refer to vibrator manual provided for further instructions for adjustments to the eccentric weights.

START-UP CHECK LIST

Check that the following procedures have been completed **prior** to operation.

- ☐ Separator is oriented properly to provide easy access to guards and parts.
- ☐ Machine has adequate clearance in all directions for operation, removal of parts, cleaning and shut down motion. A minimum clearance of 6 inches (150 mm) is required in all directions between separator and any stationary structure. For CE compliant units, a minimum clearance of 20 inches (508 mm) is required.
- ☐ Separator has sufficient space provided between feed source and screening surface for proper material discharging.
- ☐ Separator is level and mounted securely to floor/structure.
- ☐ Electrical connections are properly fastened and meet local and national codes.
- ☐ Vibrator(s) and power supply are correct voltage/frequency.
- ☐ Power supply cable has enough freedom of movement.
- ☐ Machine is properly electrically grounded.
- ☐ Shipping and lifting brackets have been removed and stored for possible re-use.
- ☐ Separator is clean of any liquids/solids.
- ☐ Screen(s) is clean and properly installed.
- ☐ Vibrators rotate in the same direction (counter-clockwise when viewed from the top).
- ☐ Eccentric vibrator weight settings are correct for the application.
- ☐ Screen motion is correct for the application.
- ☐ Horizontal and vertical amplitudes have been measured to evaluate sifter performance.
- ☐ Inlet and discharge connectors are in good condition, properly installed and secure.
- ☐ Unit nuts, bolts and fasteners are in place, tight and properly torqued.
- ☐ Guards are in place and secure.
- ☐ Clamp rings are secure and properly torqued. The 18" clamp ring uses 1/4" hardware and should be tightened to 5 foot pounds (7 Nm). The 24" through 72" clamp rings use 3/8" hardware and should be tightened to 32 foot pounds (43 Nm).
- ☐ Electrical control (if applicable) and switches are functioning properly, box is closed and bolted.
- ☐ No unusual noise originates from machine.
- ☐ Tools and lifting equipment have been removed.

CAUTION

Check noise level in your environment. If noise level exceeds 70dB, hearing protection is required to avoid impairment or loss of hearing.

WARNING

Higher amplitudes occur during shut down and start-up of unit. Stand clear of unit and keep accessory equipment away during these cycles.

CAUTION

Do not start and stop your separator more than four times an hour on a continuous basis. Frequent starting can cause heat build-up which will damage the motor. Contact your local SWECO Representative if your process requires frequent starting and stopping.

START-UP

1. Start separator.
2. Check visually and audibly that machine is operating properly.
3. Introduce product feed. The product to be sifted **MUST** be supplied to the machine at a constant, even flow perpendicular to the screen surface. Vibration should be smooth. Ensure unit is vibrating normally and no abnormal sound is present. Investigate as necessary for any abnormal noises or vibration.

SHUT DOWN

1. Shut off product flow.
2. Stop separator.
3. Once power is shut off, it is essential that the machine comes to a complete stop before restarting.
4. Check screens. It is recommended to wash the screens each time the separator is shut-down.
5. Lock out / tag out power to separator if performing maintenance, repairs, or parts replacement.

CHAPTER 3
Maintenance and Parts Replacement

RECOMMENDED SPARE PARTS

For continuous, uninterrupted service from your SWECO separator, we recommend stocking the following spare parts for each unit (refer to Chapter 4, *Parts Lists and Drawings*):

1. One screen of each mesh used in the purchased unit.
2. One clamp ring assembly.
3. Two channel gaskets.
4. One center tie-down assembly (if applicable).
5. Total quantity of springs used in purchased unit.
6. Total quantity of spring spools used in purchased unit.
7. If unit includes a Self-Cleaning Kit, we recommend stocking *all* component parts included in this kit.
8. If unit includes a ball tray, we recommend stocking one center tie-down assembly (if applicable) for ball tray, one ball tray stud, and balls (specify material).
9. When three or more separators are in operation, we recommend stocking a spare vibrator.

PREVENTIVE MAINTENANCE SCHEDULE

Routine maintenance is recommended to help minimize downtime and prolong equipment life. To aid the inspection process, refer to following checklist of items to examine on a daily and weekly basis. Use and complete the maintenance log provided and keep the log in your maintenance records.

UNIT

Daily Maintenance

ITEM	TASK
Electrical Cables	Check condition and connections are securely fastened. Check for fraying and/or damage. Rectify as required.
Unit	Visually examine unit for signs of wear and/or damage. Repair/replace as needed. Run unit and perform audible checks. Investigate as needed. Clean unit daily from solids build-up.
Screens	Clean screens from solids build-up. Check screens for wear and/or damage. Replace as needed.
Horizontal and Vertical Amplitude	Check and record amplitude reading per vibration amplitude label. Make adjustments as needed.
Clamp Rings	Check for fatigue, bent or cracked components. Replace if needed. Check clamp rings are properly seated. Adjust and tighten as needed. Check for tightness. Verify proper torque. The 18" clamp ring uses 1/4" hardware. Check and retighten to 5 foot pounds (7 Nm). The 24" through 72" clamp rings use 3/8" hardware. Check and retighten to 32 foot pounds (43 Nm).
Inlet/Outlet Spout Connectors	Check for holes, cracks, or damage. Replace as needed. Check connectors are properly fastened to screener at connection point. Adjust as needed.
Center Tie-Down (If applicable)	Check for wear and/or damage. Replace as needed. Check that center tie-down is level with screen. Make adjustments as needed. Check for tightness. (No Tools Center Tie-Down - LH thread).

Weekly Maintenance

ITEM	TASK
Eccentric Weights	Check eccentric weight setting is appropriate for application.
Screen Gaskets	Clean screen gaskets from solids build-up. Check gaskets for wear, cracks and/or damage. Replace as needed.
Support Springs/Spools	Check for wear and/or damage. Replace as needed. Check for uneven compression of spring(s). Replace if needed. Check for missing hardware (if applicable). Replace as needed.
Nuts and Bolts	Check for missing hardware. Replace as needed. Check for tightness. Torque appropriately.
Balls or Sliders (if applicable)	Check for wear and/or damage. Replace as needed.
Electrical Control (if applicable)	Check functions properly. Check cover is properly tightened. Check condition of emergency stop for damage. Rectify as required. Check function of safety switches. Replace as needed.

VIBRATOR

Vibrator	Refer to section “Vibrator Lubrication” later in this chapter and SWECO-Italvibras LX Vibrator manual supplied for bearing lubrication schedule specific to your vibrators and other suggested maintenance. Check and remove any build-up of solids from electrical motors.

MAINTENANCE LOG

Date	Run Hours	Visual / Audible Check		Remarks	Signature
		Yes	No		

WARNING

When installing or maintaining this separator, shut off and lock out power prior to cleaning and performing maintenance. Follow all local and national electrical codes. Electrocution can occur if water contacts live electrical components. Failure to comply could result in severe personal injury or property damage.

The following sections discuss the steps to take in maintaining your SWECO separator parts. This equipment must be installed, operated, and maintained by qualified personnel. Do not perform maintenance or repairs to equipment while in operation.

UNIT

Daily examine unit visually for signs of wear or damage. Repair/replace as necessary.

Perform audible checks **daily** and investigate as necessary.

WET OR DRY CLEANING

A complete and **daily** cleaning of the machine, accessory parts, and the workplace is advisable to keep the machine safe and working to maximum efficiency. Cleaning of the separator will keep unit at top efficiency. Follow these procedures for dry or wet cleaning of the unit.

General

1. Vacuum cleaning is preferred to brush cleaning or cleaning with air under pressure as it decreases dust drift to other areas of the plant.
2. Brushes or vacuum cleaner fittings used for cleaning product contact surfaces should not be used for cleaning non-product contact surfaces or for other uses which might result in contamination. Such brushes and special fittings should be stored in enclosed cabinet when not in use. (For protection and housekeeping considerations, such cabinets preferably should be of non-wood construction and should have open mesh metal shelving.)
3. Dry cleaning is always preferable to wet cleaning when possible.

Dry Cleaning

1. Completely dismantle and thoroughly vacuum or dry brush clean all product contact surfaces of the sifter. Reassemble when finished and make every effort to keep all parts dry.
2. Check sifter screen(s) for broken or displaced wires (threads) and for other openings around the frame of the screen that might permit the passage of unsifted product. Other parts of the sifter, including ball trays and balls, if used, also should be inspected for condition. Any necessary repair or replacement should be made as soon as possible.
3. Always remove the screen gasket and center tie-down (if applicable) and check for damage or accumulations underneath the gaskets.
4. Flexible rubber or cloth connectors at the inlet and outlets of the sifter should be thoroughly cleaned, following procedures recommended for the sifter. Connectors should be closely examined for holes, cracks or other damage. (To facilitate removal for cleaning, use of easily removable fastening devices is recommended.)
5. Thoroughly vacuum or dry brush clean all external parts of the sifter, including the sifter frame and drive mechanism.

Wet Cleaning

1. Completely dismantle. Remove all loose dry product. Rinse all parts with clear water and follow with a thorough hand brushing of all parts using a general purpose cleaner.
2. Rinse thoroughly to remove all cleaning solution or soil. It is recommended that hot water (170° F (76.7° C) or above) be used for rinsing in order to sanitize the equipment and to promote drying.
3. Always remove the screen gasket and center tie-down (if applicable) and check for damage or accumulations underneath the gaskets.
4. Allow all parts to air dry completely prior to reassembly. Wet washing should be done as frequently as necessary, and may be done after each use if the sifter is not being used on a continuous basis.
5. After cleaning, drying and reassembly, all openings should be protected against recontamination.
6. Wet cleaning is not recommended for cleaning the drive base of the unit which contains the motor and electrical junction box. Spraying the motor with water is a potential safety hazard and can lead to premature motor failure. If wet cleaning is required for the processing frames, it will be necessary to disassemble the unit and wet clean the processing frames separately from the drive base.

WARNING

If processing hazardous materials, check material safety data sheets (MSDS's) for hazard information and follow necessary procedures prior to servicing equipment.

SCREENS

Screens should be inspected **daily** for blinding and cleaned as required. It is recommended to wash the screens each time the separator is shut-down. Mild soap and water are suggested. Do not use pressure washer to clean screens or damage to fine mesh screens can occur.

Screens should be inspected **daily** to check for wear or damage. Replace as needed. As screen life is dependent on a wide variety of issues like mesh size, flow rate, material properties, vibration level, maintenance, etc., we cannot guarantee how long a screen will last. Note that if screens continue to vibrate for hours after initial failure (tearing), wire segments may break loose from the mesh and fall into the screened product. If you need assistance in determining a good cleaning method for your particular application, contact your local SWECO Representative.

CAUTION

Connectors are to be flexible and positioned so as to not hinder the motion of the separator. Failure to comply can cause damage to connectors or material being processed.

SPOUT CONNECTORS

Check the condition of the inlet and outlet spout connectors **daily**. Closely examine for holes, cracks, or damage and replace as needed. The life time is estimated at 6 months for normal usage and the connectors are recommended to be changed. Inspect and thoroughly clean connectors if needed. Check connectors are properly fastened to screener at connection point. Adjust as needed.

CAUTION

Use only SWECO screen channel gaskets to assure proper fit and function. Use of any other gaskets can cause damage to the unit or improper functioning.

CHANNEL GASKETS

Check screen gaskets to see that they are mounted correctly on the screen ring. Clean gaskets on a **weekly** basis from solids build-up. In addition, check for evidence of cracking, breakage or crimps. Replace as needed. Do not over-stretch gaskets. Always store spare gaskets flat on a shelf, never on a hook, and in a clean environment.

BALLS OR SLIDERS

Balls or sliders are used for cleaning the screen. If your unit is equipped with a self-cleaning kit or ball tray (optional equipment), inspect balls or sliders **weekly** for excessive wear and replace as needed.

BOLTS

It is recommended to check that all unit nuts, bolts and fasteners are in place and to the proper torque. Check before start-up, the first 24 hours of operation, and then verified once every week of service thereafter.

In addition, the vibrator mounting bolts should be checked and retightened, if needed, to prevent them from loosening and causing damage to the vibrators or unit. Retighten units using 1/2" (M12) mounting bolts to 58 foot pounds (79 Nm) and units using 5/8" (M16) mounting bolts to 137 foot pounds (186 Nm).

CAUTION

Avoid pinch points when replacing springs/spools. Failure to comply could result in personal injury.

SPRINGS AND SPOOLS

Check support springs and spools on a **weekly** basis for wear or damage; replace as needed. Check for uneven compression of springs; replace spring(s) if needed. Fatigue of springs will cause poor performance. Fracture of springs will cause abnormal shaking and, if not corrected, will cause structural damage. When replacing spools, make sure all hardware is in place and secure (if applicable). When replacing springs, make sure springs are in alignment with spools.

NOTE:

For CE compliant units, a neoprene connector has been provided to serve as a safety precaution against bare springs acting as a possible pinch point. Periodically check connector for wear or tear and replace as needed.

NOTE

Before attempting any repairs during the vibrator warranty period, contact a SWECO Representative for repair and/or replacement instructions. Unauthorized repair attempts will void warranty.

NOTE

Any repairs performed by the customer will void warranty. Any motor that has been opened beyond the removal of the weight covers will not be replaced under warranty.

CAUTION

All vibrators are lubricated at the factory. Use only prescribed grease in vibrator. If different grease is used, vibrator can be damaged and warranty will be voided.

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

CAUTION

Do not start and stop your separator more than four times an hour on a continuous basis. Frequent starting can cause heat build-up which will damage the vibrator. Contact your SWECO representative if your process requires frequent starting and stopping.

VIBRATOR LUBRICATION

Read this section before beginning vibrator lubrication. Before working on vibrators, cool to ambient temperature.

Currently, LX Low Profile units are equipped with Italvibras vibrators. Prior to March, 2012, LX Low Profile units were equipped with OLI vibrators. Any questions regarding OLI vibrators, refer to OLI manual supplied with unit or consult SWECO. OLI vibrators are offered as *replacement* motors only.

CAUTION

OLI and Italvibras vibrators cannot be mixed on the same unit due to vibrators having different forces. Mixing of brands can cause damage to vibrators.

ITALVIBRAS VIBRATORS

All electric vibrators are lubricated at the factory. If there are no external grease fittings, then the vibrator construction is lubricated for life. No grease will ever need to be added to these electric vibrators. If external grease fittings are provided, then it is intended that the bearings be periodically lubricated. Refer to the SWECO-Italvibras LX Vibrator Manual, section “Vibrator Technical Data”, for individual vibrator technical data sheets for lubrication requirements for models MVSI (standard), MVSS (stainless steel) and CDX (hazardous locations). Furthermore, refer to section “Electric Vibrator Lubrication” for additional lubrication instructions. When lubrication is required for models MVSI and MVSS, use Kluber NBU 8EP grease (SWECO part #00-695) as called for on the individual vibrator data sheet. When lubrication is required for model CDX, use Kluber ISOFLEX TOPAS NB 52 grease (SWECO part #2863029). Always use the correct grease and the specified amount. Do NOT mix different types of grease, even if they have similar features.

⚠ WARNING

Clamp rings must be properly fastened and to the specified torque. Failure to comply can cause frame stack to release and result in personal injury or property damage.

CLAMP RINGS

Clamp rings are used to hold various sections of the separator in place. Check clamp rings **weekly** to ensure they are properly secured during operation. Most clamp rings are provided in sections. Tighten each set of bolts *equally* to prevent false torque. The 18" clamp ring uses 1/4" hardware. Check and retighten to 5 foot pounds (7 Nm). The 24" through 72" clamp rings use 3/8" hardware. Check and retighten to 32 foot pounds (43 Nm). Use a heavy rubber coated dead blow hammer to help seat clamps when tightening.

After torque is established, inspect all components carefully to ensure proper fit. All clamp rings MUST be properly fastened and tight before beginning operation to prevent frame rotation and damage to gasket, frame, or screen. A loose clamp ring can cause screen rotation that will lead to fatigue.

After proper fit is complete, start machine and observe machine running for maximum of 10 minutes. Then, stop machine and recheck torque of each clamp bolt. Re-tighten if needed.

Look or feel for warm spots around the clamp ring after approximately 30 minutes of running. A warm spot means the clamp ring may be slipping and needs to be tightened.

CAUTION

Use caution when loosening clamp bands due to the bands being tensioned. Loosen bolts prior to unlatching clamp band. Failure to comply can cause risk of hand injury.

Clamp Rings (continued)

Follow these procedures when removing clamp rings:

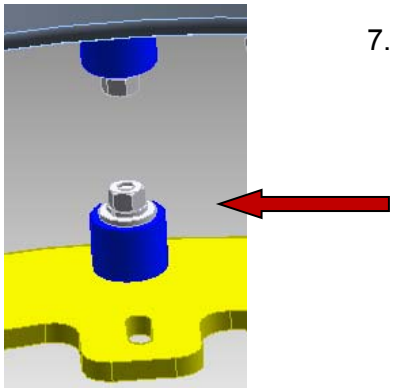
- Loosen all bolts of each clamp ring section before removal of clamp ring. This is to prevent twisting of the clamp sections.
- Carefully handle clamp ring to prevent twisting. Twisting or bending can cause premature clamp failure.
- Inspect clamp rings for fatigue, bent or cracked components. Replace if needed.
- Inspect and clean all material from mating surfaces such as screen edge, gasket, frame and clamp surfaces. This is to ensure proper seal.
- Carefully reinstall all sections of the clamp ring and tighten each set of bolts *equally* to prevent false torque. The 18" clamp ring uses 1/4" hardware and should be tightened to 5 foot pounds (7 Nm). The 24" through 72" clamp rings use 3/8" hardware and should be tightened to 32 foot pounds (43 Nm).
- Use a heavy rubber coated dead blow hammer to help seat clamps when tightening.

WARNING

When installing or maintaining this separator, shut off and lock out power before removing guards (cover, etc.) Follow all local and national electrical codes. Failure to comply could result in severe personal injury or property damage.

CAUTION

Avoid pinch points when replacing springs/spools. Failure to comply could result in personal injury.



NOTE

If you have difficulty removing springs and spools, call your local Representative or the SWECO office for assistance.

After many hours of operation, parts begin to wear and may need to be replaced. The following information discusses the procedures to take when replacing worn or damaged parts.

SPRING AND SPOOL REPLACEMENT

1. Shut off product flow.
2. Shut off and lock out power.
3. Disconnect connectors.
4. Release lower clamp ring securing lower frame and drive frame.
5. Progressively remove all parts located above the drive frame (clamp rings, cover (if applicable), frames, screens, etc.) (see Figure 3-1).
6. When replacing just one spring, tilt side of drive frame by using a suitable lifting device where spring is located. Lift high enough to slide bottom of defective spring out of the unit. Replace just two springs at a time (springs on each side of lifting device).
7. Visually check upper and lower spring spools for wear. If an excessive amount of wear is shown, then spools will need to be replaced. NOTE: The base plate and drive frame have welded studs for holding the spring spools in place. For units LX18-LX40 only, the spools are secured with mounting hardware (fender washer, split washer and hex nut) as shown. For removing spools, remove mounting hardware (if applicable) and then spool(s). Install new spool(s) and hardware (if applicable). Be sure to include grounding straps where appropriate.
8. Install new spring.
9. Lower drive frame.
10. Check and replace remaining springs/spools if needed.
11. Progressively reinstall parts above drive frame that were removed.
12. Reinstall connectors.
13. Check clamp rings. All clamp rings MUST be properly fastened and tight before beginning operation to prevent frame rotation and damage to gasket, frame, or screen. Re-check torque after one hour of operation.

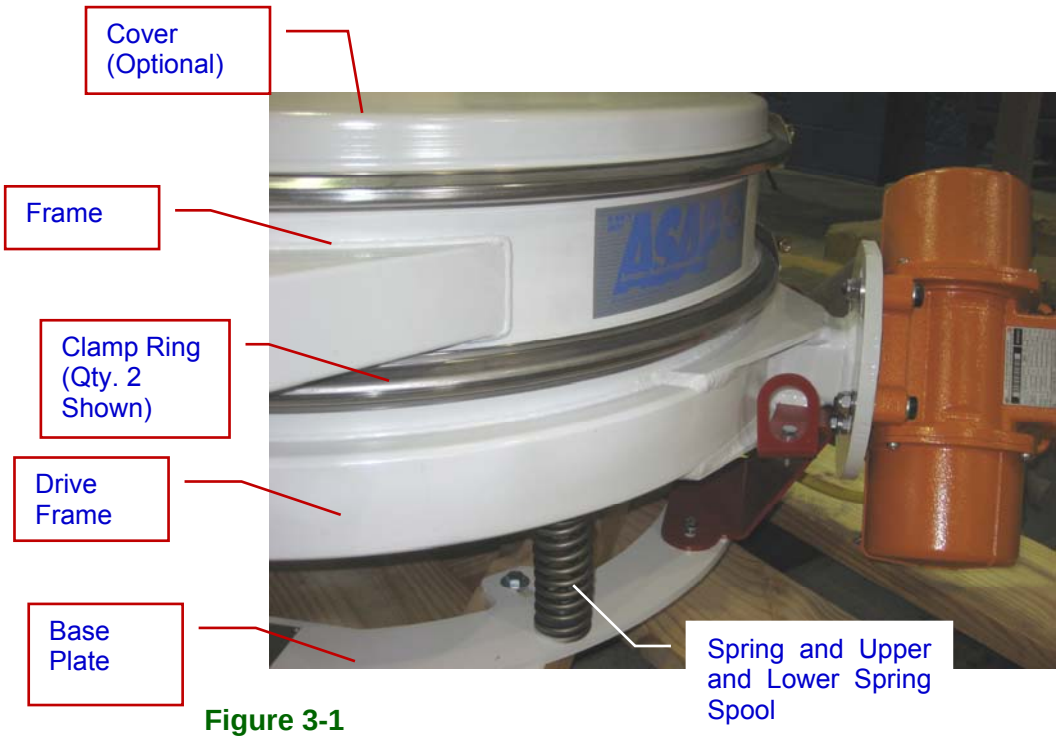


Figure 3-1
Spring/Spool Removal

WARNING

When installing or maintaining this separator, shut off and lock out power before removing guards (cover, etc.). Follow all local and national electrical codes. Failure to comply could result in severe personal injury or property damage.

NOTE

It is recommended to remove parts one piece at a time with two operators standing 180 degrees apart for their own safety. Prior to lifting parts, make sure area is clear of any obstacles and sufficient room is provided to accommodate removed parts. Use extra caution when removing cover or frames due to weight.

SCREEN REMOVAL

Screens are extremely delicate and must be mounted securely in the separator. If a screen is worn or damaged or you are replacing a screen with a different mesh (see Figure 3-6 for screen mesh information), follow these procedures for removal of the screen:

1. Shut off product flow.
2. Shut off and lock out power.
3. Loosen and remove center tie-down parts located above the screen (if applicable). Refer to Figure 3-2 for center tie-down for LX18, LX24, and LX30 units and Figure 3-3 for LX40, LX48, LX60 and LX72 units.
4. Remove clamp ring around frames.
5. Carefully lift upper frame and remove from unit. If screen is attached to the upper frame when removing, do not lift frame more than 2 inches (51 mm). Gently tap screen tension ring downwards until the screen drops to its original position.
6. Handle screen by tension ring only and lift screen from separator.

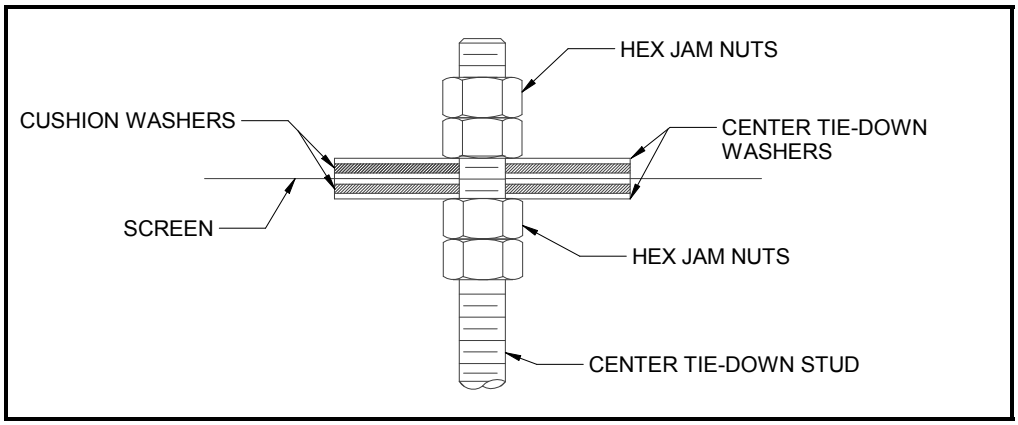
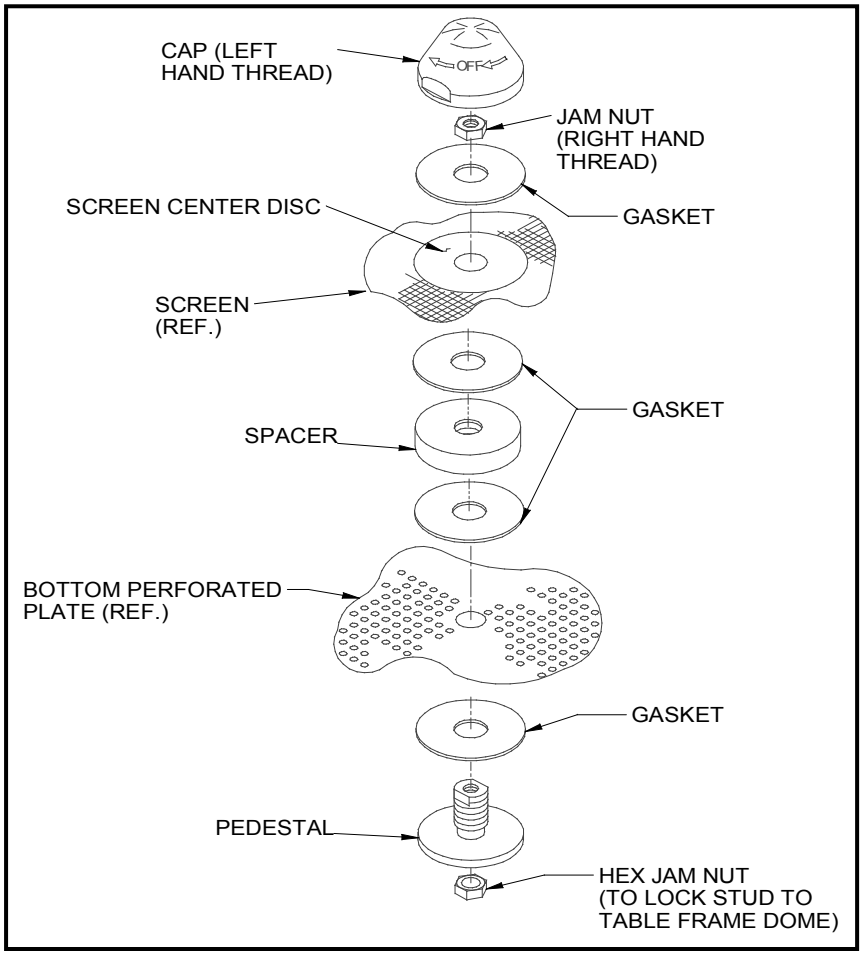


Figure 3-2
Center Tie-Down Assembly (LX18, LX24 and LX30)



NOTE:

There are four gaskets included with the "No Tools" center tie-down assembly (SWECO part #S48K00980) used in unit sizes LX40 through LX72. For standard applications, one gasket is required above and below the screen and two below the spacer.

For applications with a perforated plate (as shown in Figure 3-2), one gasket is required above and below the screen, and one gasket above and below the perforated plate.

Figure 3-3
Center Tie-Down Assembly, "No Tools" (LX40, LX48, LX60 and LX72)

NOTES: 1. Center tie-down is optional.
2. LX72 uses a screen slider support instead of a perforated plate (see Figure 3-14).

CAUTION

Screens are fragile. Handle them carefully. Never place tools or parts on the screen or damage to screen may occur. Check screens frequently for excess wear or damage. As screen life is dependent on a wide variety of issues like mesh size, flow rate, material properties, vibration level, maintenance, etc., we cannot guarantee how long a screen will last. Note that if screens continue to vibrate for hours after initial failure (tearing), wire segments may break loose from the mesh and fall into the screened product.

CAUTION

Always tighten clamp ring before tightening center tie-down assembly. This will help assure proper vertical location of screen center and help prevent premature screen failure.

NOTE

If jam nuts are installed improperly or omitted from center tie-down, the tie-down will not effectively hold the screen in place and can cause the screen to fail.

SCREEN REPLACEMENT

Once the worn or damaged screen has been removed, follow these steps for the *new* screen replacement:

1. Place new replacement screen on the frame. Make certain that the screen is right side up by checking position of the tension ring (see Figure's 3-4 and 3-5). Also note position of the gasket. Take care that the screen does not come in contact with the center tie-down stud (if applicable) and cause damage to the screen.
2. Reinstall upper frame.
3. Reposition clamp ring around frames. Tighten ring snugly by tapping ring with soft-faced hammer before final torquing to be certain of a tight fit (see caution). The 18" clamp ring uses 1/4" hardware. Check and retighten to 5 foot pounds (7 Nm). The 24" through 72" clamp rings use 3/8" hardware. Check and retighten to 32 foot pounds (43 Nm). All clamp rings MUST be properly fastened and tight before beginning operation to prevent frame rotation and damage to gasket, frame, or screen. Re-check torque after one hour of operation.
4. Reinstall center tie-down parts (if applicable) that were removed. For LX18, LX24, and LX30 units, reinstall cushion washer, center tie-down washer, and the two hex jam nuts over top of screen (see Figure 3-2). Tighten the two hex jam nuts on the center tie-down stud. When tightening, the lower hex jam nut should be held with a wrench while the top hex jam nut is brought down against it and tightened with a second wrench.

   For LX40, LX48, LX60 and LX72 units, position center gasket over top of screen (see Figure 3-3). Adjust pedestal (7/8 inch wrench) up or down as required so that the spacer makes contact with the screen center disc. The screen center should be level with the outer tension ring. Reinstall jam nut (right hand thread). Lightly tighten (13/16 inch wrench) to lock pedestal to stud. Reinstall center tie-down cap (left hand thread). Hand-tighten to top of screen center disc.

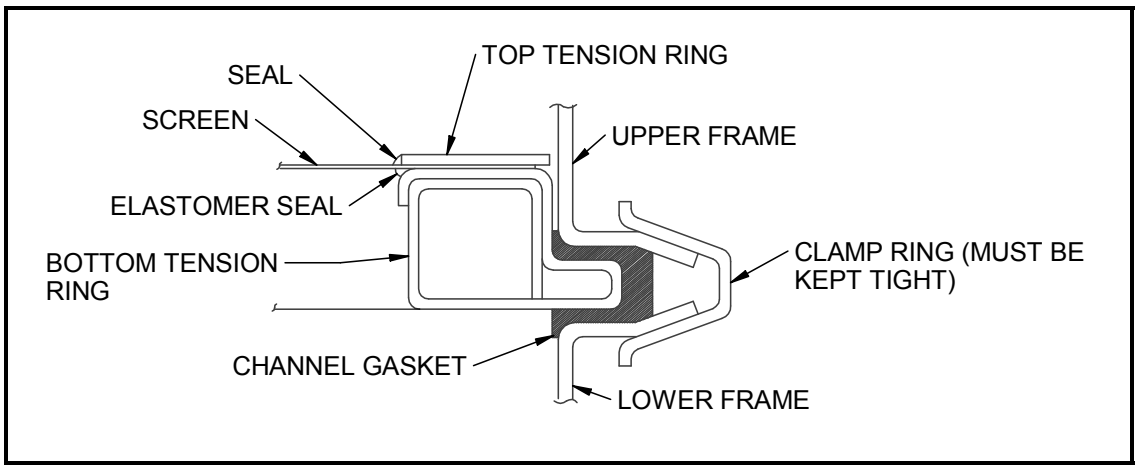


Figure 3-4
Screen Positioning (LX18 and LX24)

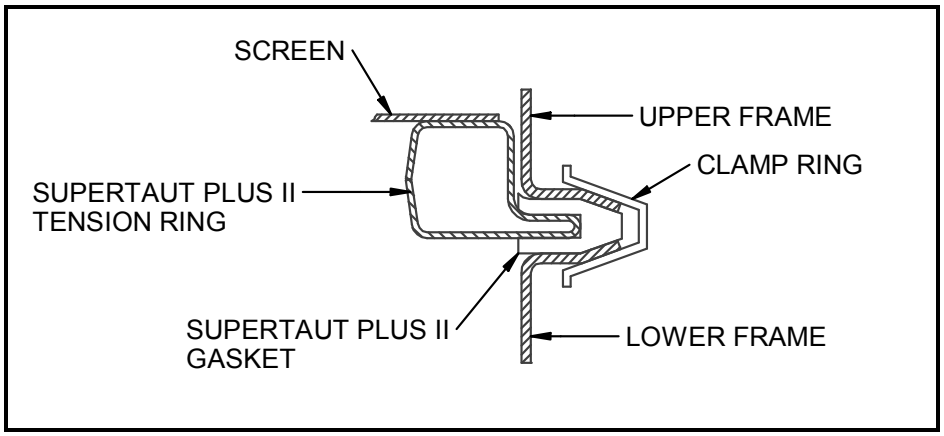


Figure 3-5
Screen Positioning (LX30, LX40, LX48, LX60 and LX72)

Tensile Bolting Cloth					Mill Grade					Market Grade					Clear Opening			U.S. Std. Sieve		
Mesh TBC	Opening Inch	Opening Micron	Wire Dia.	% Open Area	Mesh MI Gd	Opening Inch	Opening Micron	Wire Dia.	% Open Area	Mesh MG	Opening Inch	Opening Micron	Wire Dia.	% Open Area	Clear Open-ing	Wire Dia.	% Open Area	Std. Sieve	Open-ing in Inches	Open-ing in Micron
															1.0000	.105	81.9			
															.7500	.063	82.0			
															.6250	.063	82.5			
															.5625	.063	81.0			
															.5000	.047	86.0			
					2	.4460	11328	.0540	79.6	2	.4370	11100	.0630	76.4	.4375	.047	79.3			
															.3750	.047	79.2			
															.3125	.047	75.5			
					3	.2923	7424	.0410	76.7	3	.2790	7087	.0540	70.1	.2500	.047	70.9			
					4	.2150	5461	.0350	74.0	4	.2023	5138	.0475	65.9				3.5	.2205	5600
										4	.1870	4750	.0630	56.0	.1875	.041	57.3	4	.1870	4750
					5	.1680	4267	.0320	70.6	5	.1590	4039	.0410	63.2				5	.1575	4000
					6	.1387	3523	.0280	69.6	6	.1318	3348	.0348	62.7	.1250	.041	56.7	6	.1319	3350
					7	.1149	2918	.028	64.8	7	.1080	2743	.0350	57.2				7	.1102	2800
					8	.1000	2540	.0250	64.0	8	.0964	2449	.0286	60.2				8	.0929	2360
					9	.0881	2238	.230	62.7											
					10	.0800	2032	.0200	64.0	10	.0742	1885	.0258	56.3				10	.0787	2000
					11	.0709	1801	.0200	61.0	11	.0730	1854	.0180	64.5						
14	.0620	1575	.0090	76.4	12	.0653	1659	.0180	60.8	12	.0603	1532	.0230	51.8				12	.0669	1700
16	.0535	1359	.0090	73.3	14	.0544	1382	.0170	57.2	14	.0510	1295	.0204	51.0				14	.0551	1400
18	.0466	1184	.0090	70.2	16	.0465	1181	.0160	55.4	16	.0445	1130	.0181	50.7				16	.0465	1180
20	.0410	1041	.0090	67.2																
22	.0380	965	.0075	69.7	18	.0406	1031	.0150	53.4	18	.0386	980	.0173	48.3				18	.0394	1000
24	.0342	869	.0075	67.2	20	.0360	914	.0140	51.8	20	.0340	864	.0162	46.2				20	.0335	850
26	.0310	787	.0075	64.8	22	.320	813	.135	49.6											
28	.0282	716	.0075	62.4	24	.0287	729	.0130	47.4	24	.0277	704	.0140	44.2				25	.0280	710
30	.0268	681	.0065	64.8	26	.0275	699	.0110	51.1											
32	.0248	630	.0065	62.7																
34	.0229	582	.0065	60.7	28	.0257	653	.0100	51.8									30	.0236	600
36	.0213	541	.0065	58.7	30	.0238	605	.0095	51.0	30	.0203	542	.0128	37.1						
38	.0198	503	.0065	56.7	32	.0223	566	.0090	50.9									35	.0197	500
40	.0185	470	.0065	54.8																
42	.0183	465	.0055	59.1	34	.0204	518	.0090	48.1											
44	.0172	437	.0055	57.4	36	.0188	478	.0090	45.8	35	.0176	447	.0118	37.9						
46	.0162	411	.0055	55.8	38	.0178	452	.0085	45.8									40	.0167	425
48	.0153	389	.0055	54.2	40	.0165	419	.0085	43.6	40	.0150	381	.0104	36.0						
50	.0145	368	.0055	52.6																
52	.0137	348	.0055	51.0														45	.0140	355
54	.0130	330	.0055	49.4	45	.0142	361	.0080	40.8											
58	.0127	323	.0045	54.6																
60	.0122	310	.0045	53.3																
62	.0116	295	.0045	51.7														50	.0118	300
64	.0111	282	.0045	50.7	50	.0125	318	.0075	39.1	50	.0110	279	.0090	30.3						
70	.0106	269	.0037	54.9																
72	.0102	259	.0037	53.8	55	.0112	284	.0070	37.9											
74	.0098	249	.0037	52.7														60	.0098	250
76	.0095	241	.0037	51.7																
78	.0091	231	.0037	50.6	60	.0102	259	.0065	37.5	60	.0092	234	.0075	30.5						
80	.0088	224	.0037	49.6																
84	.0084	213	.0035	49.8														70	.0083	212
88	.0079	201	.0035	47.9																
90	.0076	193	.0035	47.8																
94	.0071	180	.0035	45.0						80	.0070	178	.0055	31.4				80	.0071	180
105	.0065	165	.0030	46.9																
120	.0058	147	.0025	47.3						100	.0055	140	.0045	30.3				100	.0059	150
145	.0047	119	.0022	46.4						120	.0046	117	.0037	30.5				120	.0049	125
165	.0042	107	.0019	47.1						150	.0041	104	.0026	37.9				140	.0042	106
200	.0034	86	.0016	46.2						170	.0035	89	.0024	35.4				170	.0035	90
230	.0029	74	.0014	46.0						200	.0029	74	.0021	33.6				200	.0030	75
300	.0022	56	.0012	42.0						250	.0024	61	.0016	36.0				230	.0025	63
										270	.0016	32.2	.0016	32.2				270	.0021	53
										325	.0014	30.5	.0014	30.5				325	.0018	45
										400	.0010	36.0	.0010	36.0				400	.0015	38
										500	.0010	25.0	.0010	25.0				500	.0010	25
										635	.0008	25.0	.0008	25.0				635	.0008	20

Figure 3-6
Screen Mesh Conversion Chart

WARNING

When installing or maintaining this separator, shut off and lock out power before removing guards (cover, etc.). Follow all local and national electrical codes. Failure to comply could result in severe personal injury or property damage.

CAUTION

Due to heavy weight of vibrator, take extreme caution when lifting. Failure to comply can result in personal injury or property damage.

VIBRATOR REMOVAL

Follow these procedures for removal of the vibrator(s):

1. Shut off product flow.
2. Stop separator.
3. Lock out power to separator.
4. Disconnect cable gland from vibrator.
5. Due to weight, adequately secure vibrator before removing.
6. Each vibrator is equipped with four (4) mounting bolts that secure the vibrator to the motor mounting plate (see Figure 3-7). Remove hardware and then carefully remove vibrator.
7. Follow same procedures for second vibrator if needed.

NOTES

1. For vibrator weight specific to your order, refer to the vibrator data sheets provided in the SWECO-Italvibras LX Vibrator Manual.
2. When reassembling, re-torque units with 1/2" (M12) vibrator mounting bolts to 58 foot pounds (79 Nm) and 5/8" (M16) bolts to 137 foot pounds (186 Nm) without lubricant.

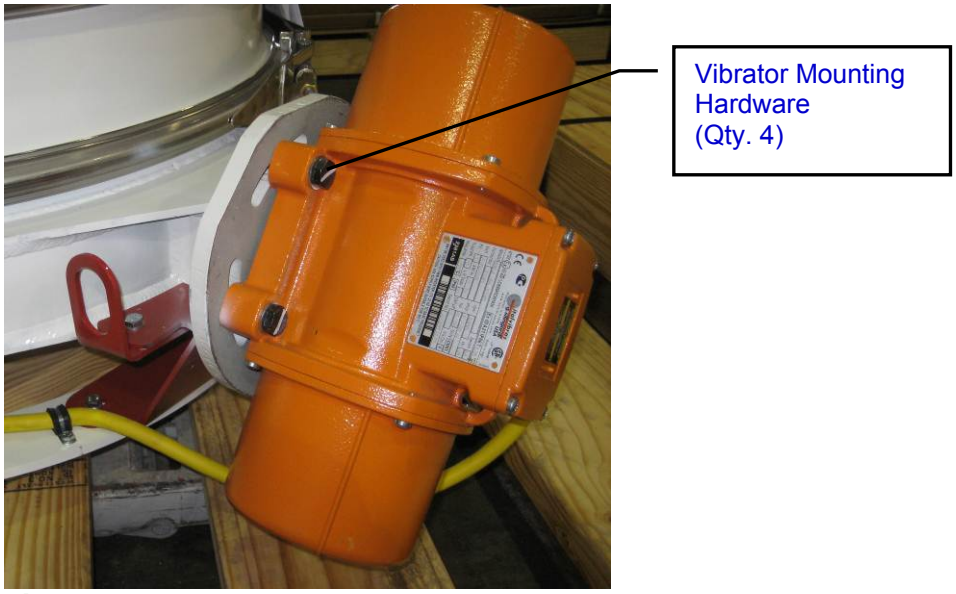


Figure 3-7
Vibrator Removal

BALL TRAY ASSEMBLY (OPTIONAL)

The SWECO Ball Tray Assembly (optional accessory) can be used to prevent screens from becoming dirty or blinded (product accumulated between the screen wires) and to prevent material from sticking to the screen. A coarse screen is mounted below the sizing screen. Elastomer balls are placed on this coarse screen and the unit's vibrating action causes the balls to bounce against the underside of the screen cloth. The bouncing and rotating action of the balls dislodge the mesh-clogging materials and scrape away the fibrous materials that tend to stick to the screen cloth.

Inspect balls on a weekly basis for excessive wear and replace if necessary.

SELF-CLEANING KIT (OPTIONAL)

It is essential that the screens be kept clean for the unit to operate properly. The SWECO Self-Cleaning Kit (optional accessory) prevents the screens from becoming dirty or blinded (product accumulated between the screen wires). It also prevents material from sticking to the screen, which will improve dry sizing and liquid/solid separation. The Self-Cleaning Kit is held between the separator frames by the outside clamping ring. When the separator is in operation, the sliders bounce and rotate between the perforated plate and the separator screen (see Figure 3-8). The bouncing and rotating action of the cleaning sliders dislodge mesh-clogging materials and scrape away fibrous materials that tend to stick to the screen cloth.

Inspect sliders on a weekly basis for excessive wear and replace if necessary.

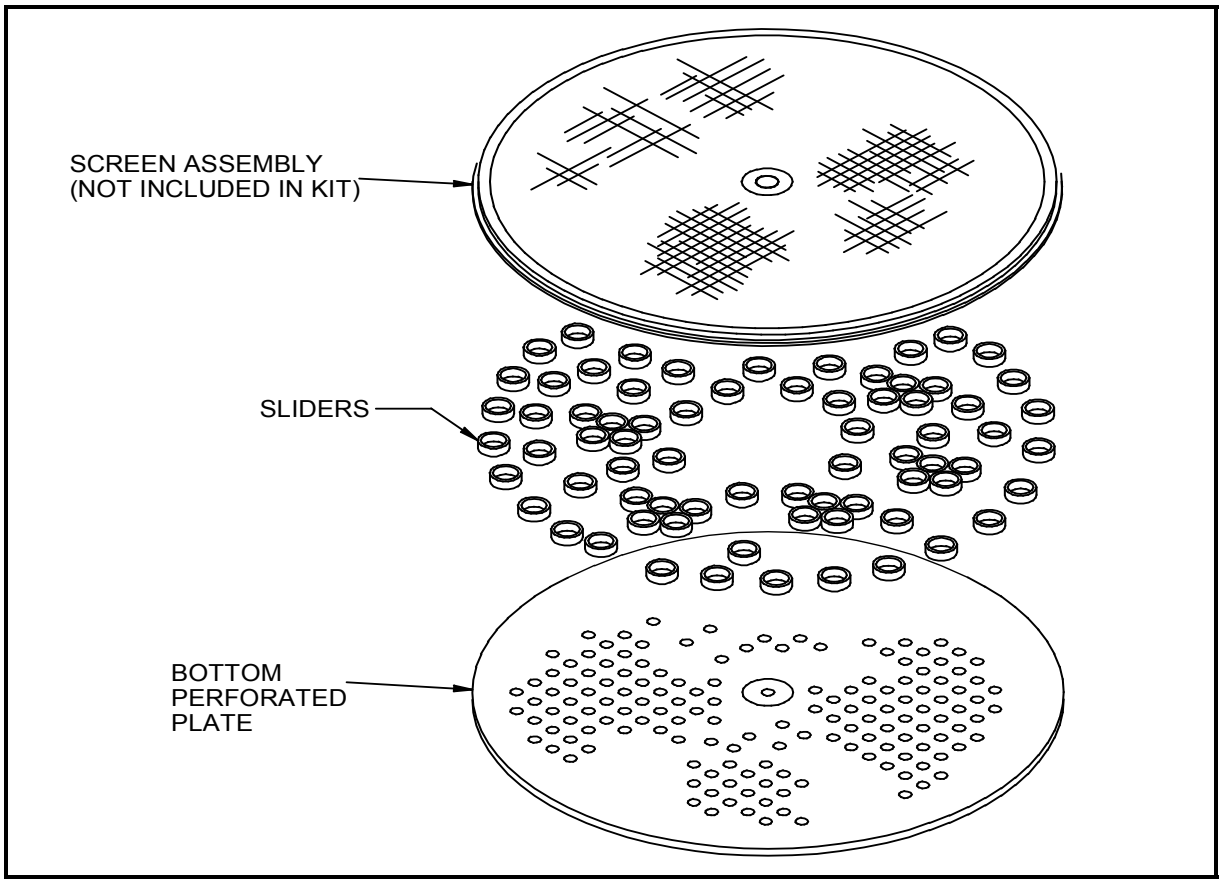


Figure 3-8
Self-Cleaning Kit

Self-Cleaning Kit (continued)

Piggybacking of sliders can stretch or tear the screen. To prevent this problem, replace sliders when they have worn to a minimum height as shown below.

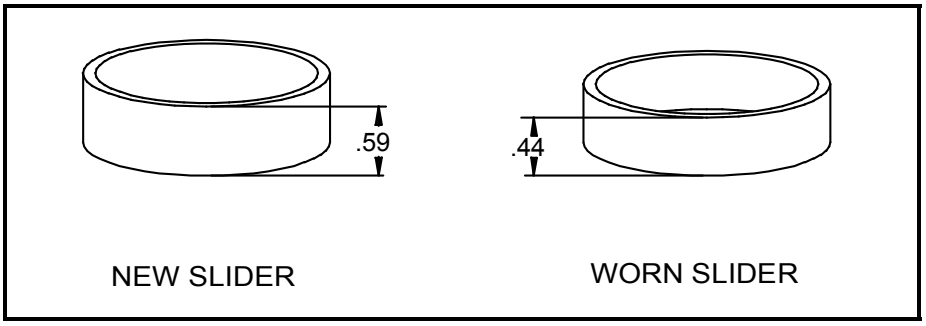


Figure 3-9
New and Worn Sliders (LX18 and LX24)

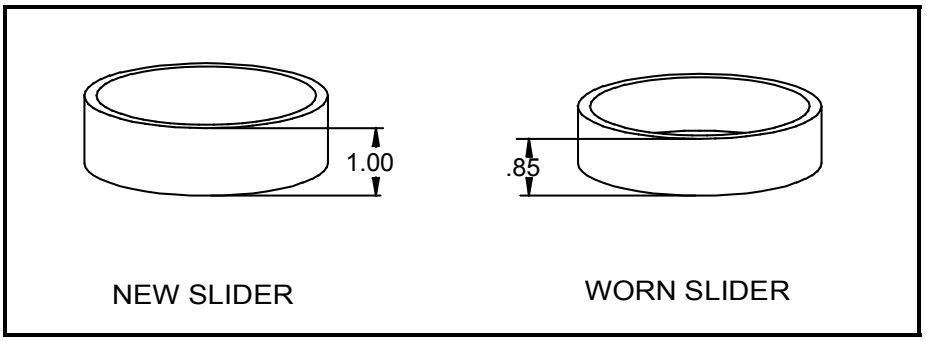


Figure 3-10
New and Worn Sliders (LX30, LX40, LX48, LX60 and LX72)

WARNING

When installing or maintaining this separator, shut off and lock out power before removing guards (cover, etc.). Follow all local and national electrical codes. Failure to comply could result in severe personal injury or property damage.

CAUTION

Screens are fragile. Handle them carefully. Never place tools or parts on the screen or damage to screen can occur.

CAUTION

Always tighten clamp ring before tightening the center tie-down assembly. This will help assure proper vertical location of screen center and help prevent premature screen failure.

To replace worn sliders, follow these procedures:

1. Shut off and lock out power.
2. Remove clamp ring, upper frame, center tie-down parts located *above* the screen (if applicable) and the screen from above the frame on which the kit is assembled.
3. Replace worn sliders that are located on top of the perforated plate.

Once sliders have been replaced, follow these steps to reassemble:

1. Place screen on frame and align properly. Make certain screen is right side up by checking the position of the tension ring. Take care that the screen does not come in contact with the center tie-down stud (if applicable) and cause damage to the screen.
2. Reinstall upper frame.
3. Reposition clamp ring around frames. Tighten ring snugly by tapping ring with soft-faced hammer before final torquing to be certain of a tight fit (see caution). The 18" clamp ring uses 1/4" hardware. Check and retighten to 5 foot pounds (7 Nm). The 24" through 72" clamp rings use 3/8" hardware. Check and retighten to 32 foot pounds (43 Nm). All clamp rings MUST be properly fastened and tight before beginning operation to prevent frame rotation and damage to gasket, frame, or screen. Re-check torque after one hour of operation.
4. Reinstall center tie-down parts (if applicable) that were removed from above the screen (see Figure 3-11 for LX18 and LX24 and Figure 3-12 for LX30). Tighten the hex jam nuts on the center tie-down stud. When tightening, the lower hex jam nut should be held with a wrench while the top hex jam nut is brought down against it and tightened with a second wrench.

   For LX40, LX48, LX60 and LX72 units, position center gasket over top of screen (see Figure's 3-13 and 3-14). Adjust pedestal (7/8 inch wrench) up or down as required so that the spacer makes contact with the screen center disc. The screen center should be level with the outer tension ring. Reinstall jam nut (right hand thread). Lightly tighten (13/16 inch wrench) to lock pedestal to stud. Reinstall center tie-down cap (left hand thread). Hand-tighten to top of screen center disc.

Self-Cleaning Kit (continued)

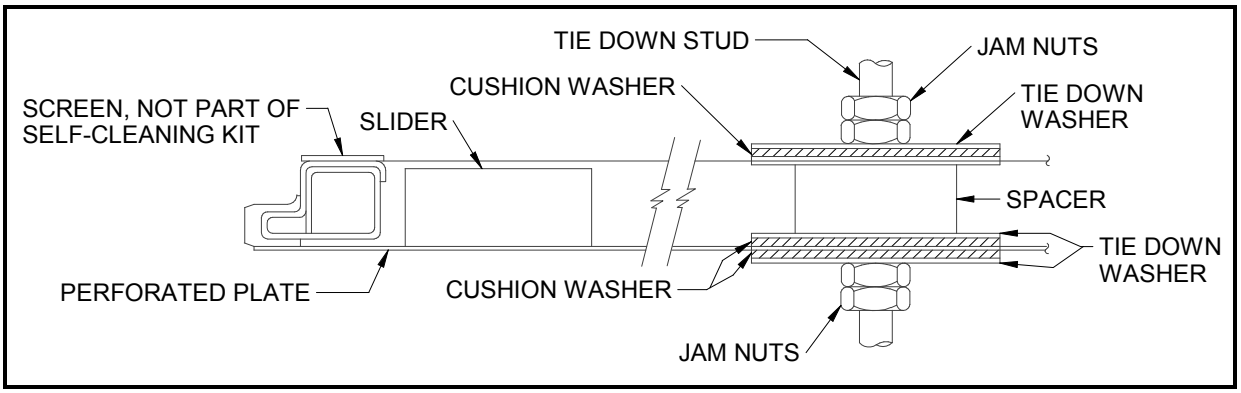


Figure 3-11
Cross-Section of Self-Cleaning Kit (LX18 and LX24)

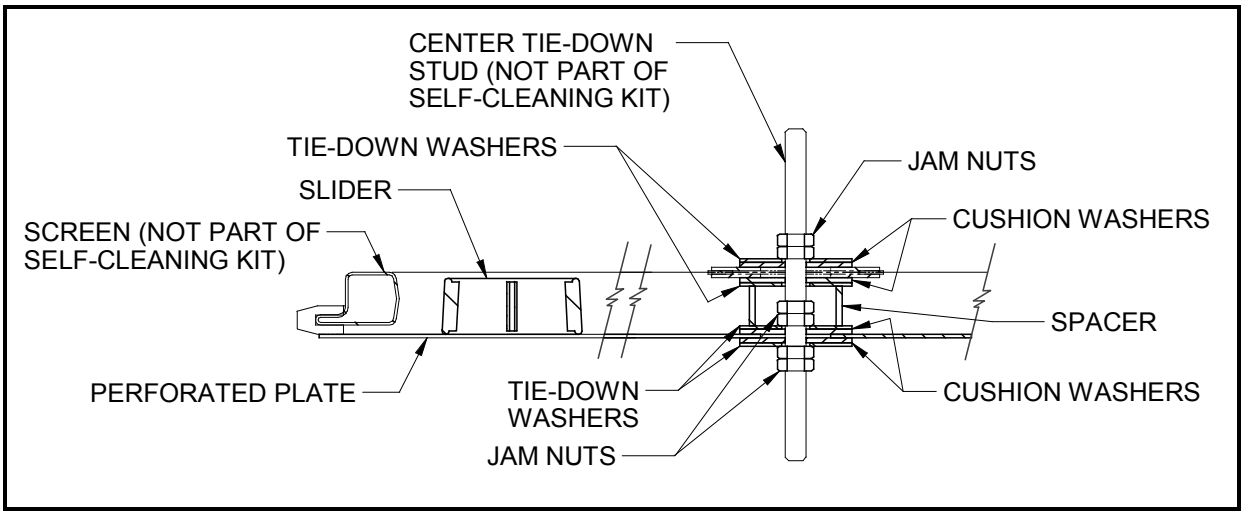


Figure 3-12
Cross-Section of Self-Cleaning Kit (LX30)

NOTE: Center tie-down is optional.

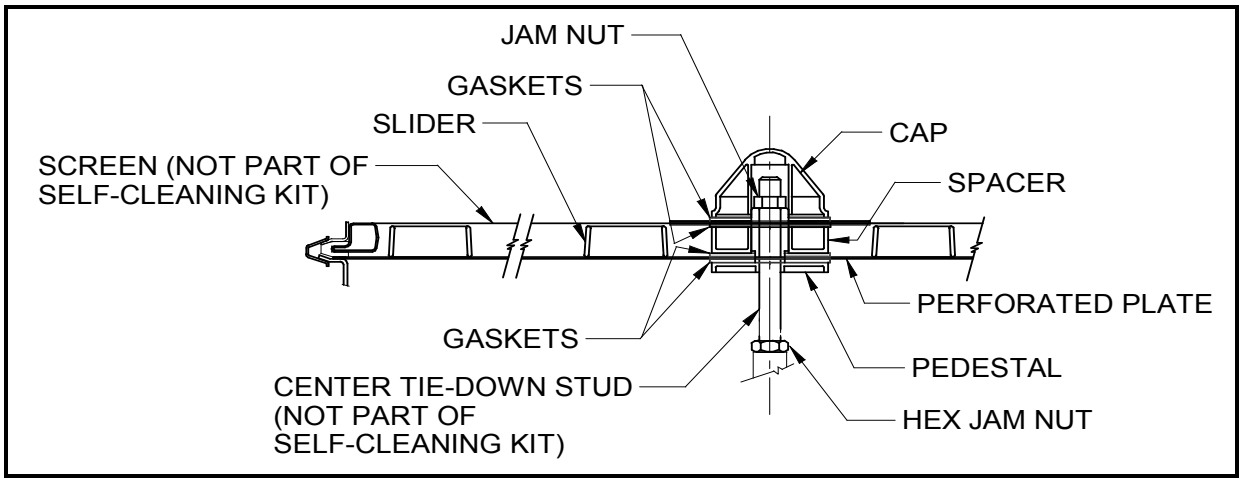


Figure 3-13
Cross-Section of Self-Cleaning Kit (LX40, LX48, and LX60)

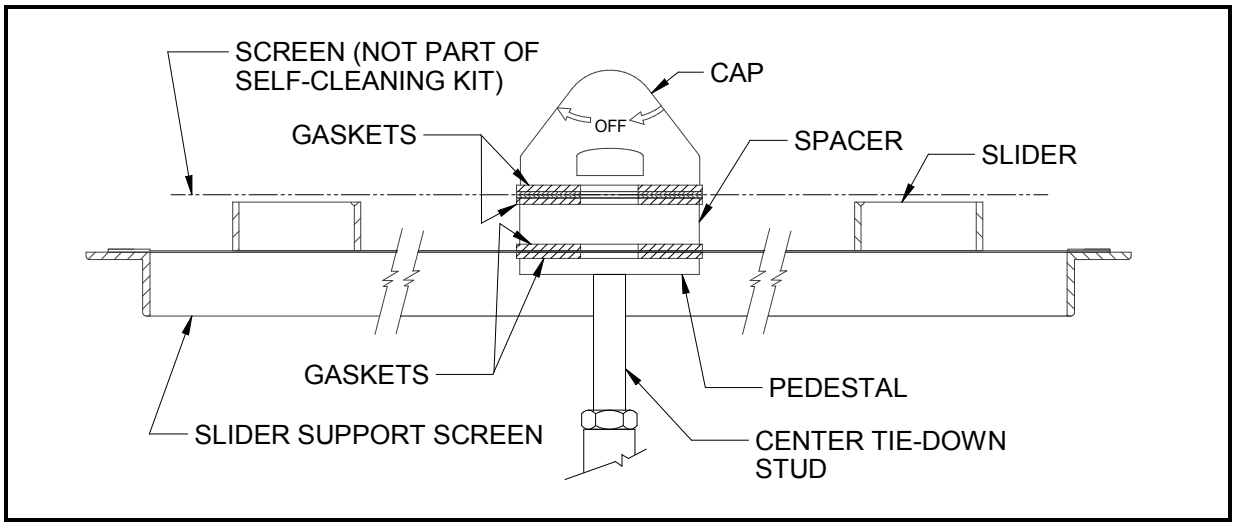


Figure 3-14
Cross-Section of Self-Cleaning Kit (LX72)

NOTES: 1. Center tie-down is optional.
2. LX72 uses a screen slider support instead of a perforated plate.

NOTES

CHAPTER 4
Parts Lists and Drawings

The following information shows the parts lists and drawings for a standard drive assembly, frames, parts, and accessories for all LX model separators (LX18 through LX72). This information provides you with the SWECO part numbers, a brief description of the parts, and quantities needed for reordering. Also included are drawings showing the location of the parts stated in the parts lists.

Use only authentic SWECO aftermarket parts to assure proper component fit and function.

When reordering, specify material type of unit or part. Order by part number NOT item number.

Refer to sales drawing (if applicable) for unit illustrations, dimensions and notes specific to your order. In addition, the following parts lists and drawings are shown as reference only. Parts listed on the sales drawing are specific to your unit and will take precedence over the parts listed in this chapter.

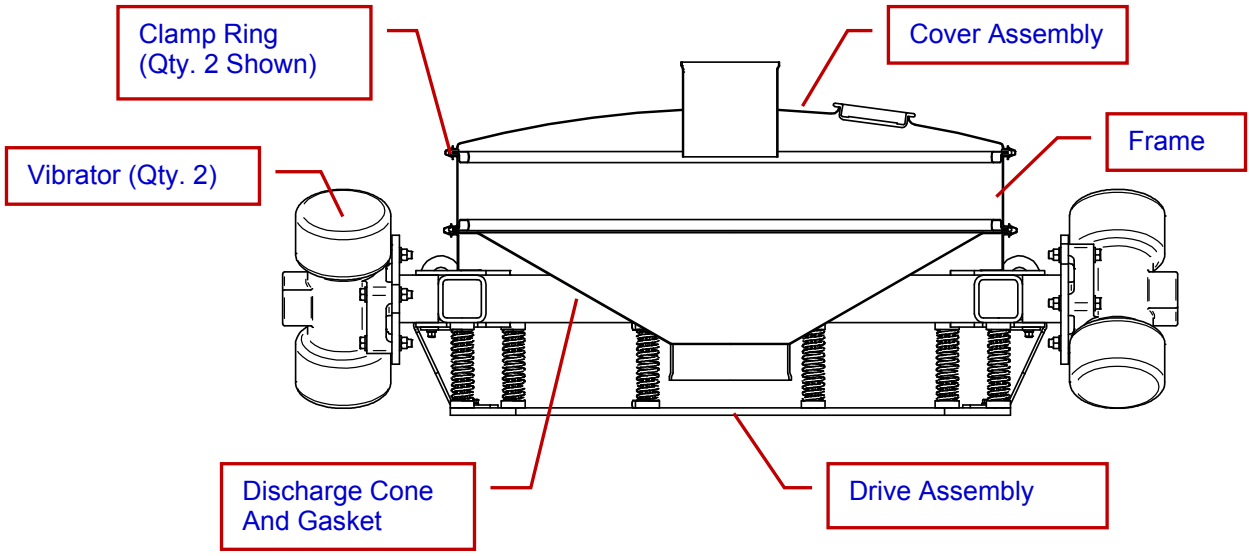


Figure 4-1
Unit Assembly

NOTES:

1. For cover, frame, clamp ring and discharge cone/gasket see section “Additional Parts and Accessories” per model size.

2. For drive assembly see section “Drive Assembly” per model size.

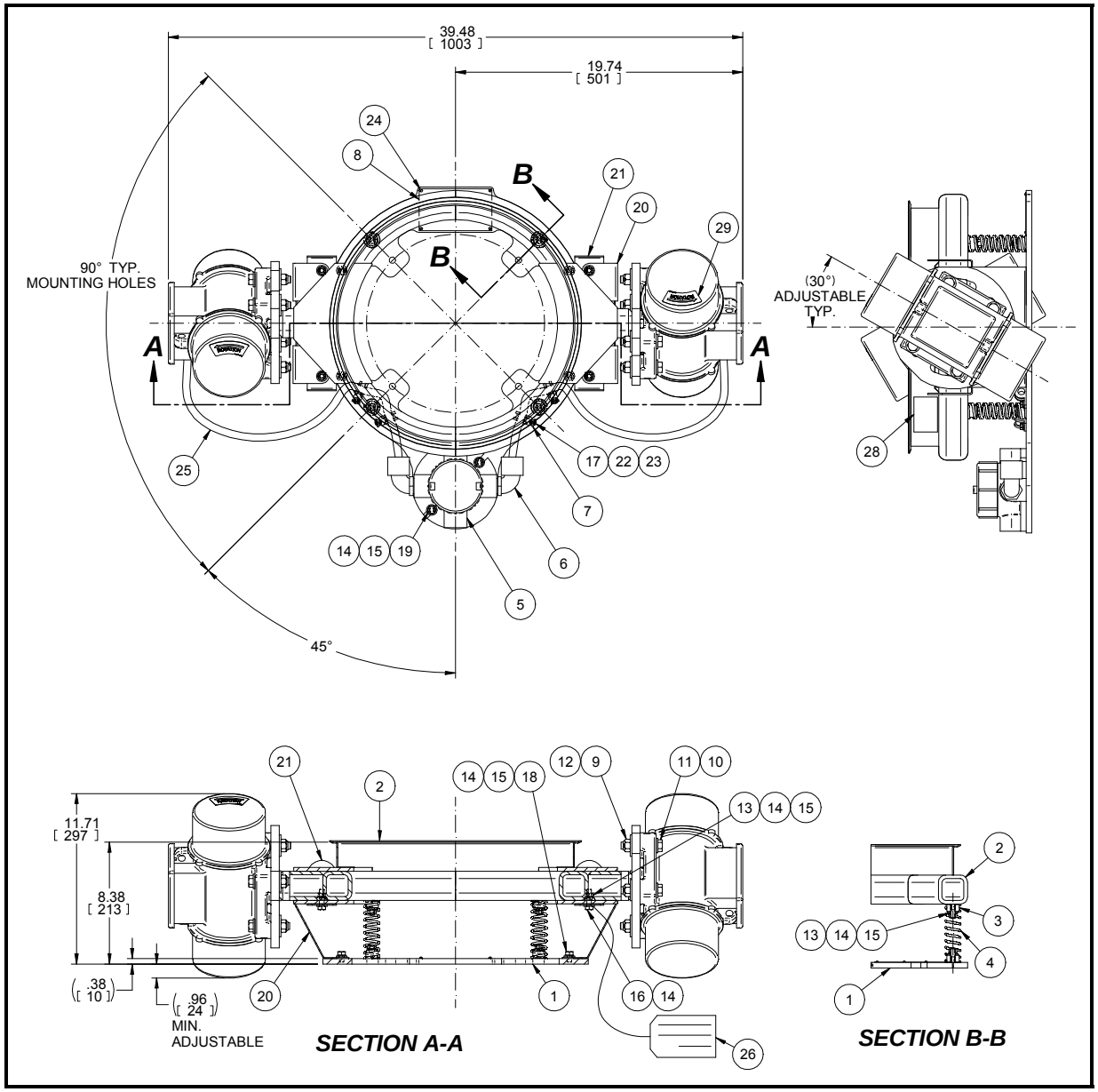
3. For vibrator information refer to section “Vibrator Technical Data” at the end of this chapter or refer to SWECO-Italvibras LX Vibrator Manual provided.

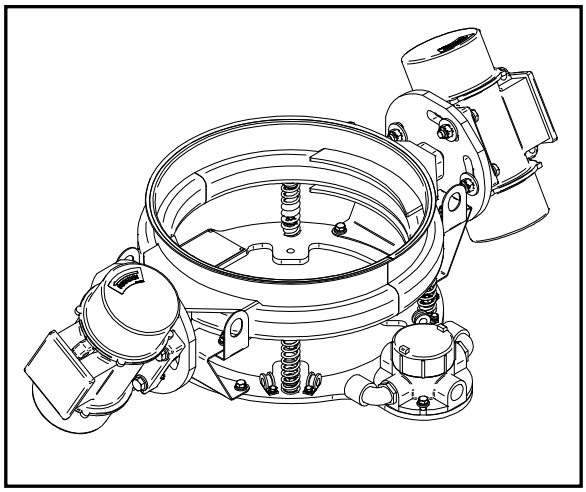
DRIVE ASSEMBLY, 8" (LX18)

Below is the parts list for a standard 8" drive assembly for an LX18 unit. Shown are the SWECO parts numbers in various material types. Specify material required when ordering parts. Refer to Figure 4-2 for illustration and notes.

ITEM NO.	DESCRIPTION	SWECO PART NO.			QTY.
		MS	304SST	316SST	
	Drive Assembly, 8", no pan, TENV motor w/ 3.54" x 4.92" mounting bolt pattern and 1.10" mounting flange thickness (Includes item's #1-30)	*G18_40570-10__			1
1	Base Plate	*G18_40590-00__			1
2	Drive Frame Weldment, 8"	*G18_40575-00__			1
3	Spring Spool, Urethane	S48K00227			8
4	Spring, 4", 302SST	S18S00204			4
5	Junction Box, 3/4 Conduit, 4 Outlets	01-1343			1
6	Cord Grip, 3/4-NPT, 90°, .375-.500, Male, Aluminum	01-1084			2
7	Clamp, 1/2" Diameter	01-1777	-	-	4
8	Nameplate	S18S01961			1
9	Hex Lock Nut, M12, Nylon Insert	07-437	07-421	-	8
10	Flat Washer, M12	05-281	05-305	05-278	8
11	Hex Head Cap Screw, M12 x 65 mm, Gr. 8.8	04-1350	-	-	8
12	Fender Washer, M12, 13mm I.D. x 37mm O.D. x 3mm Thick	05-426	05-370	-	8
13	Hex Nut, M8	03-425	03-232	03-482	12
14	Flat Washer, M8	05-384	05-276	05-312	22
15	Split Lock Washer, M8	05-383	05-285	05-313	18
16	Hex Head Cap Screw, M8-1.25 x 30 mm	-	04-1131	04-1827	4
17	Hex Head Cap Screw, M6-1.0 x 12 mm	04-1749	04-1750	04-1751	4
18	Hex Head Cap Screw, M8 x 12 mm	-	04-1139	-	4
19	Hex Head Cap Screw, M8-1.25 x 20 mm	-	-	04-1141	2
20	Shipping Bracket	G18C40578-00XE			2
21	Lifting Bracket	G18C40574-00XE			2
22	Flat Washer, M6	05-286	05-284	05-328	4
23	Split Lock Washer, M6	05-386	05-269	05-315	4
24	Drive Screws, #4 x .188 Long	04-110	04-1246	-	4
25	Cable, 16/4, SOOW-A 600V, Yellow	01-311			8 Ft.
26	Shipping Bracket Tag	F10K19149			2
27	SWECO Logo	00-421			2
28	Label, Pinch Point	S48K02146			1
29	Decal, Motor Rotation	S48K02179-00			2
30	Tag, Dual Voltage	S48K02181			2
31	Vibrators (See Figures 4-18 thru 4-20)	See Sales Order			2

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.





NOTES:

1. This drive is for vibrator motors with 3.54" x 4.92" mounting bolt pattern and 1.10" mounting flange thickness.
2. 1/2" (M12) vibrator mounting bolts to be checked and retightened to 58 foot pounds (79 Nm) without lubricant.
3. Center motor mounting bolts on thru slots of motor mounting plate.
4. Allow motor cords to hang loosely from motor to ensure enough slack for proper operation of unit.
5. Remove lift and shipping brackets (item's #20 and #21) prior to operation of unit.
6. Dimensions are shown as reference and can vary.

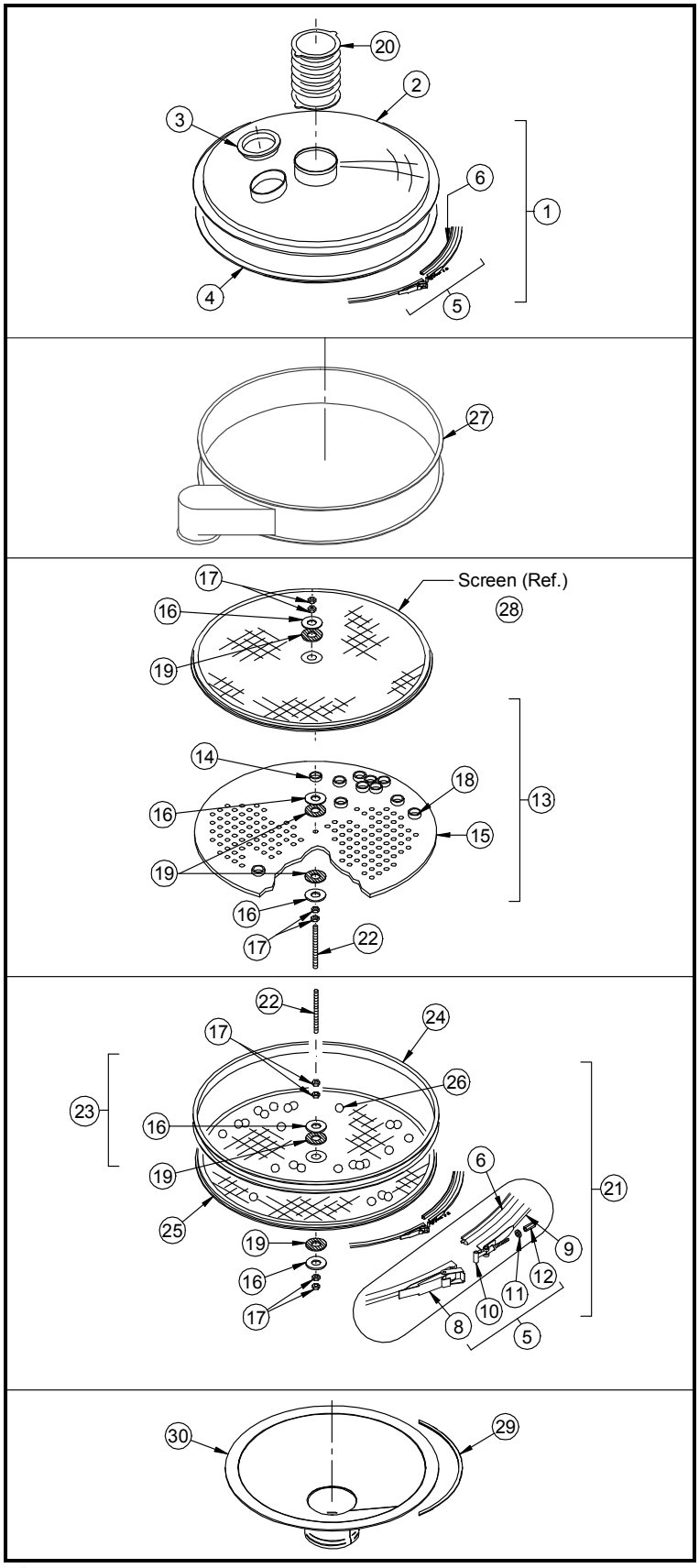
Figure 4-2
Drive Assembly, 8" (LX18)

*The fourth digit of the SWECO part number designates the material of construction. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.

ADDITIONAL PARTS AND ACCESSORIES (LX18)

Below is the parts list for standard frames, parts, and accessories available for the LX18 unit. Refer to Figure 4-3 for the illustration.

ITEM NO.	DESCRIPTION	SWECO PART NO.	QTY.
1	Cover Assembly w/4" Inlet and one 4" Inspection Opening (Includes Item's #2-6)	G18S81400-00AB	1
2	Cover Weldment	G18S81410-00AB	1
3	Round Inspection Plug, 4", White Neoprene	S48W00832	1
4	Tension Ring	S18S01021	1
5	Clamp Ring Assembly, Over-Center (Includes Item's #10-12)	S18S81124	REF.
6	Channel Gasket, White TPE FDA (Other Material's Available)	S18W81104	1
7	-	-	-
8	Clamp Ring Half, Over-Center (Component of Assembly)	-	1
9	Clamp Ring Half, Trunnion (Component of Assembly)	-	1
10	T-Bolt , 1/4-NC, 304SST	S24S01121	1
11	Flat Washer, 1/4", 304SST (Replacement Part)	05-162	2
12	Coupling Nut, Brass, 1/4-NC, Brass	03-273	2
13	Self-Cleaning Kit w/White Nylon Sliders and White Neoprene Washers (Other Material's Available) (Includes Item's #14-19)	S18Q01045-17-W	1
14	Spacer	S18S01047	1
15	Bottom Perforated Plate, Quiet Clean	S18Q01046	1
16	Center Tie-Down Washer (Self-Cleaning Kit Requires Qty. of 3, Center Tie-Down Assembly Requires Qty. of 2)	S30S00922	REF.
17	Hex Jam Nut, 3/8-NC, 316SST (Self-Cleaning Kit Requires Qty. of 4, Center Tie-Down Assembly Requires Qty. of 5)	03-159	REF.
18	Sliders, White Nylon (Other Material's Available)	S18K01017	52
19	Screen Cushion Washer, White Neoprene (Other Material's Available)(Self-Cleaning Kit Requires Qty. of 3, Center Tie-Down Assembly Requires Qty. of 2)	S30W00921	REF.
20	Spout Connector, 3" x 8" Flexible, Black Neoprene Spout Connector, 3" x 8" Flexible, White Neoprene FDA (Other Material's and Sizes Available) Clamp Band, 2-6", 304SST	S18N01904 S18W01904 10-449	1 2
21	Ball Tray Assembly w/Gum Rubber Balls (Optional) (Other Ball Material's Available) (Includes Item's #5 & 24-26)	S18S81600-05	1
22	Center Tie-Down Stud, 3/8-NC x 3" Long Center Tie-Down Stud, 3/8-NC x 5" Long	S18S00915 S18S00916	1
23	Center Tie-Down Assembly (Includes Item's #16, 17, & 19)	S18S00940	1
24	Blank Spacing Frame, 2"	S18S81601	1
25	Supertaut Plus Screen w/Gasket (Item #6), 4MG (Ball Tray) (Standard Unless Otherwise Specified)	18B8A004M	1
26	Ball Tray Ball, Gum Rubber (Other Material's Available)	S48K01605	18
27	Spacing Frame, 3" w/2" x 3" Spout Spacing Frame, 5" w/3" x 4" Spout Blank Frame, 3" Blank Frame, 5"	S18S80300-00AB S18S80500-00AB S18S80301 S18S80501-00AB	1
28	Screen Assembly (Specify Material and Mesh)	See Sales Order	1
29	Cone Gasket, 18", White FDA EPDM	S18E11105	1
30	Discharge Cone Weldment (Specify Material and Outlet Diameter)	*S18_40585-___	1



COVER ASSEMBLY

ADDITIONAL FRAMES

SELF-CLEANING KIT

NOTE: The standard LX18 requires no center tie-down; must be specified if needed.

BALL TRAY ASSEMBLY

DISCHARGE CONE AND GASKET

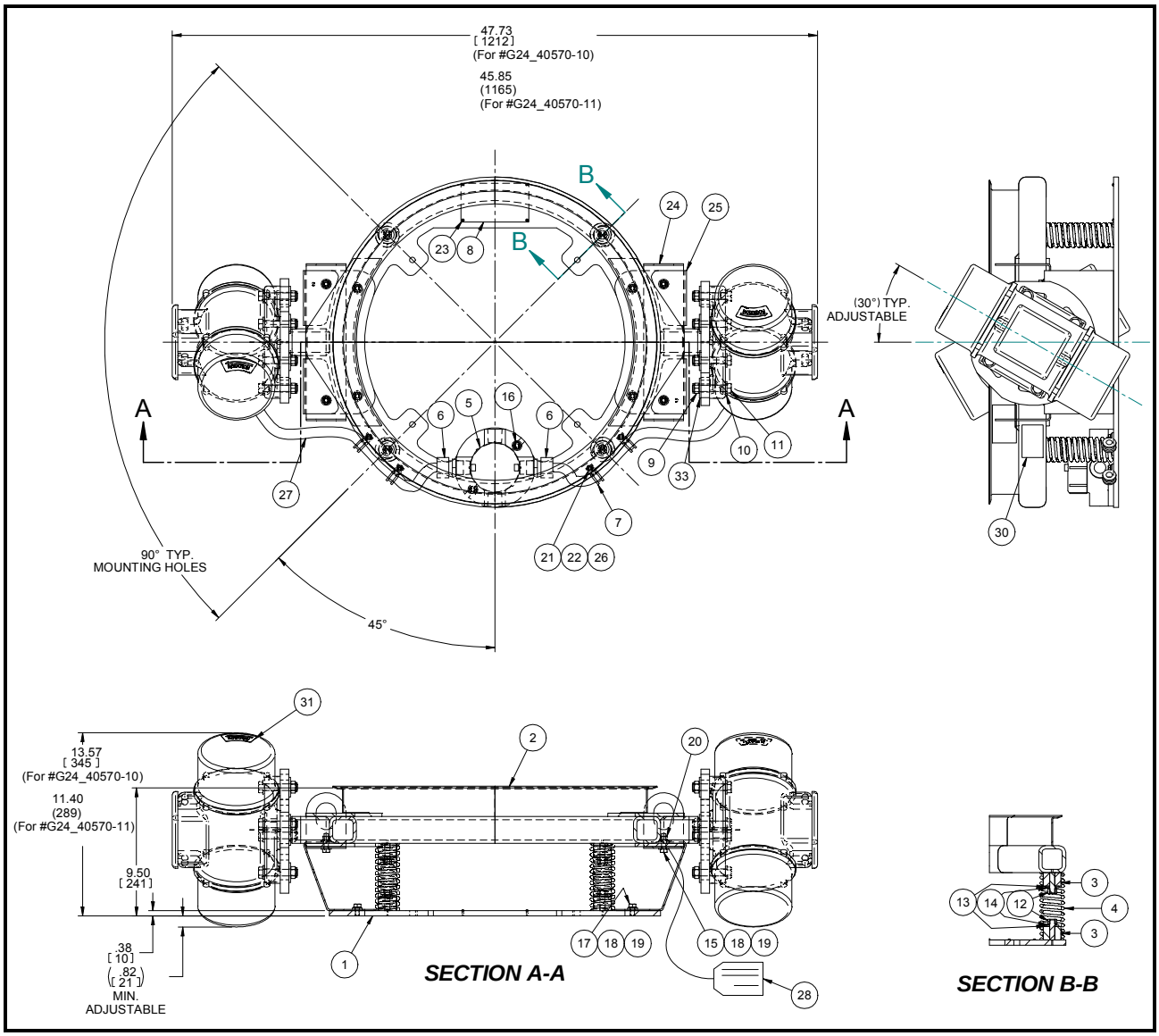
Figure 4-3
Additional Parts and Accessories (LX18)

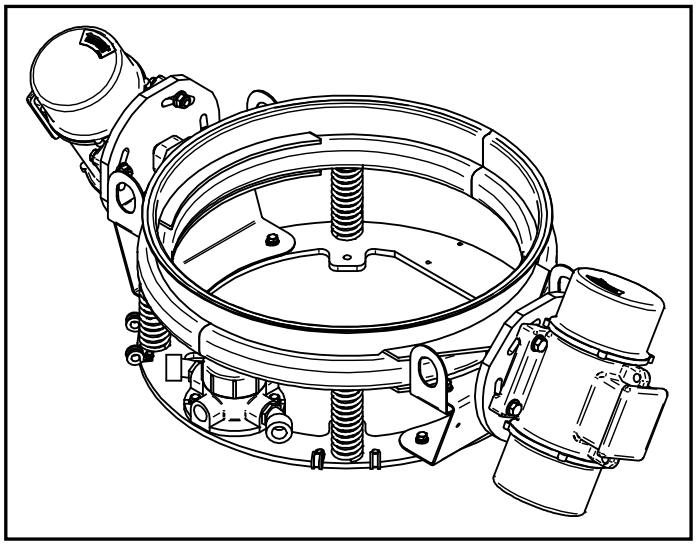
*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.

DRIVE ASSEMBLY, 10" (LX24)

Below is the parts list for a standard 10" drive assembly for an LX24 unit. Shown are the SWECO parts numbers in various material types. Specify material required when ordering parts. Refer to Figure 4-4 for illustration and notes.

ITEM NO.	DESCRIPTION	SWECO PART NO.			QTY.
		MS	304SST	316SST	
	Drive Assembly, 10", no pan, TENV motor with 4.13" x 5.51" mounting bolt pattern and 1.18" mounting flange thickness Drive Assembly, 10", no pan, TENV motor with 3.54" x 4.92" mounting bolt pattern and 1.10" mounting flange thickness Drive Assembly, 10", no pan, TEEP motor with 4.13" x 5.51" mounting bolt pattern and 1.18" mounting flange thickness (Includes item's #1-33, #35 TEEP only)	*G24_40570-10__ *G24_40570-11__ *G24_40570-20__			1
1	Base Plate	*G24_40590-00__			1
2	Drive Frame Weldment, 10" with 4.13" x 5.51" mounting bolt pattern and 1.18" mounting flange thickness Drive Frame Weldment, 10" with 3.54" x 4.92" mounting bolt pattern and 1.10" mounting flange thickness	*G24_40575-00__ *G24_40575-11__			1
3	Spring Spool, Urethane	S24K00225			8
4	Spring, 5", 302SST	G40S00201			4
5	Junction Box, 3/4 Conduit, 4 Outlets	01-1343			1
6	Cord Grip, 3/4-NPT, Straight, .625-.750, Aluminum (TENV Units with 4.13" x 5.51" x1.18" bolt pattern) Cord Grip, 3/4-NPT, Straight, .375-.500 (TENV Units with 3.54" x 4.92" x1.10" bolt pattern) Cord Grip, 3/4-NPT, Straight, .500-.625, Aluminum (TEEP Units with 4.13" x 5.51" x1.18" bolt pattern)	01-106 01-105 01-168			2
7	Clamp, 5/8" Diameter (Units with 4.13" x 5.51" x1.18" bolt pattern)	01-1778	01-1779	-	4
	Clamp, 1/2" Diameter (Units with 3.54" x 4.92" x1.10" bolt pattern)	01-1777	-	-	
8	Nameplate	S18S01961			1
9	Lock Nut, M12	-	07-421	-	8
10	Flat Washer, M12	05-281	05-305	05-278	8
11	Hex Head Cap Screw, M12-1.75 x 75 mm, Grade 10.9	04-1844	-	-	8
12	Hex Nut, M10	03-449	03-229	03-300	8
13	Fender Washer, M10	05-404	05-417	-	8
14	Split Lock Washer, M10	05-381	05-270	05-316	8
15	Hex Head Cap Screw, M8-1.25 x 30 mm	04-1926	04-1131	04-1827	4
16	Hex Head Cap Screw, M8-1.25 x 20 mm	-	-	04-1141	2
17	Hex Head Cap Screw, M8-1.25 x 16 mm	04-1927	04-1140	-	4
18	Flat Washer, M8	05-384	05-276	05-312	14
19	Split Lock Washer, M8	05-383	05-285	05-313	10
20	Hex Nut, M8	03-425	03-232	03-482	4
21	Hex Head Cap Screw, M6-1.0 x 12 mm	04-1749	04-1750	04-1751	4
22	Split Lock Washer, M6	05-386	05-269	05-315	4
23	Drive Screws, #4 x .188 Long	04-110	04-1246	-	4
24	Lifting Bracket	G24C40574-00XE			2
25	Shipping Bracket	G24C40578-00XE			2
26	Flat Washer, M6	05-286	05-284	05-328	4
27	Cable, 14/4 SOW-A 600V, Yellow (TENV Units with 4.13" x 5.51" x1.18" bolt pattern) Cable, 16/6 SO/SOW-A 600V (TEEP Units with 4.13" x 5.51" x1.18" bolt pattern) Cable, 16/4 SOOW-A 600V, Yellow (TENV Units with 3.54" x 4.92" x1.10" bolt pattern)	01-1151 01-1831 01-311			16 Ft. 16 Ft. 8 Ft.
28	Shipping Bracket Tag	F10K19149			2
29	SWECO Logo	00-421			2
30	Label, Pinch Point	S48K02146			1
31	Decal, Motor Rotation	S48K02179-00			2
32	Tag, Dual Voltage	S48K02181			2
33	Fender Washer, M12, 13mm I.D. x 37mm O.D. x 3mm Thick	05-426	05-370	-	8
34	Vibrators (See Figures 4-18 thru 4-20)	See Sales Order			2
35	Cord Grip, 1/2 NPT, Straight, .500-.625, Male (For TEEP Units Only, Not Shown)	01-165			2





NOTES:

1. 1/2" (M12) vibrator mounting bolts to be checked and retightened to 58 foot pounds (79 Nm) without lubricant.
2. Center motor mounting bolts on thru slots of motor mounting plate.
3. Allow motor cords to hang loosely from motor to ensure enough slack for proper operation of unit.
4. Remove lift and shipping brackets (item's #24 and #25) prior to operation of unit.
5. Dimensions are shown as reference and can vary.

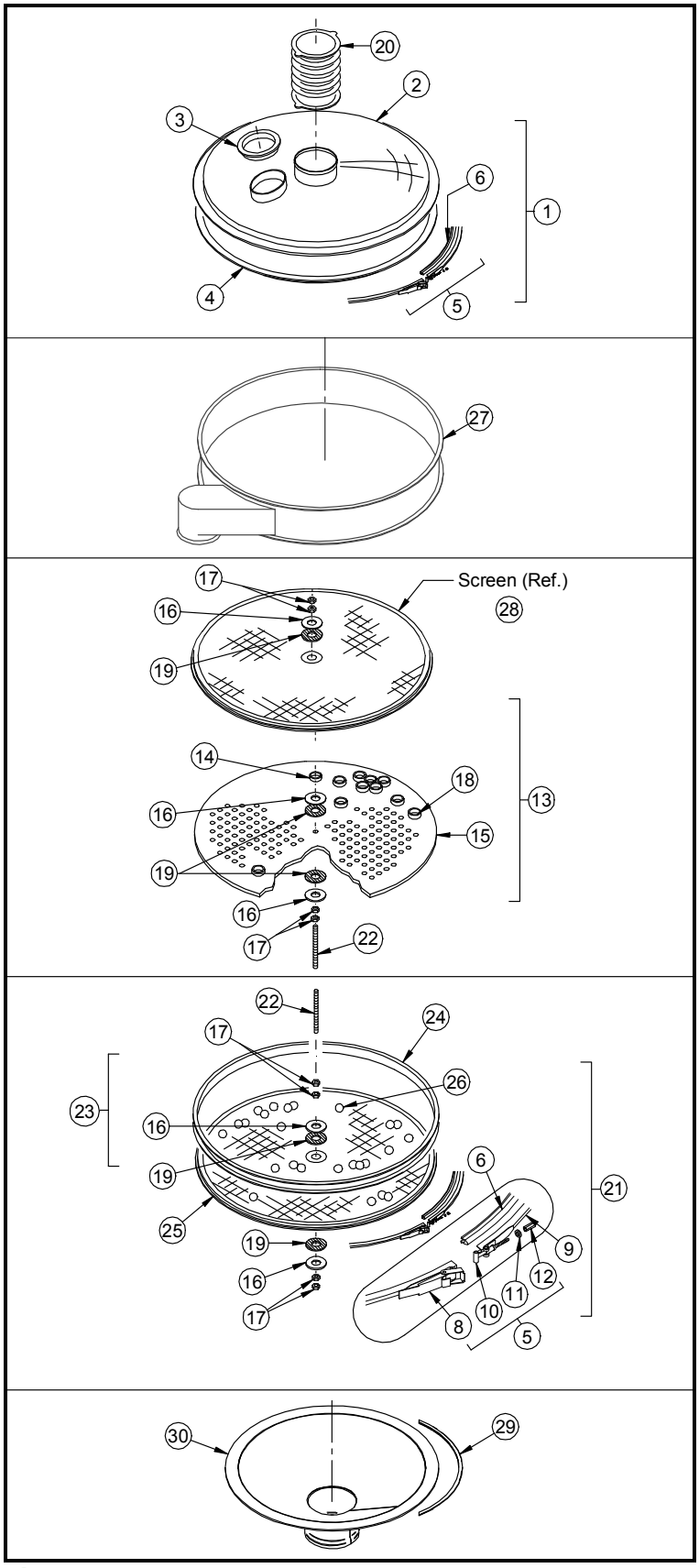
Figure 4-4
Drive Assembly, 10" (LX24)

ADDITIONAL PARTS AND ACCESSORIES (LX24)

Below is the parts list for standard frames, parts, and accessories available for the LX24 unit. Refer to Figure 4-5 for the illustration.

ITEM NO.	DESCRIPTION	SWECO PART NO.	QTY.
1	Cover Assembly w/6" Inlet and one 4" Radius Inspection Opening (Includes Item's #2-5a, & 6)	*G24_01400-00__	1
2	Cover Weldment	*G24_01410-00__	1
3	Round Inspection Plug, 4", White Neoprene	S48W00832	1
4	Tension Ring	S24S01021	1
5a	Clamp Ring Assembly, Over-Center (Includes Item's #7-12)	S24S81124	REF.
5b	Clamp Ring Assembly, Heavy Duty (Not Shown, See Figure 4-17)	S24S81150	REF.
6	Channel Gasket, White TPE FDA (Other Material's Available)	S24W81104	1
7	Hex Head Cap Screw, 3/8-NC x 8-1/4" Long, 304SST (Not Shown)	S48S01121	1
8	Clamp Ring Half, Over-Center	S24S81119	1
9	Clamp Ring Half, Trunnion	S24S81118	1
10	T-Bolt , 3/8-NC, 304SST	S48S81121	1
11	N/A	-	-
12	Coupling Nut, 3/8-NC, Brass	03-271	2
13	Self-Cleaning Kit w/White Nylon Sliders and White Neoprene Washers (Other Material's Available) (Includes Item's #14-19)	S24Q01045-17-W	1
14	Spacer	S18S01047	1
15	Bottom Perforated Plate, Quiet Clean	S24Q01046	1
16	Center Tie-Down Washer (Self-Cleaning Kit Requires Qty. of 3, Center Tie-Down Assembly Requires Qty. of 2)	S30S00922	REF.
17	Hex Jam Nut, 3/8-NC, 316SST	03-159	5
18	Sliders, White Nylon (Other Material's Available)	S18K01017	130
19	Screen Cushion Washer, White Neoprene (Other Material's Available)(Self-Cleaning Kit Requires Qty. of 3, Center Tie-Down Assembly Requires Qty. of 2)	S30W00921	REF.
20	Spout Connector, 6" x 12" Flexible, Black Neoprene Spout Connector, 6" x 12" Flexible, White Neoprene FDA (Other Material's and Sizes Available) Clamp Band, 6"	S30N01904 S30W01904 10-450	1 2
21	Ball Tray Assembly w/Gum Rubber Balls (Includes Item's #5a & 22-26)	*S24_01600-05	1
22	Center Tie-Down Stud, 3/8-NC x 6-1/8" Long (For Ball Tray) Center Tie-Down Stud, 3/8-NC x 3-5/8" Long	S24S00914 S24S00913	1
23	Center Tie-Down Assembly (Includes Item's #16, 17, & 19)	S30S00940	1
24	Blank Spacing Frame, 2"	*S24_01601-00__	1
25	Supertaut Plus Screen w/Gasket (Item #6), 4MG (Ball Tray) (Standard Unless Otherwise Specified)	24A8A004M	1
26	Ball Tray Ball, Gum Rubber (Other Material's Available)	S48K01605	25
27	Spacing Frame, 3" w/2" x 3" Spout Spacing Frame, 4" w/3" x 6" Spout Spacing Frame, 6" w/3" x 6" Spout Blank Frame, 4" Blank Frame, 6"	S24S02300-00__ *S24_02400-00__ *S24_80600-00__ *S24_02401-00__ *S24_80601	1
28	Screen Assembly (Specify Material and Mesh)	See Sales Order	1
29	Cone Gasket, 24", White FDA EPDM	S24E11105	1
30	Discharge Cone Weldment (Specify Material and Outlet Diameter)	*S24_40585-____	1

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.



COVER ASSEMBLY

ADDITONAL FRAMES

SELF-CLEANING KIT

BALL TRAY ASSEMBLY

DISCHARGE CONE AND GASKET

Figure 4-5
Additional Parts and Accessories (LX24)

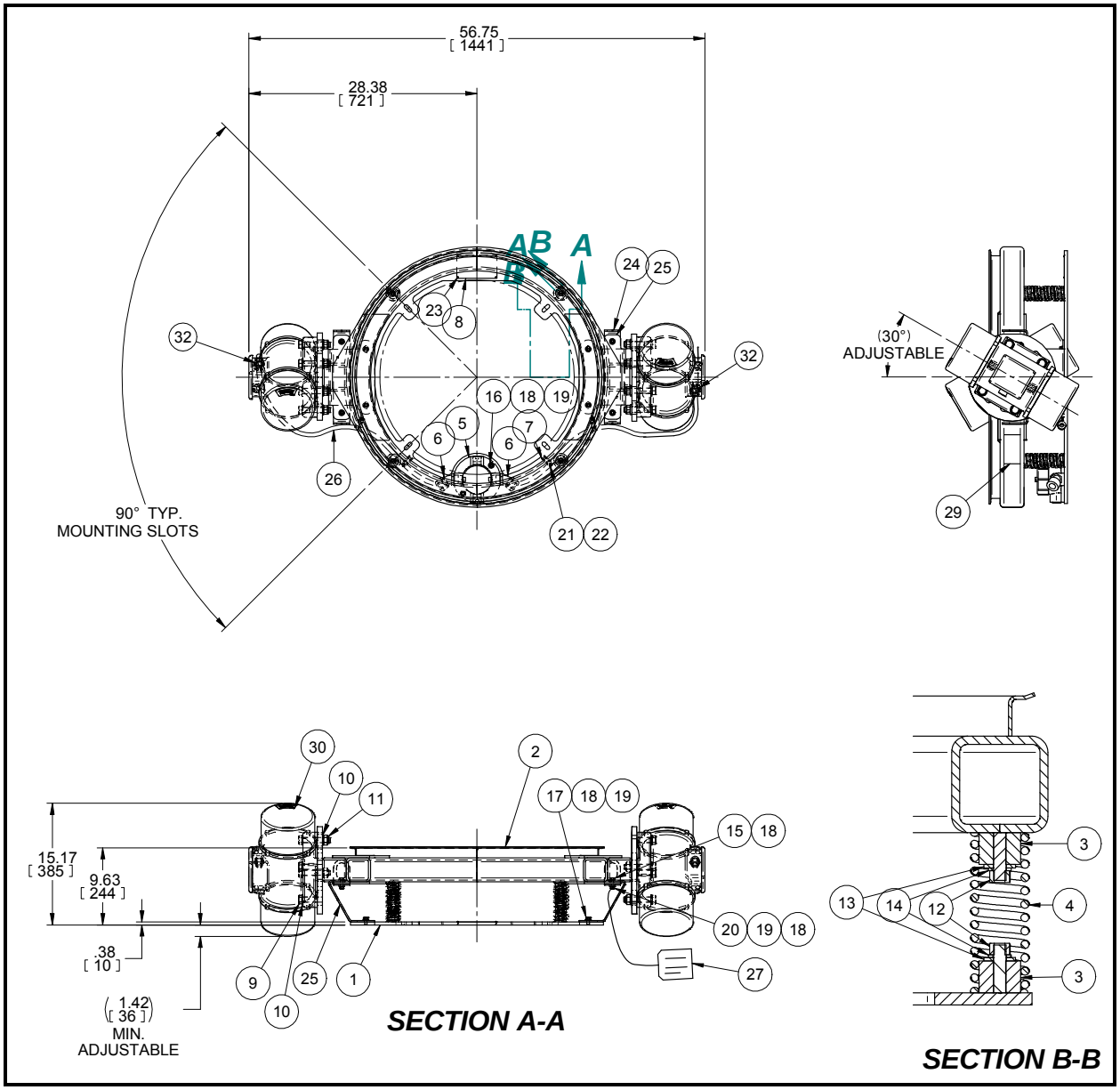
NOTE: See bill of material and Figure 4-7 for 10" drive assembly with 4.13" x 5.51" mounting bolt pattern and 1.18" mounting flange thickness.

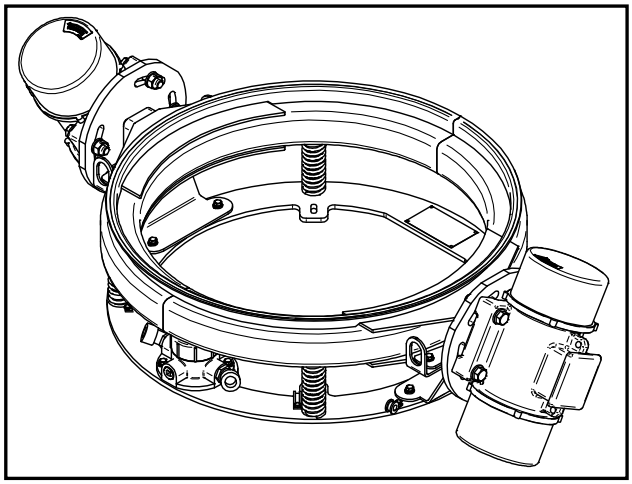
DRIVE ASSEMBLY, 10" (LX30)

Below is the parts list for a standard 10" drive assembly with 4.72" x 6.69" mounting bolt pattern and 1.77" mounting flange thickness for LX30 units. Shown are the SWECO parts numbers in various material types. Specify material required when ordering parts. Refer to Figure 4-6 for illustration and notes.

ITEM NO.	DESCRIPTION	SWECO PART NO.			QTY.
		MS	304SST	316SST	
	Drive Assembly, 10", no pan, TENV motor with 4.72" x 6.69" mounting bolt pattern and 1.77" mounting flange thickness (Includes item's #1-31) Drive Assembly, 10", no pan, Explosion Proof (TEEP) motor with 4.72" x 6.69" mounting bolt pattern and 1.77" mounting flange thickness (Includes item's #1-32)	*G30_40570-10__ *G30_40570-20__			1
1	Base Plate	*G30_40590-00__			1
2	Drive Frame Weldment, 10" with 4.72" x 6.69" mounting bolt pattern and 1.77" mounting flange thickness	*G30_40575-00__			1
3	Spring Spool, Urethane	S24K00225			8
4	Spring, 5", 302SST	G40S00201			4
5	Junction Box, 3/4 Conduit, 4 Outlets	01-1343			1
6	Cord Grip, 3/4-NPT, 45°, .500-.625, Male, Aluminum	01-167			2
7	Clamp, 5/8" Diameter	01-1778	01-1779	-	4
8	Nameplate	S18S01961			1
9	Hex Head Cap Screw, M16-2.0 x 90 mm, Grade 8.8	04-1888	-	-	8
10	Flat Washer, M16	05-444	05-289	05-326	16
11	Hex Locknut, M16-2.0, Nylok Insert	07-193	-	-	8
12	Hex Nut, M10	03-449	03-229	03-300	8
13	Fender Washer, M10	05-404	05-417	-	8
14	Split Lock Washer, M10	05-381	05-270	05-316	8
15	Hex Head Cap Screw, M8-1.25 x 30 mm	04-1926	04-1131	04-1827	4
16	Hex Head Cap Screw, M8-1.25 x 20 mm	-	-	04-1141	2
17	Hex Head Cap Screw, M8-1.25 x 16 mm	04-1927	04-1140	-	4
18	Flat Washer, M8	05-384	05-276	05-312	14
19	Split Lock Washer, M8	05-383	05-285	05-313	10
20	Hex Nut, M8	03-425	03-232	03-482	4
21	Hex Head Cap Screw, M6-1.0 x 12 mm	04-1749	04-1750	04-1751	4
22	Split Lock Washer, M6	05-386	05-269	05-315	4
23	Drive Screws, #4 x .188 Long	04-110	04-1246	-	4
24	Lifting Bracket	G30C40574-00XE			2
25	Shipping Bracket	G30C40578-00XE			2
26	Cable, 14/4 SOW-A 600V, Yellow (TENV) Cable, 16/6 SO/SOW-A 600V (UL Approved) (TEEP)	01-1151 01-1831			10 Ft.
27	Shipping Bracket Tag	F10K19149			2
28	SWECO Logo	00-421			2
29	Label, Pinch Point	S48K02146			1
30	Decal, Motor Rotation	S48K02179-00			2
31	Tag, Dual Voltage	S48K02181			2
32	Cord Grip, 1/2-NPT, Straight, .500-.625, Male (Explosion Proof Only)	01-165			2
33	Vibrators (See Figures 4-18 thru 4-20)	See Sales Order			2

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.





NOTES:

1. This drive is for vibrator motors with 4.72" x 6.69" mounting bolt pattern and 1.77" mounting flange thickness.
2. 1/2" (M12) vibrator mounting bolts to be checked and retightened to 58 foot pounds (79 Nm) and 5/8" (M16) to 137 foot pounds (186 Nm) without lubricant.
3. Center motor mounting bolts on thru slots of motor mounting plate.
4. Allow motor cords to hang loosely from motor to ensure enough slack for proper operation of unit.
5. Remove lift and shipping brackets (item's #24 and #25) prior to operation of unit.
6. Dimensions are shown as reference and can vary.

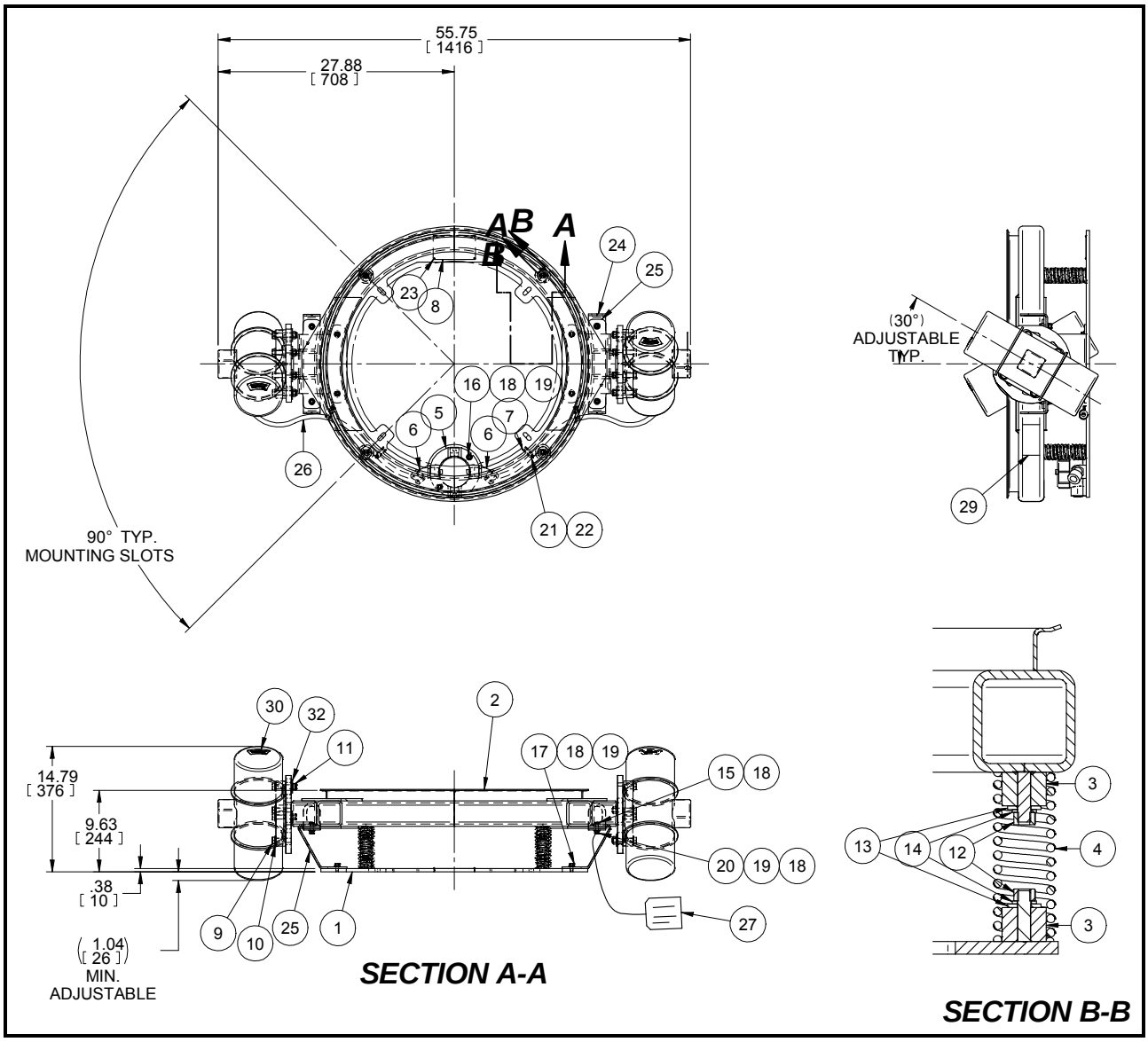
Figure 4-6
Drive Assembly, 10" (LX30)

DRIVE ASSEMBLY, 10" (LX30)

Below is the parts list for a standard 10" drive assembly with **4.13" x 5.51" mounting bolt pattern and 1.18" mounting flange thickness for LX30 units**. Shown are the SWECO parts numbers in various material types. Specify material required when ordering parts. Refer to Figure 4-7 for illustration and notes.

ITEM NO.	DESCRIPTION	SWECO PART NO.			QTY.
		MS	304SST	316SST	
	Drive Assembly, 10", no pan, TENV motor with 4.13" x 5.51" mounting bolt pattern and 1.18" mounting flange thickness (Includes item's #1-32)	*G30_40570-11__			1
1	Base Plate	*G30_40590-00__			1
2	Drive Frame Weldment, 10" with 4.13" x 5.51" mounting bolt pattern and 1.18" mounting flange thickness	*G30_40575-01__			1
3	Spring Spool, Urethane	S24K00225			8
4	Spring, 5", 302SST	G40S00201			4
5	Junction Box, 3/4 Conduit, 4 Outlets	01-1343			1
6	Cord Grip, 3/4-NPT, 45°, .500-.625, Male, Aluminum	01-167			2
7	Clamp, 5/8" Diameter	01-1778	01-1779	-	4
8	Nameplate	S18S01961			1
9	Hex Head Cap Screw, M12 x 65 mm, Grade 8.8	04-1350	-	-	8
10	Flat Washer, M12	05-281	05-305	05-278	8
11	Hex Locknut, M12, Nylok Insert	-	07-421	-	8
12	Hex Nut, M10	03-449	03-229	03-300	8
13	Fender Washer, M10	05-404	05-417	-	8
14	Split Lock Washer, M10	05-381	05-270	05-316	8
15	Hex Head Cap Screw, M8-1.25 x 30 mm	04-1926	04-1131	04-1827	4
16	Hex Head Cap Screw, M8-1.25 x 20 mm	-	-	04-1141	2
17	Hex Head Cap Screw, M8-1.25 x 16 mm	04-1927	04-1140	-	4
18	Flat Washer, M8	05-384	05-276	05-312	14
19	Split Lock Washer, M8	05-383	05-285	05-313	10
20	Hex Nut, M8	03-425	03-232	03-482	4
21	Hex Head Cap Screw, M6-1.0 x 12 mm	04-1749	04-1750	04-1751	4
22	Split Lock Washer, M6	05-386	05-269	05-315	4
23	Drive Screws, #4 x .188 Long	04-110	04-1246	-	4
24	Lifting Bracket	G30C40574-00XE			2
25	Shipping Bracket	G30C40578-00XE			2
26	Cable, 14/4 SOW-A 600V, Yellow	01-1151			10 Ft.
27	Shipping Bracket Tag	F10K19149			2
28	SWECO Logo	00-421			2
29	Label, Pinch Point	S48K02146			1
30	Decal, Motor Rotation	S48K02179-00			2
31	Tag, Dual Voltage	S48K02181			2
32	Fender Washer, M12, 13mm I.D. x 37mm O.D. x 3mm Thick	05-426	05-370	-	8
33	Vibrators (See Figures 4-18 thru 4-20)	See Sales Order			2

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.



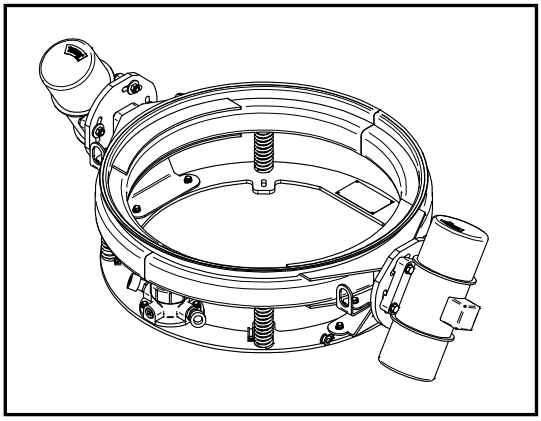


Figure 4-7
Drive Assembly, 10" (LX30)

NOTES:

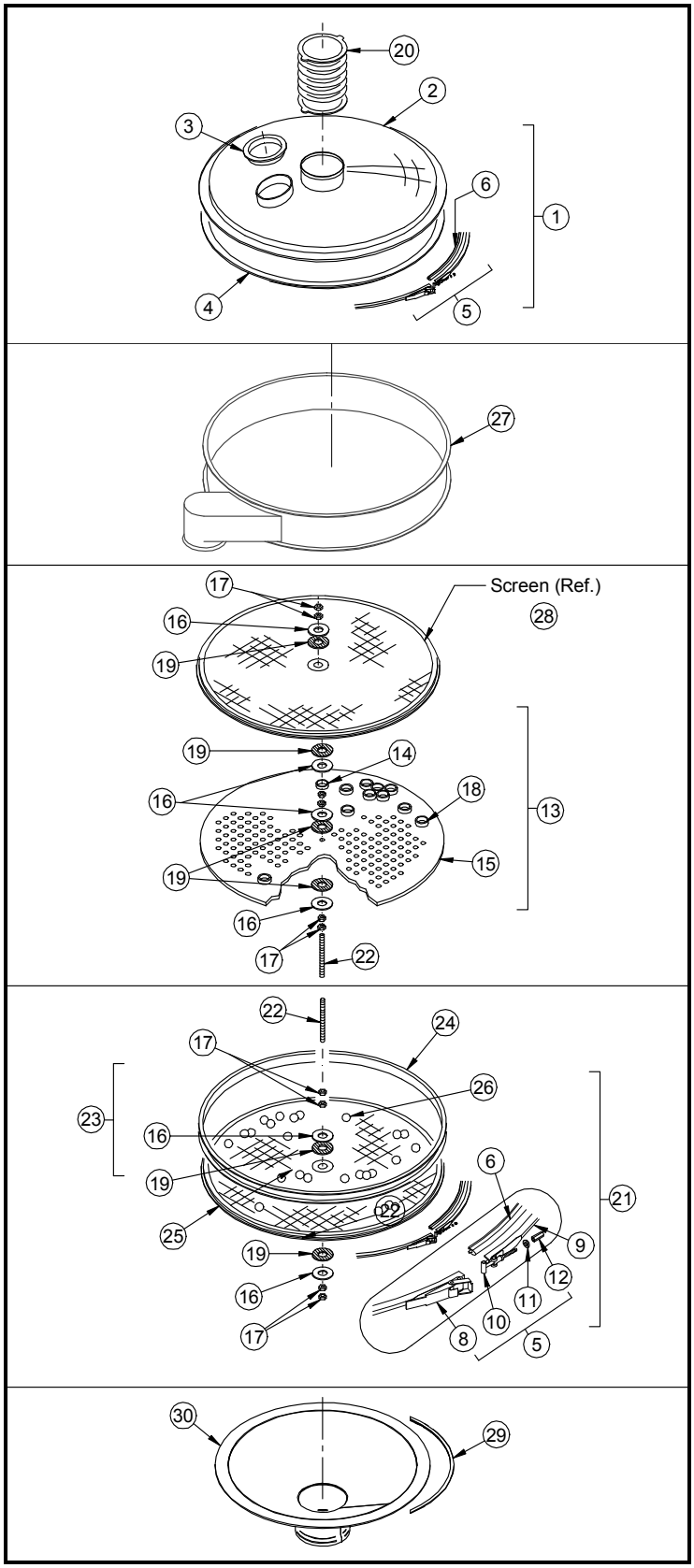
1. This drive is for vibrator motors with 4.13" x 5.51" mounting bolt pattern and 1.18" mounting flange thickness.
2. 1/2" (M12) vibrator mounting bolts to be checked and retightened to 58 foot pounds (79 Nm) and 5/8" (M16) to 137 foot pounds (186 Nm) without lubricant.
3. Center motor mounting bolts on thru slots of motor mounting plate.
4. Allow motor cords to hang loosely from motor to ensure enough slack for proper operation of unit.
5. Remove lift and shipping brackets (item's #24 and #25) prior to operation of unit.

ADDITIONAL PARTS AND ACCESSORIES (LX30)

Below is the parts list for standard frames, parts, and accessories available for the LX30 unit. Refer to Figure 4-8 for the illustration.

ITEM NO.	DESCRIPTION	SWECO PART NO.	QTY.
1	Cover Assembly w/6" Inlet and one 6" Radius Inspection Opening (Includes Item's #2-5a & 6)	*G30_81400-00__	1
2	Cover Weldment	*G30_81410-00__	1
3	Round Inspection Plug, 6", White Neoprene	S48W00827	1
4	Supertaut Plus II Tension Ring	S30S11085	1
5a	Clamp Ring Assembly, Over-Center (Includes Item's #7-12)	S30S81124	REF.
5b	Clamp Ring Assembly, Over-Center Heavy Duty (Includes Item's #7-12)	S30S81150	REF.
6	Supertaut Plus II Gasket, White TPE FDA (Other Material's Available)	S30W11104	1
7	Hex Head Cap Screw, 3/8-NC x 8-1/4" Long, 304SST (Not Shown)	S48S01121	1
8	Clamp Ring Half, Over-Center	S30S81122	1
	Clamp Ring Half, Over-Center, Heavy Duty	S30S81152	
9	Clamp Ring Half, Trunnion	S30S81110	1
	Clamp Ring Half, Trunnion, Heavy Duty	S38S81147	
10	T-Bolt , 3/8-NC, 304SST	S48S81121	1
11	Washer, Clamp Ring	S48S01113	2
12	Coupling Nut, 3/8-NC, Brass	03-271	2
13	Self-Cleaning Kit w/White Nylon Sliders and White Neoprene Washers (Other Material's Available) (Includes Item's #14-19)	S30S01045-17-W	1
14	Spacer	S30S01047	1
15	Bottom Perforated Plate	S30S01046	1
16	Center Tie-Down Washer (Self-Cleaning Kit Requires Qty. of 4, Center Tie-Down Assembly Requires Qty. of 2)	S30S00922	REF.
17	Hex Jam Nut, 3/8-NC, 316SST (Self-Cleaning Kit Requires Qty. of 7, Ball Tray & Center Tie-Down Requires Qty. of 5)	03-159	7
18	Sliders, Zytel Nylon FDA (Other Material's Available)	S48K41017	40
19	Screen Cushion Washer, White Neoprene (Other Material's Available)(Self-Cleaning Kit Requires Qty. of 4, Center Tie-Down Assembly Requires Qty. of 2)	S30W00921	REF.
20	Spout Connector, 6" x 12" Flexible, Black Neoprene	S30N01904	1
	Spout Connector, 6" x 12" Flexible, White Neoprene FDA (Other Material's and Sizes Available)	S30W01904	
	Clamp Band, 6"	10-450	2
21	Ball Tray Assembly w/Gum Rubber Balls (Includes Item's #5a & 22-26)	*S30_81600-05	1
22	Center Tie-Down Stud, 3/8-NC x 8" Long (For Ball Tray)	S18S00915-06	1
	Center Tie-Down Stud, 3/8-NC x 4" Long	S30S02624	
	Center Tie-Down Stud, 3/8-NC x 2-5/8" Long	S30S00915	
	Center Tie-Down Stud, 3/8-NC x 4-5/8" Long	S30S00916	
23	Center Tie-Down Assembly (Includes Item's #16, 17, & 19)	S30S00940	1
24	Blank Spacing Frame, 2"	*S30_81601	1
25	Supertaut Plus Screen w/Gasket (Item #6), 4MG (Ball Tray) (Standard Unless Otherwise Specified)	30A8A004M	1
26	Ball Tray Ball, Gum Rubber (Other Material's Available)	S48K01605	30
27	Spacing Frame, 4" w/2-1/2" x 6" Spout	*S30_80500-00__	1
	Spacing Frame, 6" w/4" x 6" Spout	*S30_80600-00__	
	Blank Frame, 4"	*S30_80501-00__	
	Blank Frame, 6"	*S30_80601-00__	
28	Screen Assembly (Specify Material and Mesh)	See Sales Order	1
29	Cone Gasket, 30", White FDA EPDM	S30E11105	1
30	Discharge Cone Weldment (Specify Material and Outlet Diameter)	*S30_40585-____	1

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.



COVER ASSEMBLY

ADDITIONAL FRAMES

SELF-CLEANING KIT

BALL TRAY ASSEMBLY

DISCHARGE CONE AND GASKET

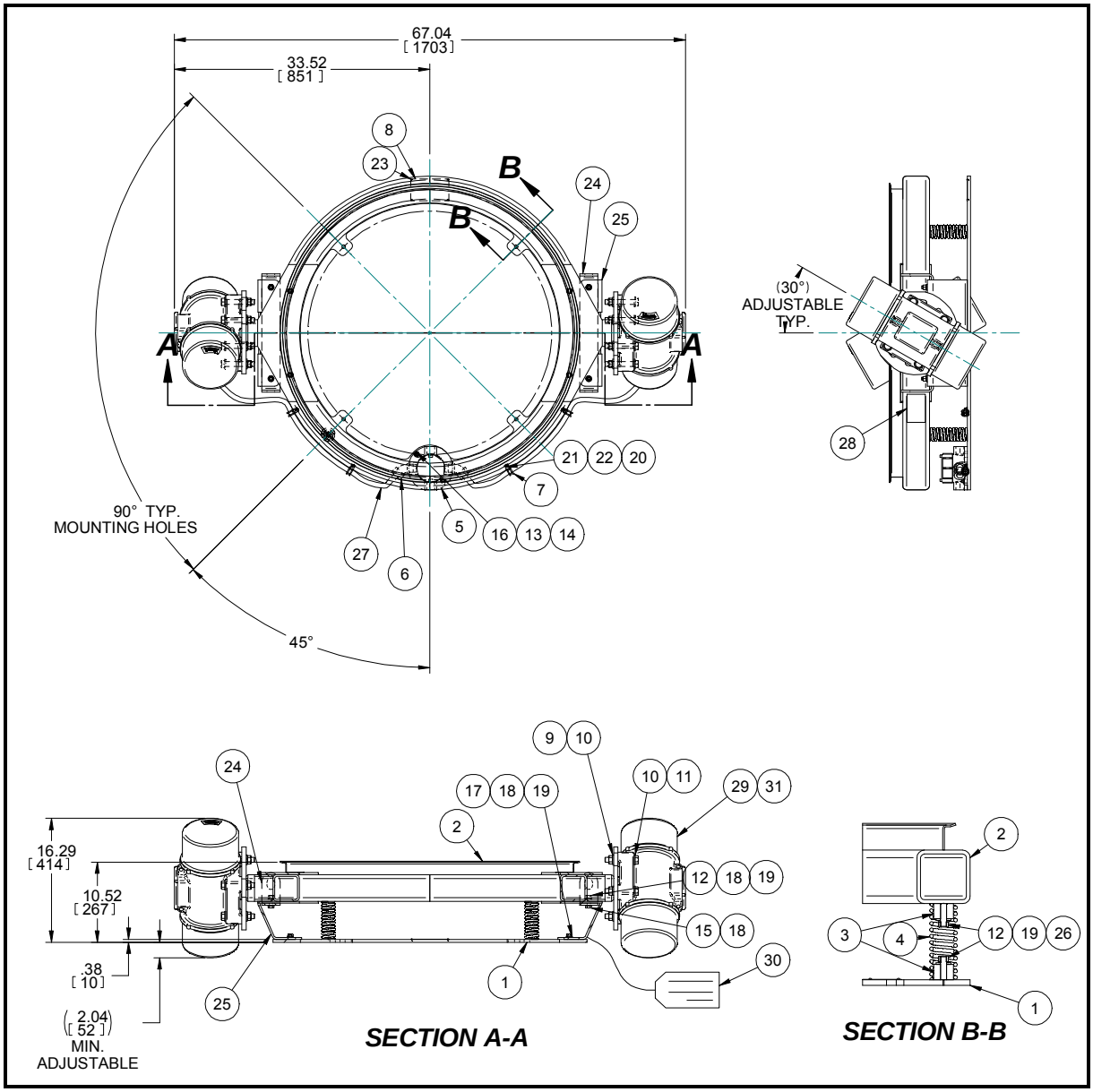
Figure 4-8
Additional Parts and Accessories (LX30)

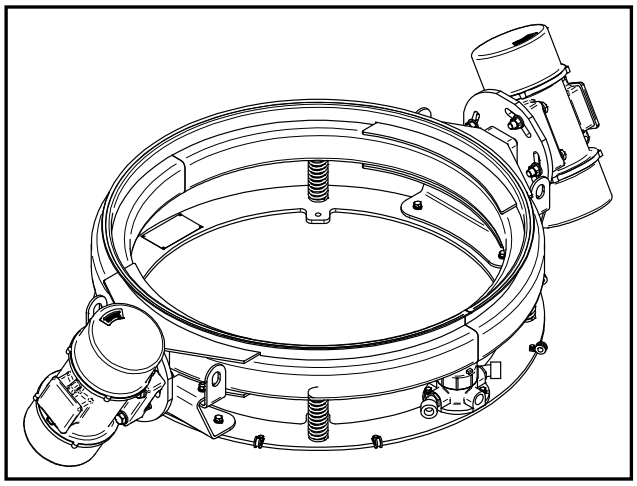
DRIVE ASSEMBLY, 11" (LX40)

Below is the parts list for a standard 11" drive assembly for an LX40 unit. Shown are the SWECO parts numbers in various material types. Specify material required when ordering parts. Refer to Figure 4-9 for illustration and notes.

ITEM NO.	DESCRIPTION	SWECO PART NO.			QTY.
		MS	304SST	316SST	
	Drive Assembly, 11", no pan, TENV motor with 4.72" x 6.69" mounting bolt pattern and 1.77" mounting flange thickness, TENV Motor (Includes item's #1-32) Drive Assembly, 11", no pan, Explosion Proof (TEEP) motor with 4.72" x 6.69" mounting bolt pattern and 1.77" mounting flange thickness (Includes item's #1-33)	*G40_40570-10__ *G40_40570-20__			1
1	Base Plate	*G40_40590-00__			1
2	Drive Frame Weldment, 11"	*G40_40575-00__			1
3	Spring Spool, Urethane	S24K00225			8
4	Spring, 6", 302SST	S60S00201			4
5	Junction Box, 3/4 Conduit, 4 Outlets	01-1343			1
6	Cord Grip, 3/4-NPT, 45°, .500-.625, Male, Aluminum	01-167			2
7	Clamp, 5/8" Diameter	01-1778	01-1779	-	4
	Clamp, 1/2" Diameter (For Explosion Proof)	01-1777	-	-	
8	Nameplate	S18S01961			1
9	Hex Lock Nut, M16-2.0, Heavy Nylok Insert	07-193	-	-	8
10	Flat Washer, M16	05-444	05-289	05-326	16
11	Hex Head Cap Screw, M16-2.0 x 100 mm	04-1792	04-1651	-	8
12	Hex Nut, M10	03-449	03-229	03-300	12
13	Flat Washer, M8	05-384	05-276	05-312	2
14	Split Lock Washer, M8	05-383	05-285	05-313	2
15	Hex Head Cap Screw, M10 x 40 mm	04-1603	04-1120	04-1594	4
16	Hex Head Cap Screw, M8-1.25 x 20 mm	-	-	04-1141	2
17	Hex Head Cap Screw, M10 x 20 mm	04-1734	04-1142	04-1570	4
18	Flat Washer, M10	05-385	05-277	05-317	12
19	Split Lock Washer, M10	05-381	05-270	05-316	16
20	Flat Washer, M6	05-286	05-284	05-328	4
21	Hex Head Cap Screw, M6-1.0 x 12 mm	04-1749	04-1750	04-1751	4
22	Split Lock Washer, M6	05-386	05-269	05-315	4
23	Drive Screws, #4 x .188 Long	04-110	04-1246	-	4
24	Lifting Bracket	G40C40574-00XE			2
25	Shipping Bracket	G40C40578-01XE			2
26	Fender Washer, M10	05-404	05-417	-	8
27	Cable, 14/4 SOW-A 600V, Yellow (TENV) Cable, 16/6 SO/SOW-A, UL Approved (TEEP)	01-1151 01-1831			12 Ft.
28	Label, Pinch Point	S48K02146			1
29	Decal, Motor Rotation	S48K02179-00			2
30	Shipping Bracket Tag	F10K19149			2
31	Tag, Dual Voltage	S48K02181			2
32	SWECO Logo	00-421			2
33	Cord Grip, 3/4-NPT, Straight, .500-.625, Male (Explosion Proof Only)(Not Shown)	01-168			2
34	Vibrators (See Figures 4-18 thru 4-20)	See Sales Order			2

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.





NOTES:

1. This drive is for vibrators with 4.72" x 6.69" mounting bolt pattern and 1.77" mounting flange thickness.
2. 5/8" (M16) vibrator mounting bolts to be checked and retightened to 137 foot pounds (186 Nm) without lubricant.
3. Center motor mounting bolts on thru slots of motor mounting plate.
4. Allow motor cords to hang loosely from motor to ensure enough slack for proper operation of unit.
5. Remove lift and shipping brackets (item's #24 and #25) prior to operation.
6. Dimensions are shown as reference and can vary.

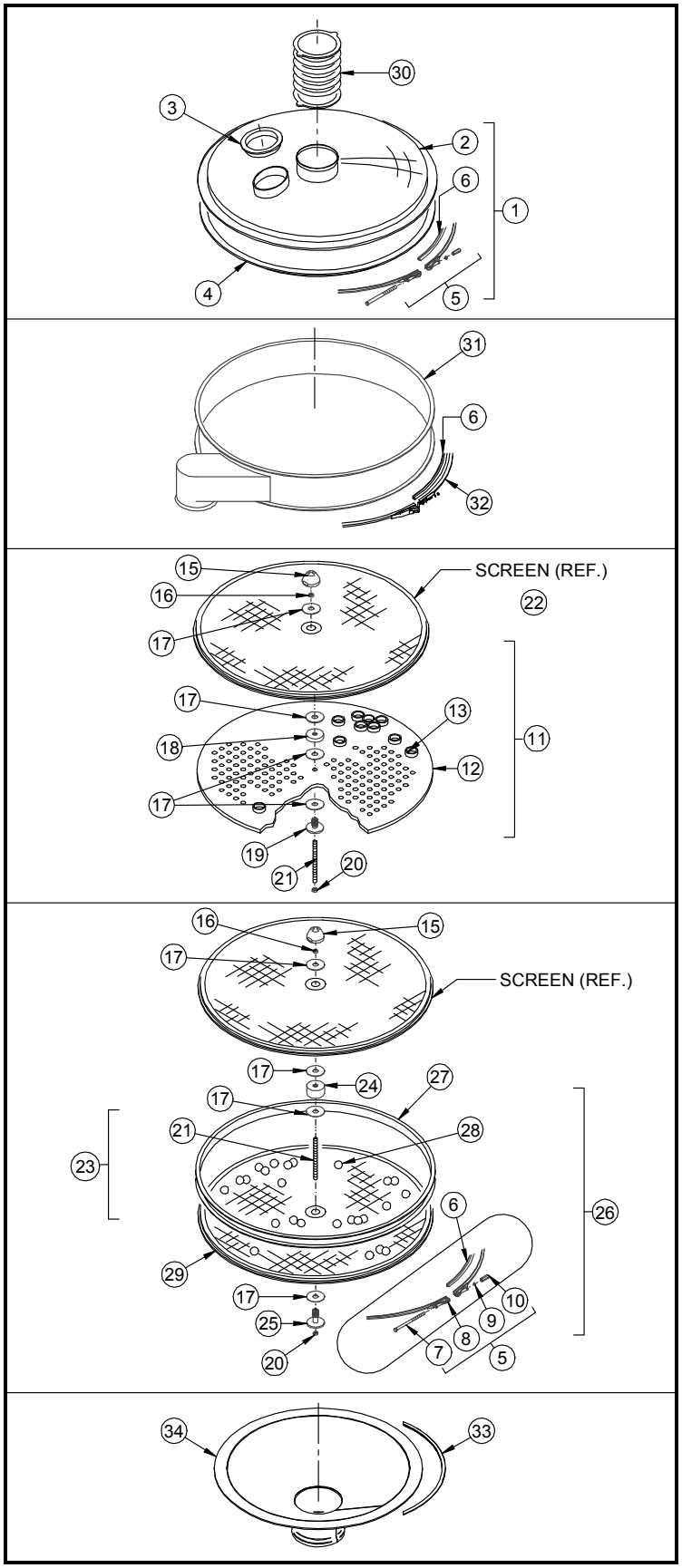
Figure 4-9
Drive Assembly, 11" (LX40)

ADDITIONAL PARTS AND ACCESSORIES (LX40)

Below is the parts list for standard frames, parts, and accessories available for the LX40 unit. Refer to Figure 4-10 for the illustration.

ITEM NO.	DESCRIPTION	SWECO PART NO.	QTY.
1	Cover Assembly w/8" Inlet and one 6" Inspection Opening (Includes Item's #2-5a & 6)	*G40_81400-00__	1
2	Cover Weldment	*G40_81410-00__	1
3	Round Inspection Plug, 6", White Neoprene	S48W00827	1
4	Supertaut Plus II Tension Ring	S40S11085	1
5a	Clamp Ring Assembly (Includes Item's #7-10)(Quantities Per One Assembly)	S40S81105	REF.
5b	Clamp Ring Assembly, Heavy Duty (Not Shown, See Figure 4-17)	S40S81150	REF.
6	Supertaut Plus II Gasket, White TPE FDA (Other Material's Available)	S40W11104	1
7	Clamp Ring Bolt, 3/8-NC x 8-1/4" Long	S48S01121	2
8	Clamp Ring Half, Trunnion	S40S81110	2
9	Clamp Ring Washer	S48S01113	2
10	Coupling Nut, 3/8-NC, Brass	03-271	2
11	Self-Cleaning Kit w/White Nylon Sliders (Other Material's Available)(Includes Item's #12 & #13)	S40S01045-17	1
12	Bottom Perforated Plate	S40S01046	1
13	Sliders, Zytel Nylon FDA (Other Material's Available)	S48K41017	60
14	Center Tie-Down Assembly, Nylon (Includes Item's #15-20) (Quantities Per One Assembly)	S48K00980	REF.
15	Cap, Nylon	S48K00981	1
16	Jam Nut, SST	S48S00984	1
17	Gasket, White Neoprene FDA	S48W00985	4
18	Spacer, Nylon	S48K00983	1
19	Pedestal, Nylon	S48K00982	1
20	Hex Jam Nut, 5/8-NC, 304SST	03-160	1
21	Center Tie-Down Stud, 5/8-NC x 11.5" Long (For Ball Tray) Center Tie-Down Stud, 5/8-NC x 4.75" Long Center Tie-Down Stud, 5/8-NC x 7.25" Long Center Tie-Down Stud, 5/8-NC x 5.25" Long	S60S00925-18 S60S00925-02 S60S00925-08 S60S00925-04	1
22	Screen Assembly (Specify Material & Mesh)	Consult SWECO	1
23	Center Tie-Down Assembly (For Ball Tray Only) (Includes Item's #15-17, 20, 24 & 25)	S48K00990	1
24	Spacer, Nylon	S48K00992	1
25	Pedestal, Nylon	S48K00991	1
26	Ball Tray Assembly w/Gum Rubber Balls (Includes Item's #5a, 21, 23, & 27-29)	*S40_81600-05	1
27	Blank Spacing Frame, 2"	*S40_81601-00__	1
28	Ball Tray Ball, Gum Rubber (Other Ball Material's Available)	S48K01605	40
29	Supertaut Plus Screen with Gasket (Item #4) 4MG (Unless Otherwise Specified)	40A8A004M	1
30	Flexible Spout Connector, 8" x 12" Long, Black Neoprene Flexible Spout Connector, 8" x 12" Long, White Neoprene FDA (Other Size's and Material's Available) Clamp Band, 8", 304SST	S48N01904 S48W01904 10-451	1 2
31	Spacing Frame Weldment, 6", w/3" x 8" Spout Spacing Frame Weldment, 8", w/6" x 8" Spout Blank Frame, 5" Blank Frame, 6" Blank Frame, 8" (Consult SWECO, Other Frames Available)	*S40_80600-00__ *S40_80800-00__ *S40_80501 *S40_80601-00__ *S40_80801-00__	1
32	Clamp Ring Assembly, Over-Center (Includes Item's #7-10 and S40S81122 (O/C Clamp Ring Half) and S48S81121 (3/8-NC T-Bolt)	S40S81124	1
33	Cone Gasket, 40", White FDA EPDM	S40E11105	1
34	Discharge Cone Weldment (Specify Material and Outlet Diameter)	*S40_40585-____	1

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.



COVER ASSEMBLY

ADDITIONAL FRAMES

SELF-CLEANING KIT

BALL TRAY ASSEMBLY

DISCHARGE CONE AND GASKET

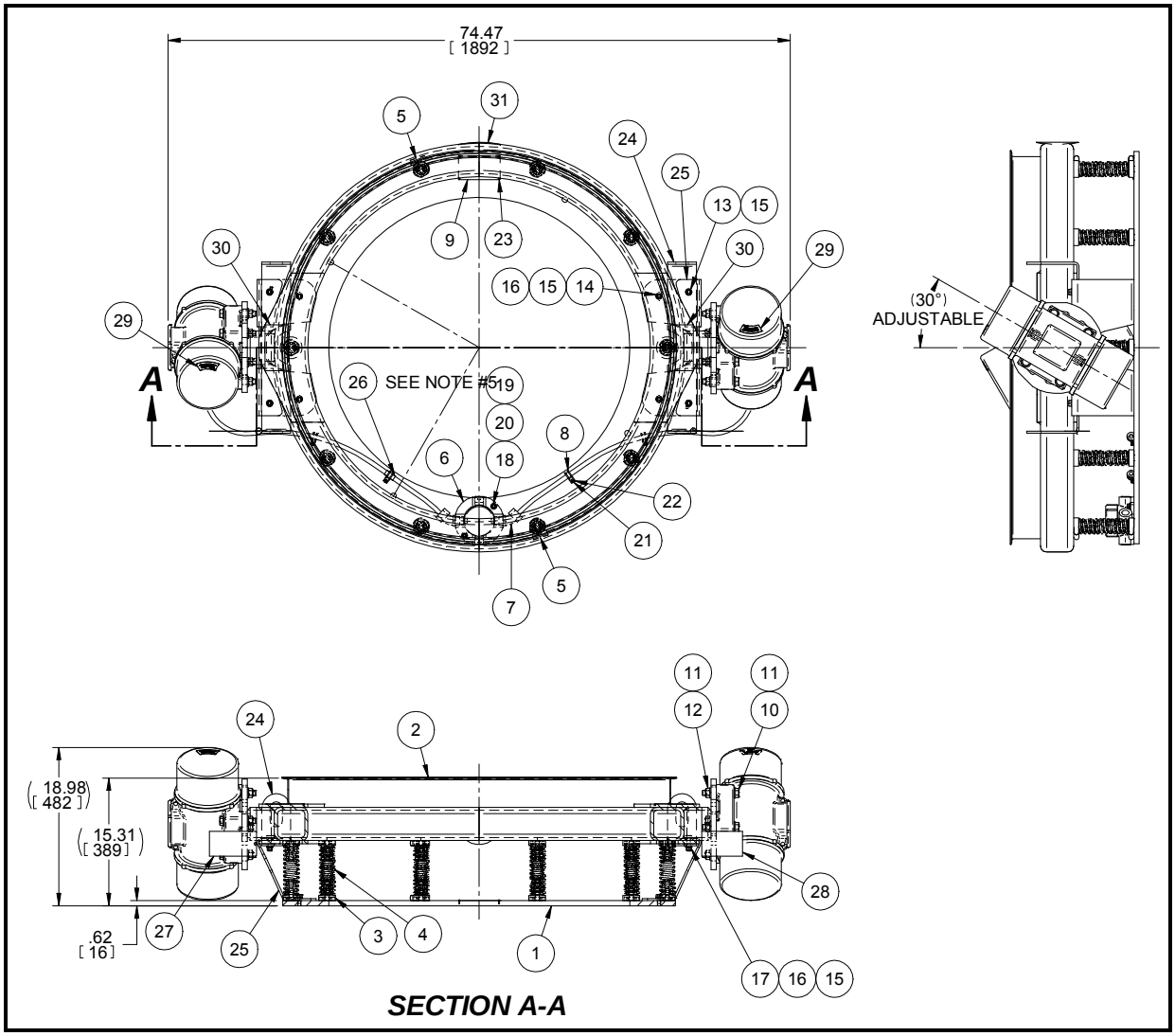
Figure 4-10
Additional Parts and Accessories (LX40)

DRIVE ASSEMBLY, 15" (LX48)

Below is the parts list for a standard 15" drive assembly for an LX48 unit. Shown are the SWECO parts numbers in various material types. Specify material required when ordering parts. Refer to Figure 4-11 for illustration and notes.

ITEM NO.	DESCRIPTION	SWECO PART NO.			QTY.
		MS	304SST	316SST	
	Drive Assembly, 15", no pan, TENV motor with 4.72" x 6.69" mounting bolt pattern, 1.77-2.13 Flange Thickness, TENV (Includes item's #1-31) Drive Assembly, 15", no pan, Explosion Proof (TEEP) motor with 4.72" x 6.69" mounting bolt pattern, 1.77-2.13 Flange Thickness (Includes item's #1-32)	*G48_40570-10__ *G48_40570-20__			1
1	Base Plate	*G48_40590-00__			1
2	Drive Frame Weldment, 15"	*G48_40575-00__			1
3	Spring Spool, Urethane	S48K00226			20
4	Spring, 6", 302SST	S48S00201			10
5	Grounding Strap	S48S00443			4
6	Junction Box, 3/4 Conduit, 4 Outlets	01-1343			1
7	Cord Grip, 3/4-NPT, 45°, .500-.625, Male, Aluminum	01-167			2
8	Clamp, 5/8" Diameter	01-1778	01-1779	-	4
9	Nameplate	S18S01961			1
10	Hex Head Cap Screw, M16-2.0x100 mm, Grade 8.8	04-1792	-	-	8
11	Flat Washer, M16	-	05-289	05-326	16
12	Hex Locknut, M16-2.0, Heavy Nylok Insert	07-193	-	-	8
13	Hex Head Cap Screw, M10 x 40 mm	04-1603	04-1120	04-1594	4
14	Hex Head Cap Screw, M10 x 20 mm	04-1734	04-1142	04-1570	4
15	Flat Washer, M10	05-385	05-277	05-317	12
16	Split Lock Washer, M10	05-381	05-270	05-316	8
17	Hex Nut, M10	03-449	03-229	03-300	4
18	Hex Head Cap Screw, M8 x 25 mm	-	04-1672	04-1855	2
19	Flat Washer, M8	05-384	05-276	05-312	2
20	Split Lock Washer, M8	05-383	05-285	05-313	2
21	Hex Head Cap Screw, M6 x 16 mm	04-1731	04-1133	-	4
22	Split Lock Washer, M6	05-386	05-269	05-315	4
23	Drive Screws, #4 x .188 Long	04-110	04-1246	-	4
24	Lifting Bracket	G48C40574-00XE			2
25	Shipping Bracket	G48C40578-00XE			2
26	Cable, 14/4 SOW-A 600V, Yellow (TENV) Cable, 16/6 SO/SOW-A, UL Approved (TEEP)	01-1151 01-1831			16 Ft.
27	Shipping Bracket Tag	F10K19149			1
28	Tag, Dual Voltage	S48K02181			1
29	Decal, Motor Rotation	S48K02179-00			2
30	Label, Pinch Point	S48K02146			2
31	SWECO Logo	00-712			1
32	Cord Grip, 3/4-NPT, Straight, .500-.625, Male, (Explosion Proof, TEEP, Only)(Not Shown)	01-168			2
33	Vibrators (See Figures 4-18 thru 4-20)	See Sales Order			2

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.



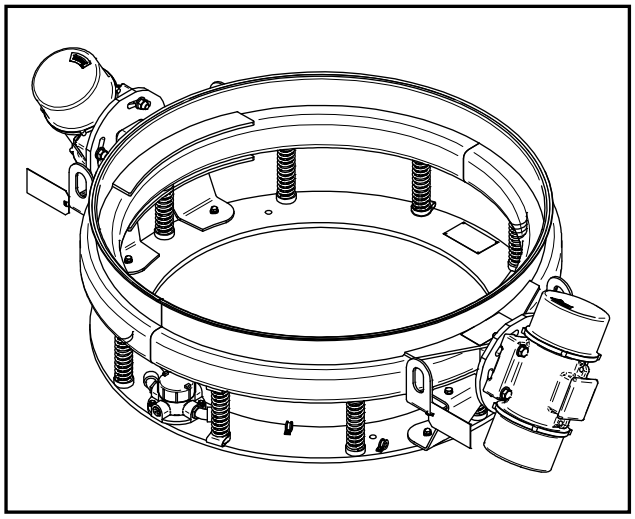


Figure 4-11
Drive Assembly, 15" (LX48)

NOTES:

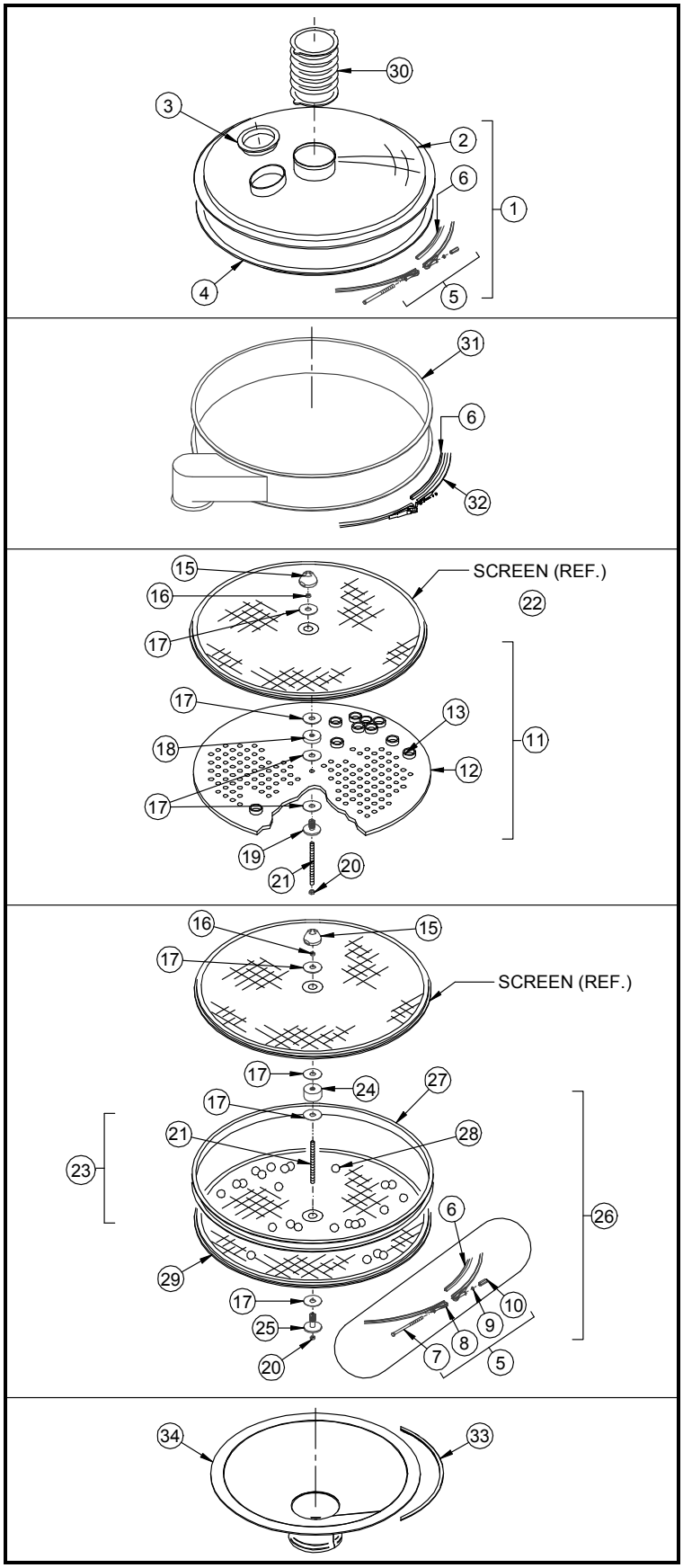
1. This drive is for vibrators with 4.72" x 6.69" mounting bolt pattern.
2. 5/8" (M16) vibrator mounting bolts to be checked and retightened to 137 foot pounds (186 Nm) without lubricant.
3. Center motor mounting bolts on thru slots of motor mounting plate.
4. Allow motor cords to hang loosely from motor to ensure enough slack for proper operation of unit.
5. Remove lift and shipping brackets (item's #24 and #25) prior to operation of unit.
6. Dimensions are shown as reference and can vary.

ADDITIONAL PARTS AND ACCESSORIES (LX48)

Below is the parts list for standard frames, parts, and accessories available for the LX48 unit. Refer to Figure 4-12 for the illustration.

ITEM NO.	DESCRIPTION	SWECO PART NO.	QTY.
1	Cover Assembly w/8" Inlet and one 6" Inspection Opening (Includes Item's #2-5a and #6)	*G48_81400-00__	1
2	Cover Weldment	*G48_81410-00__	1
3	Round Inspection Plug, 6", White Neoprene	S48W00827	1
4	Supertaut Plus II Tension Ring	S48S11085	1
5a	Clamp Ring Assembly	S48S81105	REF.
5b	Clamp Ring Assembly, Heavy Duty (Ref. Figure 4-17) (Includes Item's #7-10)(Quantities Per One Assembly)	S48S81150	
6	Supertaut Plus II Gasket, White TPE FDA (Other Material's Available)	S48W11104	1
7	Clamp Ring Bolt, 3/8-NC x 8-1/4" Long	S48S01121	2
8	Clamp Ring Half, Trunnion (For S48S81105, Std.)	S48S81110	2
	Clamp Ring Half, Heavy Duty (For S48S81150, Heavy Duty)	S48S81147	
9	Clamp Ring Washer	S48S01113	2
10	Coupling Nut, 3/8-NC, Brass	03-271	2
11	Self-Cleaning Kit w/White Nylon Sliders (Other Material's Available)(Includes Item's #12 & #13)	S48S01045-17	1
12	Bottom Perforated Plate	S48S01046	1
13	Sliders, Zytel Nylon, FDA (Other Material's Available)	S48K41017	100
14	Center Tie-Down Assembly, Nylon (Includes Item's #15-20) (Quantities Per One Assembly)	S48K00980	REF.
15	Cap, Nylon	S48K00981	1
16	Jam Nut, SST	S48S00984	1
17	Gasket, White Neoprene FDA	S48W00985	4
18	Spacer, Nylon	S48K00983	1
19	Pedestal, Nylon	S48K00982	1
20	Hex Jam Nut, 5/8-NC, 304SST	03-160	1
21	Center Tie-Down Stud, 5/8-NC x 5" Long	S60S00925-03	1
	Center Tie-Down Stud, 5/8-NC x 7" Long	S60S00925-07	
	Center Tie-Down Stud, 5/8-NC x 11.5" Long (For Ball Tray)	S60S00925-18	
22	Screen Assembly (Specify Material & Mesh)	Consult SWECO	1
23	Center Tie-Down Assembly (For Ball Tray Only) (Includes Item's #15-17, 20, 24 & 25)	S48K00990	1
24	Spacer, Nylon	S48K00992	1
25	Pedestal, Nylon	S48K00991	1
26	Ball Tray Assembly w/Gum Rubber Balls (Includes Item's #5a, 21, 23, & 27-29)	*S48_81600-05	1
27	Blank Spacing Frame, 2"	*S48_81603-00__	1
28	Ball Tray Ball, Gum Rubber (Other Ball Material's Available)	S48K01605	50
29	Supertaut Plus Screen with Gasket (Item #4) 4MG (Unless Otherwise Specified)	48A8A004M	1
30	Flexible Spout Connector, 8" x 12" Long, Black Neoprene	S48N01904	1
	Flexible Spout Connector, 8" x 12" Long, White Neoprene FDA (Other Size's and Material's Available)	S48W01904	
	Clamp Band, 8", 304SST	10-451	2
31	Spacing Frame Weldment, 6", w/3" x 8" Spout	*S48_80600-00__	1
	Spacing Frame Weldment, 8", w/6" x 8" Spout	*S48_80800-00__	
	Blank Frame, 6"	*S48_80601-00__	
	Blank Frame, 8"	*S48_80801-00__	
	Blank Frame, 10" (Consult SWECO, Other Frames Available)	*S48_81001-00__	
32	Clamp Ring Assembly, Over-Center (Includes Item's #7-10 and S48S81122 (O/C Clamp Ring Half) and S48S81121 (3/8-NC T-Bolt)	S48S81124	1
33	Cone Gasket, 48", White FDA EPDM	S48E11105	1
34	Discharge Cone Weldment (Specify Material and Outlet Diameter)	*S48_40585-____	1

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.



COVER ASSEMBLY

ADDITIONAL FRAMES

SELF-CLEANING KIT

BALL TRAY ASSEMBLY

DISCHARGE CONE AND GASKET

Figure 4-12
Additional Parts and Accessories (LX48)

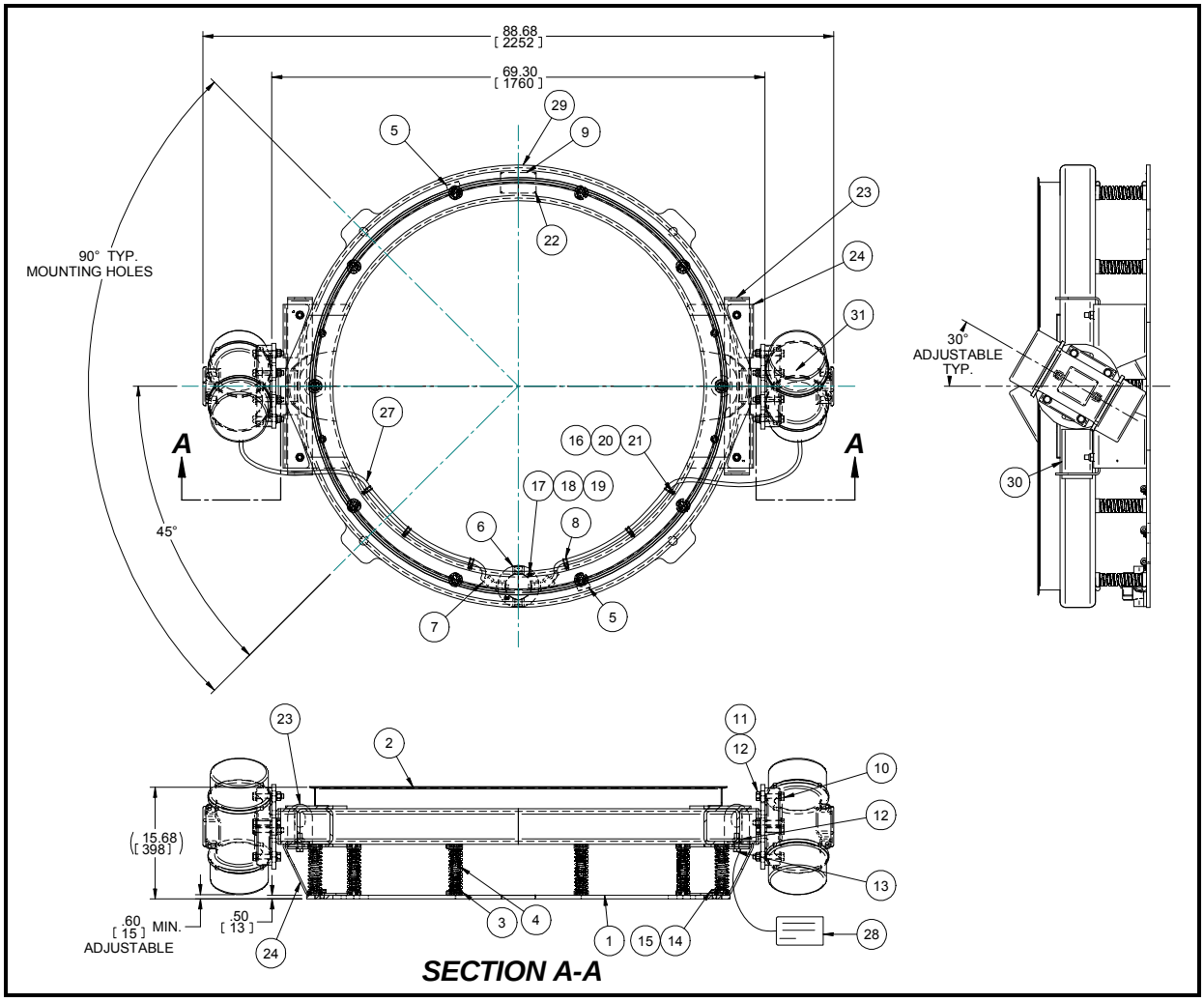
NOTE: See bill of material and Figure 4-14 for 16" drive assembly with 4.72" x 6.69" mounting bolt pattern and 2.13" mounting flange thickness.

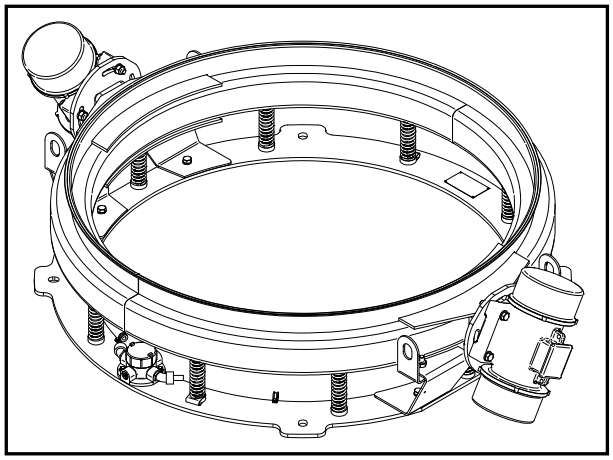
DRIVE ASSEMBLY, 16" (LX60 and LX72)

Below is the parts list for a standard 16" drive assembly for an LX60 or LX72 unit. **This drive is for vibrators with 5.51" x 7.48" mounting bolt pattern.** Refer to Figure 4-13 for illustrations and notes. The LX72 unit uses the LX60 drive assembly along with a 60" to 72" transition frame to support the 72" frame stack-up (see Figure 4-16). Shown are the SWECO parts numbers in various material types. Specify material required when ordering parts.

ITEM NO.	DESCRIPTION	SWECO PART NO.			QTY.
		MS	304SST	316SST	
	Drive Assembly, 16", no pan, TENV motor with 5.51" x 7.48" mounting bolt pattern and 2.13" mounting flange thickness (Includes item's #1-30)	*G60_40570-10__			1
1	Base Plate	*G60_40590-00__			1
2	Drive Frame Weldment, 16"	*G60_40575-00__			1
3	Spring Spool, Urethane	S48K00226			20
4	Spring, 6", 302SST	S60S00201			10
5	Grounding Strap	S48S00443			4
6	Junction Box, 3/4 Conduit, 4 Outlets	01-1343			1
7	Cord Grip, 3/4-NPT, 45°, .625-.750, Male, Aluminum	01-115			2
8	Clamp, 5/8" Diameter	01-1778	01-1779	-	6
9	Nameplate	S18S01961			1
10	Hex Head Cap Screw, M16-2.0x100 mm, Grade 8.8	04-1792	-	-	8
11	Flat Washer, M16	05-444	05-289	05-326	16
12	Hex Lock Nut, M16-2.0, MS, Nylok Insert	07-193	-	-	12
13	Hex Head Cap Screw, M16 x 55 mm	04-1811	04-1707	-	4
14	Hex Head Cap Screw, M16 x 20 mm	-	04-1909	04-1363	4
15	Split Lock Washer, M16	05-275	05-272	05-327	4
16	Flat Washer, M6	05-286	05-284	05-328	6
17	Hex Head Cap Screw, M8-1.25 x 20 mm	-	-	04-1141	2
18	Flat Washer, M8	05-384	05-276	05-312	2
19	Split Lock Washer, M8	05-383	05-285	05-313	2
20	Hex Head Cap Screw, M6 x 16 mm	04-1731	04-1133	-	6
21	Split Lock Washer, M6	05-386	05-269	05-315	6
22	Drive Screws, #4 x .188 Long	04-110	04-1246	-	4
23	Lifting Bracket	G60C40574-00XE			2
24	Shipping Bracket	G60C40578-00XE			2
25	Cable, 14/4 SOW-A 600V, Yellow	01-1151			16 Ft.
26	Shipping Bracket Tag	F10K19149			1
27	SWECO Logo	00-712			1
28	Label, Pinch Point	S48K02146			1
29	Decal, Motor Rotation	S48K02179-00			1
30	Tag, Dual Voltage	S48K02181			1
31	Vibrators (See Figures 4-18 thru 4-20)	See Sales Order			2

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.





NOTES:

1. This drive is for vibrators with 5.51" x 7.48" mounting bolt pattern.
2. 5/8" (M16) vibrator mounting bolts to be checked and retightened to 137 foot pounds (186 Nm) without lubricant.
3. Center motor mounting bolts on thru slots of motor mounting plate.
4. Allow motor cords to hang loosely from motor to ensure enough slack for proper operation of unit.
5. Remove lift and shipping brackets (item's #23 and #24) prior to operation of unit.

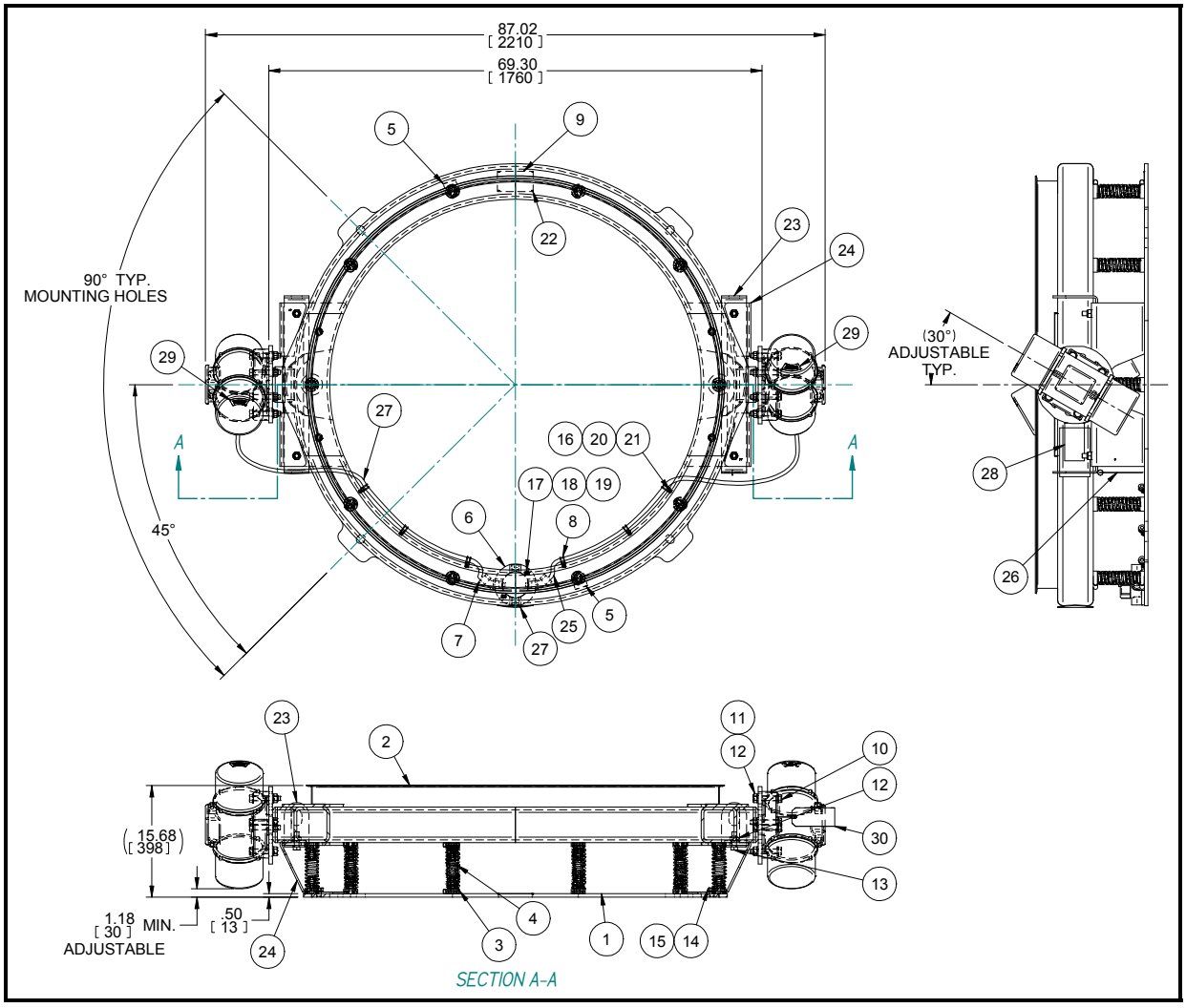
Figure 4-13
Drive Assembly, 16" (LX60 and LX72)
(Vibrators with 5.51" x 7.48" mounting bolt pattern)

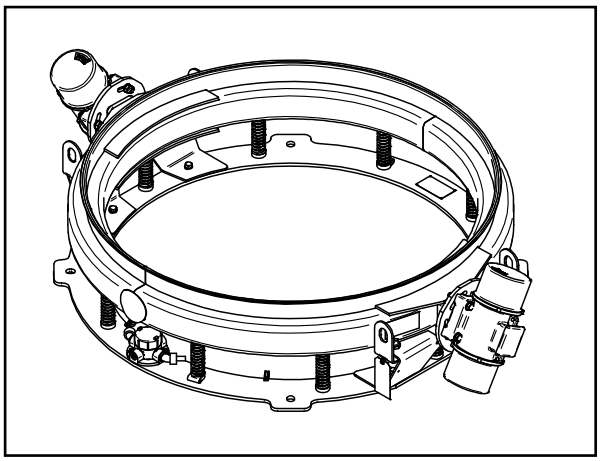
DRIVE ASSEMBLY, 16" (LX60 and LX72)

Below is the parts list for a standard 16" drive assembly for an LX60 or LX72 unit. **This drive is for vibrators with 4.72" x 6.69" mounting bolt pattern.** Refer to Figure 4-14 for illustrations and notes. The LX72 unit uses the LX60 drive assembly along with a 60" to 72" transition frame to support the 72" frame stack-up (see Figure 4-16). Shown are the SWECO parts numbers in various material types. Specify material required when ordering parts.

ITEM NO.	DESCRIPTION	SWECO PART NO.			QTY.
		MS	304SST	316SST	
	Drive Assembly, 16", no pan, TENV motor with 4.72" x 6.69" mounting bolt pattern and 2.13" mounting flange thickness (Includes item's #1-30)	*G60_40570-11__			1
1	Base Plate	*G60_40590-00__			1
2	Drive Frame Weldment, 16"	*G60_40575-03__			1
3	Spring Spool, Urethane	S48K00226			20
4	Spring, 6", 302SST	S60S00201			10
5	Grounding Strap	S48S00443			4
6	Junction Box, 3/4 Conduit, 4 Outlets	01-1343			1
7	Cord Grip, 3/4-NPT, 45°, .625-.750, Male, Aluminum	01-115			2
8	Clamp, 5/8" Diameter	01-1778	01-1779	-	6
9	Nameplate	S18S01961			1
10	Hex Head Cap Screw, M16-2.0x100 mm, Grade 8.8	04-1792	-	-	8
11	Flat Washer, M16	05-444	05-289	05-326	16
12	Hex Lock Nut, M16-2.0, MS, Nylok Insert	07-193	-	-	12
13	Hex Head Cap Screw, M16 x 55 mm	04-1811	04-1707	-	4
14	Hex Head Cap Screw, M16 x 20 mm	-	04-1909	04-1363	4
15	Split Lock Washer, M16	05-275	05-272	05-327	4
16	Flat Washer, M6	05-286	05-284	05-328	6
17	Hex Head Cap Screw, M8-1.25 x 20 mm	-	-	04-1141	2
18	Flat Washer, M8	05-384	05-276	05-312	2
19	Split Lock Washer, M8	05-383	05-285	05-313	2
20	Hex Head Cap Screw, M6 x 16 mm	04-1731	04-1133	-	6
21	Split Lock Washer, M6	05-386	05-269	05-315	6
22	Drive Screws, #4 x .188 Long	04-110	04-1246	-	4
23	Lifting Bracket	G60C40574-00XE			2
24	Shipping Bracket	G60C40578-00XE			2
25	Cable, 14/4 SOW-A 600V, Yellow	01-1151			16 Ft.
26	Shipping Bracket Tag	F10K19149			1
27	SWECO Logo	00-712			1
28	Label, Pinch Point	S48K02146			1
29	Decal, Motor Rotation	S48K02179-00			1
30	Tag, Dual Voltage	S48K02181			1
31	Vibrators (See Figures 4-18 thru 4-20)	See Sales Order			2

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.





NOTES:

1. This drive is for vibrators with 4.72" x 6.69" mounting bolt pattern.
2. 5/8" (M16) vibrator mounting bolts to be checked and retightened to 137 foot pounds (186 Nm) without lubricant.
3. Center motor mounting bolts on thru slots of motor mounting plate.
4. Allow motor cords to hang loosely from motor to ensure enough slack for proper operation of unit.
5. Remove lift and shipping brackets (item's #23 and #24) prior to operation of unit.

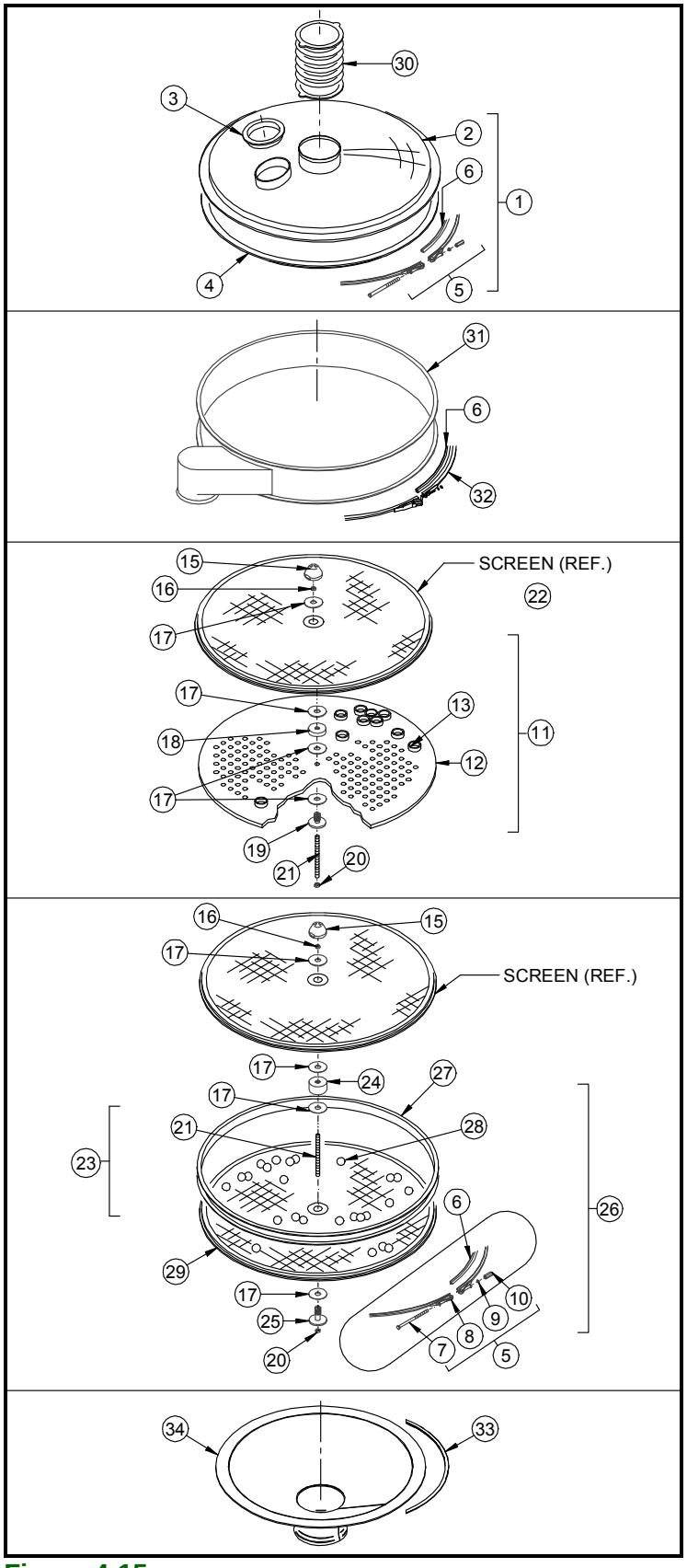
Figure 4-14
Drive Assembly, 16" (LX60 and LX72)
(Vibrators with 4.72" x 6.69" mounting bolt pattern)

ADDITIONAL PARTS AND ACCESSORIES (LX60)

Below is the parts list for standard frames, parts, and accessories available for the LX60 unit. Refer to Figure 4-15 for the illustration.

ITEM NO.	DESCRIPTION	SWECO PART NO.	QTY.
1	Cover Assembly w/8" Inlet and one 6" Inspection Opening (Includes Item's #2-6)	*G60_81400-00__	1
2	Cover Weldment	*G60_81410-00__	1
3	Round Inspection Plug, 6", White Neoprene	S48W00827	1
4	Supertaut Plus II Tension Ring	S60S11085	1
5	Clamp Ring Assembly, Heavy Duty (Ref. Figure 4-17) (Includes Item's #7-10)(Quantities Per One Assembly)	S60S81150	REF.
6	Supertaut Plus II Gasket, White TPE FDA (Other Material's Available)	S60W11104	1
7	Clamp Ring Bolt, 3/8-NC x 8-1/4" Long	S48S01121	2
8	Clamp Ring Half	S60S81147	2
9	Clamp Ring Washer	S48S01113	2
10	Coupling Nut, 3/8-NC, Brass	03-271	2
11	Self-Cleaning Kit w/White Nylon Sliders (Other Material's Available)(Includes Item's #12 & #13)	S60S01045-17	1
12	Bottom Perforated Plate	S60S01046	1
13	Sliders, Zytel Nylon FDA (Other Material's Available)	S48K41017	160
14	Center Tie-Down Assembly, Nylon (Includes Item's #15-20) (Quantities Per One Assembly)	S48K00980	REF.
15	Cap, Nylon	S48K00981	1
16	Jam Nut, SST	S48S00984	1
17	Gasket, White Neoprene FDA	S48W00985	4
18	Spacer, Nylon	S48K00983	1
19	Pedestal, Nylon	S48K00982	1
20	Hex Jam Nut, 5/8-NC, 304SST	03-160	1
21	Center Tie-Down Stud, 5/8-NC x 5" Long Center Tie-Down Stud, 5/8-NC x 7" Long Center Tie-Down Stud, 5/8-NC x 11.5" Long (For Ball Tray)	S60S00925-03 S60S00925-07 S60S00925-18	1
22	Screen Assembly (Specify Material & Mesh)	Consult SWECO	1
23	Center Tie-Down Assembly (For Ball Tray Only) (Includes Item's #15-17, 20, 24 & 25)	S48K00990	1
24	Spacer, Nylon	S48K00992	1
25	Pedestal, Nylon	S48K00991	1
26	Ball Tray Assembly w/Gum Rubber Balls (Includes Item's #5, 21, 23, & 27-29)	*S60_81600-05	1
27	Blank Spacing Frame, 2"	*S60_81601-00__	1
28	Ball Tray Ball, Gum Rubber (Other Ball Material's Available)	S48K01605	60
29	Supertaut Plus Screen with Gasket (Item #4) 4MG (Unless Otherwise Specified)	60A3A004M	1
30	Flexible Spout Connector, 8" x 12" Long, Black Neoprene Flexible Spout Connector, 8" x 12" Long, White Neoprene FDA (Other Size's and Material's Available) Clamp Band, 8", 304SST	S48N01904 S48W01904 10-451	1 2
31	Spacing Frame Weldment, 6", w/3" x 8" Spout Spacing Frame Weldment, 8", w/6" x 8" Spout Spacing Frame Weldment ,10", w/6" x 8" Spout Blank Frame, 8" Blank Frame, 10" (Consult SWECO, Other Frames Available)	*S60_80600-00__ *S60_80800-00__ *S60_81000-00__ *S60_80801-00__ *S60_81001	1
32	Clamp Ring Assembly, Over-Center (Includes Item's #7-10 and S60S81152 (O/C Clamp Ring Half) and S48S81121 (3/8-NC T-Bolt)	S60S81154	1
33	Cone Gasket, 60", White FDA EPDM	S60E11105	1
34	Discharge Cone Weldment (Specify Material and Outlet Diameter)	*S60_40585-___	1

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.



COVER ASSEMBLY

ADDITIONAL FRAMES

SELF-CLEANING KIT

BALL TRAY ASSEMBLY

DISCHARGE CONE AND GASKET

Figure 4-15
Additional Parts and Accessories (LX60)

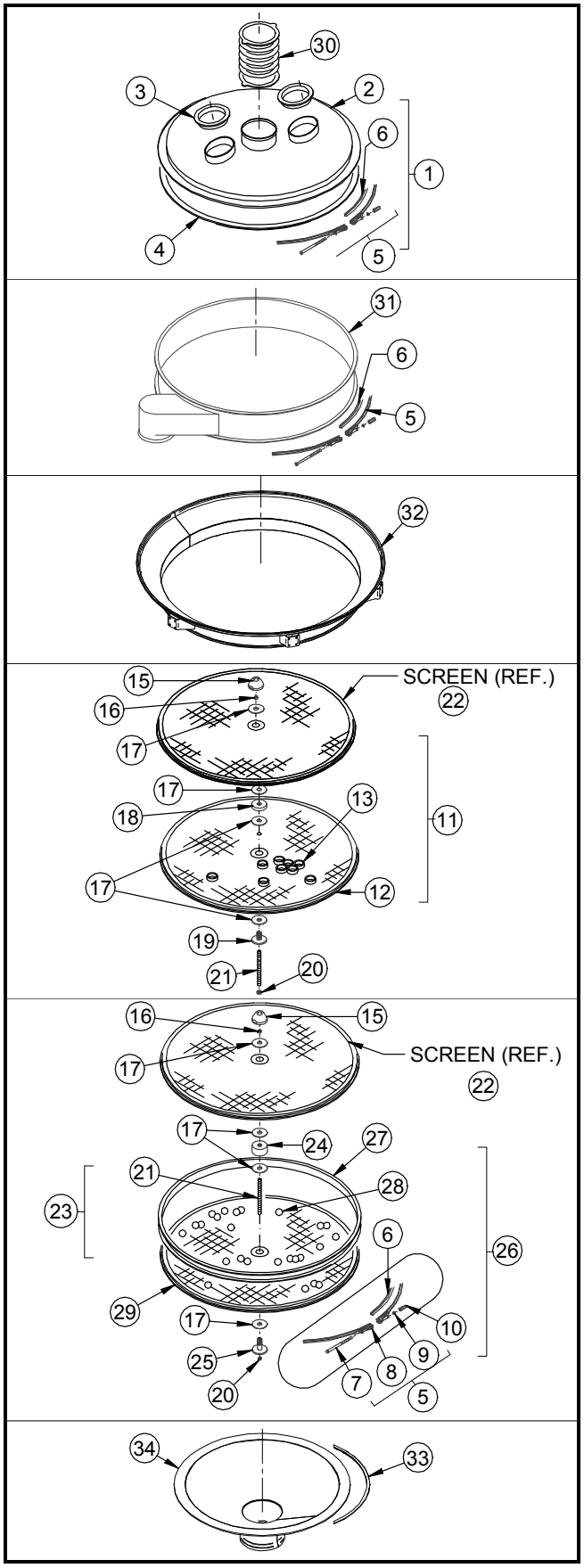
NOTE: The LX72 unit uses the LX60 drive assembly along with a 60" to 72" transition frame to support the 72" frame stack-up.

ADDITIONAL PARTS AND ACCESSORIES (LX72)

Below is the parts list for standard frames, parts, and accessories available for the LX72 unit. Refer to Figure 4-16 for the illustration.

ITEM NO.	DESCRIPTION	SWECO PART NO.	QTY.
1	Cover Assembly w/8" Inlet and one 6" Inspection Opening (Includes Item's #2-6)	*G72_61400-00__	1
2	Cover Weldment	*G72_61410-00__	1
3	Round Inspection Plug, 10", White Neoprene	S48W00829	2
4	Supertaut Plus II Tension Ring	S72S11085	1
5	Clamp Ring Assembly, Heavy Duty (Includes Item's #7-10)(Quantities Per One Assembly)	S72S61150	REF.
6	Supertaut Plus II Gasket, White TPE FDA (Other Material's Available)	S72W11104	1
7	Clamp Ring Bolt, 3/8-NC x 8-1/4" Long	S48S01121	3
8	Clamp Ring Half	S72S61147	3
9	Clamp Ring Washer	S48S01113	3
10	Coupling Nut, 3/8-NC, Brass	03-271	3
11	Self-Cleaning Kit w/White Nylon Sliders & Slider Support (Other Material's Available)(Includes Item's #12 & #13)	S72S61045-17-04	1
12	Slider Support Screen, 4MG, .063 Wire Diameter	S72S01049-4M-6	1
13	Sliders, Zytel Nylon FDA (Other Material's Available)	S48K41017	200
14	Center Tie-Down Assembly, Nylon (Includes Item's #15-20) (Quantities Per One Assembly)	S48K00980	REF.
15	Cap, Nylon	S48K00981	1
16	Jam Nut, SST	S48S00984	1
17	Gasket, White Neoprene FDA	S48W00985	4
18	Spacer, Nylon	S48K00983	1
19	Pedestal, Nylon	S48K00982	1
20	Hex Jam Nut, 5/8-NC, 304SST	03-160	1
21	Center Tie-Down Stud, 5/8-NC x 9" Long Center Tie-Down Stud, 5/8-NC x 4.88" Long Center Tie-Down Stud, 5/8-NC x 11.5" Long (Ball Tray)	S60S00925-15 S60S00925-16 S60S00925-18	1
22	Screen Assembly (Specify Material & Mesh)	Consult SWECO	1
23	Center Tie-Down Assembly (For Ball Tray Only) (Includes Item's #15-17, 20, 24 & 25)	S48K00990	1
24	Spacer, Nylon	S48K00992	1
25	Pedestal, Nylon	S48K00991	1
26	Ball Tray Assembly w/Gum Rubber Balls (Includes Item's #5, 21, 23, & 27-29)	*S72_61600-05	1
27	Blank Spacing Frame, 2"	*S72S61601-00AB	1
28	Ball Tray Ball, Gum Rubber (Other Ball Material's Available)	S48K01605	80
29	Supertaut Plus Screen with Gasket (Item #4) 4MG (Unless Otherwise Specified)	72D8A004MXXXX5	1
30	Flexible Spout Connector, 10" x 10.5" Long, Black Neoprene Flexible Spout Connector, 10" x 10.5" Long, White Neoprene FDA (Other Size's and Material's Available) Clamp Band, 8", 304SST	S72N01904 S72W01904 10-451	1 2
31	Spacing Frame, 8" w/6" x 10" Radius Corner Spout, Baffle & 3 Lifting Lugs Blank Frame, 8" Blank Frame, 10" (Consult SWECO, Other Frames Available)	*S72_60800-00__ *S72_80801 *S72_81001	1
32	Transition Frame, 60" to 72"	*R72_80402-00__	1
33	Cone Gasket, 60", White FDA EPDM	S60E11105	1
34	Discharge Cone Weldment (Specify Material and Outlet Diameter)	*S60_40585-____	1

*The fourth digit of the SWECO part number designates the material of construction. If the fourth character is shown as a dash "_" this indicates that the part is offered in different types of steel. When reordering specify material type of unit or part. The types of material available and their material codes are as follows: "C" represents carbon steel, "S" represents 304 stainless steel and "Y" represents 316L stainless steel.



COVER ASSEMBLY

ADDITIONAL FRAMES

TRANSITION FRAME

SELF-CLEANING KIT

BALL TRAY ASSEMBLY

DISCHARGE CONE AND GASKET

Figure 4-16
Additional Parts and Accessories (LX72)

CLAMP RING ASSEMBLIES, HEAVY DUTY

Clamp rings are used to hold various sections of the separator in place. Below is the parts list for the heavy-duty clamp ring assemblies.

ITEM NO.	DESCRIPTION	SWECO PART NO.	QTY.
1	Clamp Ring Assembly, Heavy Duty, 24" Clamp Ring Assembly, Heavy Duty, 40" Clamp Ring Assembly, Heavy Duty, 48" Clamp Ring Assembly, Heavy Duty, 60" Clamp Ring Assembly, Heavy Duty, 72" (Includes Items #2-5)(Quantities per One Assembly)	S24S81150 S40S81150 S48S81150 S60S81150 S72S61150	A/R
2	Clamp Ring Bolt, 3/8-NC x 8-1/4" Long	S48S01121	2
3	Clamp Ring Half, 24" Clamp Ring Half, 40" Clamp Ring Half, 48" Clamp Ring Half, 60"	S24S81147 S40S81147 S48S81147 S60S81147	2
4	Clamp Ring Washer	S48S01113	2
5	Coupling Nut, 3/8-NC x 1-3/4" Long, Brass	03-271	2
6	Gasket (Not Part of Clamp Ring Assembly, Shown as Reference)	-	A/R

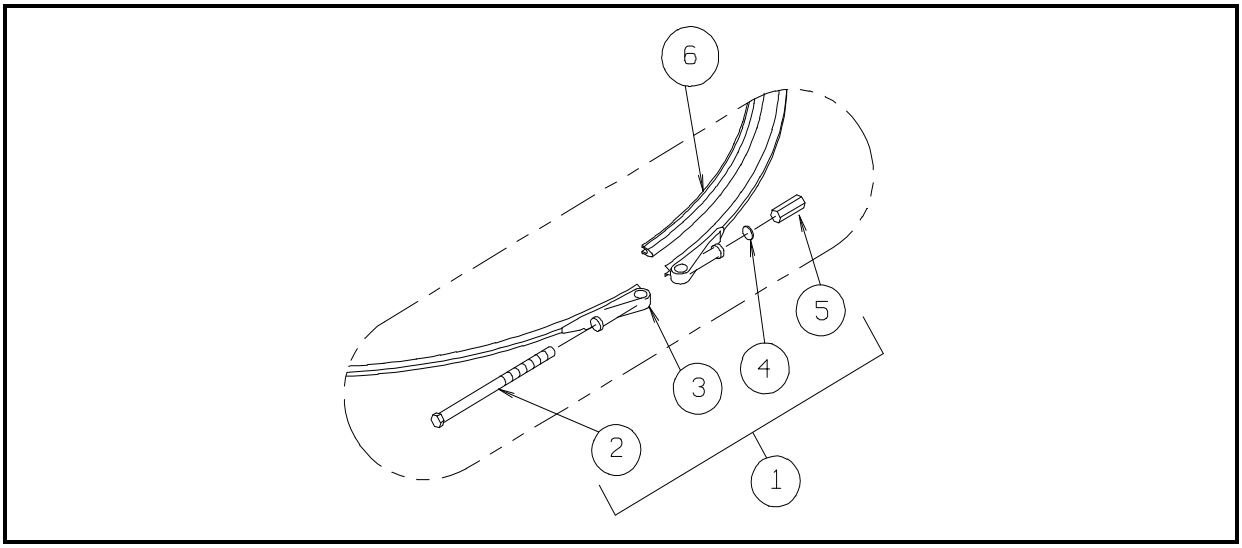


Figure 4-17
Clamp Ring Assembly, Heavy Duty

VIBRATOR TECHNICAL DATA

The SWECO-Italvibras vibrators used in model LX low profile units are available in three (3) models: MVSI – continuous duty standard vibrator, MVSS – continuous duty stainless steel vibrator and CDX – continuous duty for use in hazardous locations. Refer to Figures 4-18 thru 4-20 for the technical data of the available vibrators.

LX Size	Voltage	Hz	Phase	RPM	Sweco Part No.	Italvibras Part No.	Italvibras Model No.	Frame Size	Throw Force Lbs.	Hp	Current Draw in Amps	Wt. Lbs.	Motor Mount			
													D (in)	E (in)	Flange Thick-ness	Bolt
18	230/460	60	3	1200	EM1C22818-010	602297C	MVSI 12-300	10	299	0.12	0.30	27.5	3.54	4.92	1.1	1/2-13 NC (M12)
18	230/460	60	3	1800	EM1C22818-000	601367C	MVSI 18-480	10	469	0.13	0.40	25.7	3.54	4.92	1.1	1/2-13 NC (M12)
18	230/400	50	3	1500	EM1C22818-023	601367A	MVSI 18-480	10	469	0.13	0.41	27.5	3.54	4.92	1.1	1/2-13 NC (M12)
18	330/575	60	3	1200	EM1C22818-012	602297F	MVSI 12-300	10	299	0.12	0.24	27.5	3.54	4.92	1.1	1/2-13 NC (M12)
24	230/460	60	3	1200	EM1C22824-010	602298C	MVSI 12-580	20	581	0.16	0.50	41.8	4.13	5.51	1.18	1/2-13 NC (M12)
24	230/460	60	3	1800	EM1C22818-000	601367C	MVSI 18-480	10	469	0.13	0.40	25.7	3.54	4.92	1.1	1/2-13 NC (M12)
24	230/400	50	3	1500	EM1C22818-023	601367A	MVSI 18-480	10	469	0.13	0.41	27.5	3.54	4.92	1.1	1/2-13 NC (M12)
24	330/575	60	3	1200	EM1C22824-012	602298F	MVSI 12-580	20	581	0.16	0.40	41.8	4.13	5.51	1.18	1/2-13 NC (M12)
30	230/460	60	3	1200	EM1C22831-010	602314C	MVSI 12-760	30	744	0.37	0.68	57.6	4.72	6.69	1.77	5/8-11 NC (M16)
30	230/460	60	3	1800	EM1C22830-000	601373C	MVSI 18-1310	20	1302	0.37	0.60	41.8	4.13	5.51	1.18	1/2-13 NC (M12)
30	230/400	50	3	1500	EM1C22830-023	601373A	MVSI 18-1310	20	1214	0.29	0.60	44.9	4.13	5.51	1.18	1/2-13 NC (M12)
30	330/575	60	3	1200	EM1C22830-012	602314F	MVSI 12-760	30	744	0.37	0.54	57.6	4.72	6.69	1.77	5/8-11 NC (M16)
40	230/460	60	3	1200	EM1C22840-010	602402C	MVSI 12-1630	35	1621	0.36	0.68	80.3	4.72	6.69	2.13	5/8-11 NC (M16)
40	230/460	60	3	1800	EM1C22840-000	601408C	MVSI 18-1690	30	1672	0.66	0.98	57.6	4.72	6.69	1.77	5/8-11 NC (M16)
40	230/400	50	3	1500	EM1C22840-023	601408A	MVSI 18-1690	30	1584	0.51	0.92	60.5	4.72	6.69	1.77	5/8-11 NC (M16)
40	330/575	60	3	1200	EM1C22840-012	602402F	MVSI 12-1630	35	1621	0.36	0.54	80.3	4.72	6.69	2.13	5/8-11 NC (M16)
48	230/460	60	3	1200	EM1C22840-010	602402C	MVSI 12-1630	35	1621	0.36	0.68	80.3	4.72	6.69	2.13	5/8-11 NC (M16)
48	230/460	60	3	1800	EM1C22840-000	601408C	MVSI 18-1690	30	1672	0.66	0.98	57.6	4.72	6.69	1.77	5/8-11 NC (M16)
48	230/400	50	3	1500	EM1C22840-023	601408A	MVSI 18-1690	30	1584	0.51	0.92	60.5	4.72	6.69	1.77	5/8-11 NC (M16)
48	330/575	60	3	1200	EM1C22840-012	602402F	MVSI 12-1630	35	1621	0.36	0.54	80.3	4.72	6.69	2.13	5/8-11 NC (M16)
60/72	230/460	60	3	1200	EM1C22860-010	602380C	MVSI 12-1990	40	1991	0.69	1.35	96.8	5.51	7.48	2.13	5/8-11 NC (M16)
60/72	230/460	60	3	1800	EM1C22860-000	601524C	MVSI 18-2150	35	2160	0.67	0.95	67.1	4.72	6.69	2.13	5/8-11 NC (M16)
60/72	230/400	50	3	1500	EM1C22860-023	601524A	MVSI-18-2150	35	2299	0.54	0.95	67.1	4.72	6.69	2.13	5/8-11 NC (M16)
60/72	330/575	60	3	1200	EM1C22860-012	602380F	MVSI 12-1990	40	1991	0.69	1.08	96.8	5.51	7.48	2.13	5/8-11 NC (M16)

Figure 4-18
SWECO-Italvibras Vibrator Data (Model MVSI - Standard)

NOTES:

1. Refer to individual vibrator technical data sheets in provided in the SWECO-Italvibras LX Vibrator Manual for dimensions, drawings, lubrication schedule (if required) and other technical information.
2. Refer to vibrator nameplate specifying voltage, speed, type and model of your equipment.
3. Check and retighten units using 1/2" (M12) vibrator mounting bolts to 58 ft. lbs. (79 Nm) and units using 5/8" (M16) vibrator mounting bolts to 137 ft. lbs. (186 Nm) without lubricant.
4. Any repairs performed by the customer will void warranty. Any motor that has been opened beyond the removal of the weight covers will not be replaced under warranty.

Vibrator Technical Data (continued)

LX Size	Voltage	Hz	Phase	RPM	Sweco Part No.	Italvibras Part No.	Italvibras Model No.	Frame Size	Throw Force Lbs.	Hp	Current Draw in Amps	Wt. Lbs.	Motor Mount			
													D (in)	E (in)	Flange Thick-ness	Bolt
18	230/460	60	3	1200	EM1C22818-010S	602284C	MVSS 12-300	10	299	0.12	0.30	34.8	3.54	4.92	0.47	1/2-13 NC (M12)
18	230/460	60	3	1800	EM1C22818-000S	601344C	MVSS 18-480	10	471	0.13	0.40	67.5	3.54	4.92	0.47	1/2-13 NC (M12)
18	230/400	50	3	1500	EM1C22818-023S	601344A	MVSS 18-480	10	469	0.13	0.41	34.8	3.54	4.92	0.47	1/2-13 NC (M12)
18	330/575	60	3	1200	EM1C22818-012S	602284F	MVSS 12-300	10	299	0.12	0.24	34.8	3.54	4.92	0.47	1/2-13 NC (M12)
24	230/460	60	3	1200	EM1C22824-010S	602285C	MVSS 12-580	20	581	0.16	0.50	49.5	4.13	5.51	0.59	1/2-13 NC (M12)
24	230/460	60	3	1800	EM1C22818-000S	601344C	MVSS 18-480	10	471	0.13	0.40	67.5	3.54	4.92	0.47	1/2-13 NC (M12)
24	230/400	50	3	1500	EM1C22818-023S	601344A	MVSS 18-480	10	469	0.13	0.41	34.8	3.54	4.92	0.47	1/2-13 NC (M12)
24	330/575	60	3	1200	EM1C22824-012S	602285F	MVSS 12-580	20	581	0.16	0.40	49.5	4.13	5.51	0.59	1/2-13 NC (M12)
30	230/460	60	3	1200	EM1C22831-010S	602405C	MVSS 12-760	30	744	0.36	0.68	67.5	4.72	6.69	0.67	5/8-11 NC (M16)
30	230/460	60	3	1800	EM1C22830-000S	601346C	MVSS 18-1310	20	1302	0.37	0.60	49.5	4.13	5.51	0.59	1/2-13 NC (M12)
30	230/400	50	3	1500	EM1C22830-023S	601346A	MVSS 18-1310	20	1214	0.29	0.60	52.6	4.13	5.51	0.59	1/2-13 NC (M12)
30	330/575	60	3	1200	EM1C22830-012S	602405F	MVSS 12-760	30	744	0.36	0.54	67.5	4.72	6.69	0.67	5/8-11 NC (M16)
40	230/460	60	3	1200	EM1C22840-010S	602417C	MVSS 12-1630	35	1621	0.36	0.68	90.2	4.72	6.69	0.79	5/8-11 NC (M16)
40	230/460	60	3	1800	EM1C22840-000S	601526C	MVSS 18-1690	30	1672	0.66	0.98	67.5	4.72	6.69	0.67	5/8-11 NC (M16)
40	230/400	50	3	1500	EM1C22840-023S	601526A	MVSS 18-1690	30	1584	0.51	0.92	70.4	4.72	6.69	0.67	5/8-11 NC (M16)
40	330/575	60	3	1200	EM1C22840-012S	602417F	MVSS 12-1630	35	1621	0.36	0.54	90.2	4.72	6.69	0.79	5/8-11 NC (M16)
48	230/460	60	3	1200	EM1C22840-010S	602417C	MVSS 12-1630	35	1621	0.36	0.68	90.2	4.72	6.69	0.79	5/8-11 NC (M16)
48	230/460	60	3	1800	EM1C22840-000S	601526C	MVSS 18-1690	30	1672	0.66	0.98	67.5	4.72	6.69	0.67	5/8-11 NC (M16)
48	230/400	50	3	1500	EM1C22840-023S	601526A	MVSS 18-1690	30	1584	0.51	0.92	70.4	4.72	6.69	0.67	5/8-11 NC (M16)
48	330/575	60	3	1200	EM1C22840-012S	602417F	MVSS 12-1630	35	1621	0.36	0.54	90.2	4.72	6.69	0.79	5/8-11 NC (M16)
60/72	230/460	60	3	1200	EM1C22860-010S	602408C	MVSS 12-1990	40	1991	0.69	1.35	116	5.51	7.48	0.98	5/8-11 NC (M16)
60/72	230/460	60	3	1800	EM1C22860-000S	601348C	MVSS 18-2150	35	2160	0.67	0.95	82.5	4.72	6.69	0.79	5/8-11 NC (M16)
60/72	230/400	50	3	1500	EM1C22860-023S	601348A	MVSS 18-2150	35	2299	0.54	0.95	92.4	4.72	6.69	0.79	5/8-11 NC (M16)
60/72	330/575	60	3	1200	EM1C22860-012S	602408F	MVSS 12-1990	40	1991	0.69	1.08	116	5.51	7.48	0.98	5/8-11 NC (M16)

Figure 4-19
SWECO-Italvibras Vibrator Data (Model MVSS - Stainless Steel)

LX Size	Voltage	Hz	Phase	RPM	Sweco Part Number	Italvibras Part No.	Italvibras Model No.	Frame Size	Throw Force Lbs.	Hp	Current Draw in Amps	Wt. Lbs.	Motor Mount			
													D (in)	E (in)	Flange Thick-ness	Bolt
18	230/460	60	3	1200	EM1C22818-110	602315C	CDX 12-110	10	108	0.12	0.30	25.3	3.54	4.92	1.1	1/2-13 NC (M12)
18	230/460	60	3	1800	EM1C22818-100	601409C	CDX 18-470	10	471	0.13	0.40	28.6	3.54	4.92	1.1	1/2-13 NC (M12)
18	230/400	50	3	1500	EM1C22818-123	601409A	CDX 18-470	10	469	0.13	0.41	30.8	3.54	4.92	1.1	1/2-13 NC (M12)
18	330/575	60	3	1200	EM1C22818-112	602315F	CDX 12-110	10	108	0.12	0.24	25.3	3.54	4.92	1.1	1/2-13 NC (M12)
24	230/460	60	3	1200	EM1C22824-110	602317C	CDX 12-575	20	581	0.16	0.50	47.1	4.13	5.51	1.18	1/2-13 NC (M12)
24	230/460	60	3	1800	EM1C22818-100	601409C	CDX 18-470	10	471	0.13	0.40	28.6	3.54	4.92	1.1	1/2-13 NC (M12)
24	230/400	50	3	1500	EM1C22818-123	601409A	CDX 18-470	10	469	0.13	0.41	30.8	3.54	4.92	1.1	1/2-13 NC (M12)
24	330/575	60	3	1200	EM1C22824-112	602317F	CDX 12-575	20	581	0.16	0.40	47.1	4.13	5.51	1.18	1/2-13 NC (M12)
30	230/460	60	3	1200	EM1C22831-110	602318C	CDX 12-750	30	744	0.36	0.68	63.8	4.72	6.69	1.77	5/8-11 NC (M16)
30	230/460	60	3	1800	EM1C22830-100	601411C	CDX 18-1300	20	1302	0.37	0.60	47.1	4.13	5.51	1.18	1/2-13 NC (M12)
30	230/400	50	3	1500	EM1C22830-123	601411A	CDX18-1300	20	1214	0.29	0.60	50.2	4.13	5.51	1.18	1/2-13 NC (M12)
30	330/575	60	3	1200	EM1C22830-112	602318F	CDX 12-750	30	744	0.36	0.54	63.8	4.72	6.69	1.77	5/8-11 NC (M16)
40	230/460	60	3	1200	EM1C22840-110	602320C	CDX 12-1630	35	1621	0.30	0.61	105	4.72	6.69	2.05	5/8-11 NC (M16)
40	230/460	60	3	1800	EM1C22840-100	601412C	CDX 18-1670	30	1672	0.66	0.98	63.8	4.72	6.69	1.77	5/8-11 NC (M16)
40	230/400	50	3	1500	EM1C22840-123	601412A	CDX 18-1670	30	1584	0.51	0.92	66.7	4.72	6.69	1.77	5/8-11 NC (M16)
40	330/575	60	3	1200	EM1C22840-112	602320F	CDX 12-1630	35	1621	0.30	0.49	105	4.72	6.69	2.05	5/8-11 NC (M16)
48	230/460	60	3	1200	EM1C22840-110	602320C	CDX 12-1630	35	1621	0.30	0.61	105	4.72	6.69	2.05	5/8-11 NC (M16)
48	230/460	60	3	1800	EM1C22840-100	601412C	CDX 18-1670	30	1672	0.66	0.98	63.8	4.72	6.69	1.77	5/8-11 NC (M16)
48	230/400	50	3	1500	EM1C22840-123	601412A	CDX 18-1670	30	1584	0.51	0.92	66.7	4.72	6.69	1.77	5/8-11 NC (M16)
48	330/575	60	3	1200	EM1C22840-112	602320F	CDX 12-1630	35	1621	0.30	0.49	105	4.72	6.69	2.05	5/8-11 NC (M16)
60/72	230/460	60	3	1200	EM1C22860-110	602325C	CDX 12-1990	40	1991	0.59	1.30	144	5.51	7.48	2.56	5/8-11 NC (M16)
60/72	230/460	60	3	1800	EM1C22860-100	601413C	CDX 18-2150	35	2160	0.60	0.88	91.3	4.72	6.69	2.05	5/8-11 NC (M16)
60/72	230/400	50	3	1500	EM1C22860-123	601413A	CDX 18-2150	35	2299	0.49	0.81	101	4.72	6.69	2.05	5/8-11 NC (M16)
60/72	330/575	60	3	1200	EM1C22860-112	602325F	CDX 12-1990	40	1991	0.59	1.04	144	5.51	7.48	2.56	5/8-11 NC (M16)

Figure 4-20
SWECO-Italvibras Vibrator Data (Model CDX for Hazardous Locations)

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APPENDIX A

SWECO-Italvibras LX Vibrator Manual

SWECO

Electric Vibrator Operator's Manual

For LX Low Profile Units

Models

MVSI (Standard),

MVSS (Stainless Steel)
and
CDX (for Hazardous Locations)

NOTE:

If you need assistance in any form regarding the operation of your equipment, contact your SWECO Representative or the SWECO home office immediately. Constant "Service-After-The-Sale" is the keynote of SWECO.

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Information contained within this publication is subject to change without notice.

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INTRODUCTION

SWECO industrial electric vibrators have been designed and manufactured in accordance with the most exacting international industrial standards and requirements. The industrial electric vibrators are designed for long life at continuous duty and maximum force output. For models MVSI and MVSS, the electric vibrators are suitable for operation in ambient from -30°C to 40°C (-22°F to 104°F). Operation outside of this range needs engineering consideration. For models CDX, the electric vibrators are suitable for operation in ambient from -25°C to 40°C (-13°F to 104°F) for Class I and Class II electric vibrators and for operation in ambient from -25°C to 55°C (-13°F to 131°F) for Class I.

SWECO industrial electric vibrators have been evaluated for installation throughout the world. Check the electric vibrator nameplate for the exact ratings and approvals for the specific model. Standard ratings include the following per model:

Models MVSI and MVSS - CSA (Canadian Standards Association) Approval, the CE (European Directive) Mark, EX Approval for Zone 21 (ATEX II2D tD A21 IP66), Russian GOST Mark and IECEx Approval (II2D tD A21 IP66).

Models CDX - Underwriters Laboratories, Inc. (UL) Listing, CSA (Canadian Standards Association) Approval, the CE (European Directive) Mark, EX Approval for Zone 1, 2, 21, 22 (ATEX II2GD, Ex d IIB T 120°C Gb, Ex t IIIC T120°C Db, IP66), Russian GOST Mark for Ex d explosion-proof rating and IECEx Approval (Ex d IIB T120°C Gb, Ex t IIIC T120°C Db, IP66).

The electric vibrator can be referred to by its Model or Type designation. The vibrator Model or Type designations referred to in this manual are as follows:

MVSI – Continuous duty *standard* industrial electric vibrator, single or three phase.

MVSS - Continuous duty *stainless steel* industrial electric vibrator, single or three phase.

CDX - Continuous duty *explosion-proof* industrial electric vibrator for use in hazardous locations, single or three phase.

For models MVSI and MVSS, the electric vibrator may optionally be CSA Approved for Class I, Division 2, Group A, B, C and D hazardous locations, or it may be marked as being suitable for Class II, Division 2, Group F and G hazardous locations.

Applications and installations requiring Division 1 equipment shall use CDX explosion-proof and dust-ignition-proof electric vibrators which are intended for the following hazardous locations:

In areas that have explosive or flammable gases, vapors and / or dusts where the explosion hazard is referred to as Division 1 or Zone 1, the electric vibrator is marked for Class I, Groups C and D and Class II, Groups E, F and G hazardous locations and Ex d IIB T120°C Gb – Ex t IIIC T120°C Db.

In areas that have explosive or flammable gases and / or vapors where the explosion hazard is referred to as Division 1 or Zone 1, the electric vibrator is marked for Class I, Groups C and D hazardous locations and Ex d IIB T160°C Gb.

Models CDX explosion-proof electric vibrators comply with the Essential Health and Safety Requirements: EN 60079-0:2009, EN 60079-1:2007, EN 60079-31:2009, IEC 60079-0:2007, IEC 60079-1:2007, EIC 60079-31:2008.

General Safety Requirements

Read this entire manual before proceeding. Compliance with all company, local and OSHA regulations is essential. Any electrical work must be done in accordance with all applicable local and national codes and must be performed only by qualified, licensed and authorized personnel. Always follow lockout and tag out procedures and requirements and always wear ear protection when in close proximity to operating vibratory equipment.

Comprehensive adherence to these documents at a minimum is required – The National Electrical Code NFPA 70, ANSI z244.1 the American National Standard for Personnel Protection – Lockout/Tag out of Energy Sources – Minimum Safety Requirements, CFR 29 Part 1910 – Control of Hazardous Energy Sources (Lockout/Tag out) Final Rule and CFR 29 Part 1910.15 Occupational Noise Exposure.

⚠ **CAUTION: This equipment must be installed, operated, and maintained by qualified personnel to avoid personal injury or damage to property.**

⚠ **CAUTION: All persons operating the equipment and working in general area should wear standard safety equipment (i.e. safety glasses, ear protection, steel-toed boots) to prevent risk of personal injury. All safety items must conform to local safety requirements.**

Storage

Storage of the electric vibrator should be in an ambient not less than 5°C (41°F) with a relative humidity not more than 60%. If the vibrator has been stored for longer than two years, the vibrator should be evaluated by authorized and trained personnel to ensure that the grease is intact, that there is no bearing damage such as brinelling and that the ground insulation is sound and not damaged from condensation.

INSTALLATION

⚠ CAUTION: This equipment must be installed, operated, and maintained by qualified personnel to avoid personal injury or damage to property.

Before installing the vibrator, make sure that you have everything that you will need and that there is no shipping damage. Any product damage should be reported to SWECO and the delivery service immediately. Standard metric hand tools will be needed. Carefully handle the electric vibrator. Dropping or impacting the electric vibrator may damage the bearings.

Welding – Never weld on a bin, hopper or machine with the electric vibrator mounted to it since the welding may damage the vibrator bearings or electrical circuits. When you do weld, especially in an enclosed area, make sure that the area is known to be nonhazardous and that there are no flammable or explosive levels of gases, vapors or dusts.

Mounting Surface – The object of vibration on bins and hoppers is to transmit vibration energy through the structure to the material within. The mounting surface must be rigid and strong for this transfer of energy to take place. The mounting surface must also be clean, flat (0.010 in. across mounting feet maximum), free of paint and have a minimum thickness equal to the major diameter of the mounting bolt. Also make sure that the electric vibrator feet are clean and free of debris.

⚠ CAUTION: All persons operating the equipment and working in general area should wear standard safety equipment (i.e. safety glasses, ear protection, steel-toed boots) to prevent risk of personal injury. All safety items must conform to local safety requirements.

Mounting Plate

The mounting plate should be at least the overall size of the electric vibrator feet. It should be located on the bin and hopper wall at a height of 1/4 to 1/3 of the sloped wall height. The mounting plate or bracket should extend at least 3/4 the length of the sloped wall (see Figure 1). If a second electric vibrator is to be installed to the bin or hopper, install it at a height of 1/2 of the sloped wall height and 180° from the first vibrator. Weld the mounting plate or bracket to the structure wall with skip welds that are 3 inches long then skip 2 inches then 3 inch long weld, etc. Do not weld at corners of mounting plate within 1 inch of the corner.

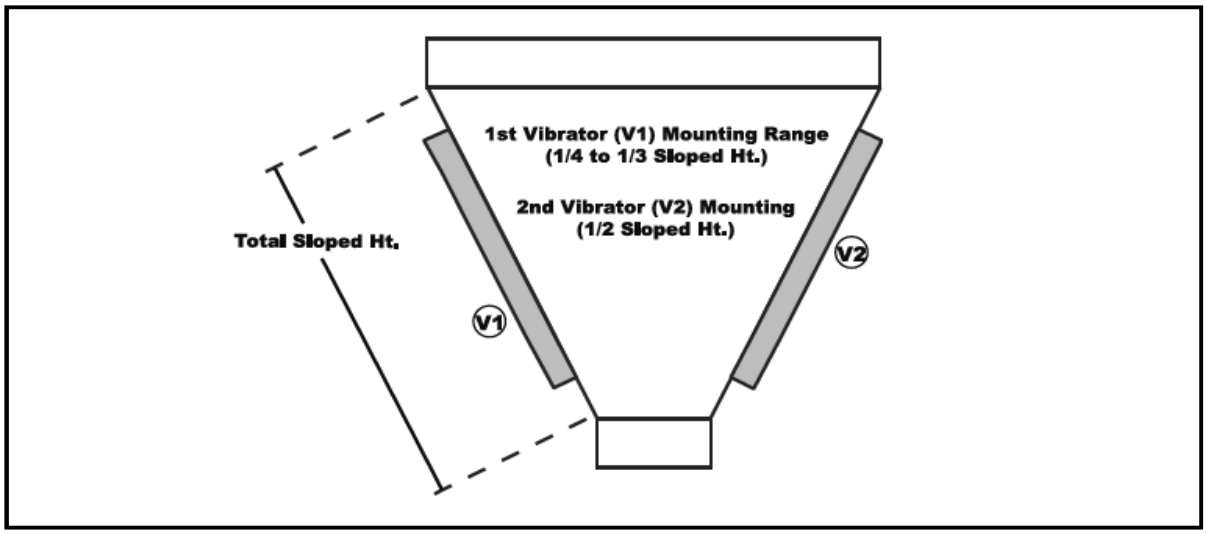


Figure 1. Mounting Examples

Mounting Hardware and Torque

Always use new bolts, nuts and compression washers. The bolts should be Grade 5 or 8 (equivalent international designation is 8.8 and 12.9, respectively). Grade 5 bolts are suitable for a majority of applications. Do not use split lock washers. Use only compression washers. Table I offers suggested mounting bolt torque values. Always check with the bolt manufacturer for recommended torque values. Torque the mounting bolts in the proper sequence as shown in Figure 2 so as not to damage casting. After operating vibrator for 15 minutes, disconnect, lockout/tag out, and torque the mounting bolts a second time. Periodically check mounting bolt torque thereafter.

WARNING: After 15 minutes of operation and periodically thereafter, disconnect and lockout / tagout. Check vibrator mounting bolts and retighten, if needed, to prevent them from loosening and causing damage to the vibrators or unit. Check and retighten 1/2" (M12) mounting bolts to 58 foot pounds (8 kgm). Check and retighten 5/8" (M16) mounting bolts to 137 foot pounds (19 kgm). If a vibrator (electric vibrating motor) vibrates loose, damage to the power cord and to the structure may result as well as risk of personal injury.

Table I. Mounting Bolts and Torque Requirements

	British		Metric	
Frame Size	**Bolt Size**	**Dry Torque Grade 5**	**Bolt Size**	**Dry Torque Grade 8.8**
00, 01	5/16 in-18 NC	16.5	M8	2.3
10, 20	1/2 in-13 NC	58	M12	8
30, 33, 35, 40, 50	5/8 in-11 NC	137	M16	19

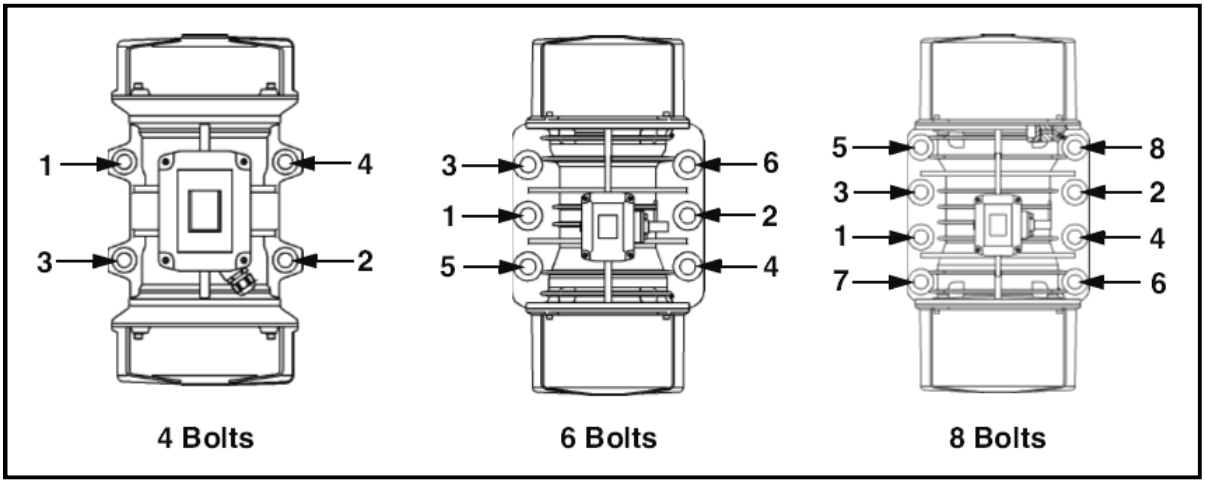


Figure 2. Torque Sequence

Wiring Electric Vibrator

It is mandatory to comply with the National Electrical Code, NFPA 70, and all applicable local codes. Identify which wiring diagram is applicable by referencing the Diagram designation on the nameplate or by referring to Table II. Remove the four screws with washers securing the wiring box cover along with the foam rubber block and set aside. Identify the wiring diagram by referencing the predetermined Diagram noted on the wiring diagram found within the wiring box or by referring to the following Diagrams shown in Figure 3 (Models MVSI and MVSS) and Figure 4 (Model CDX).

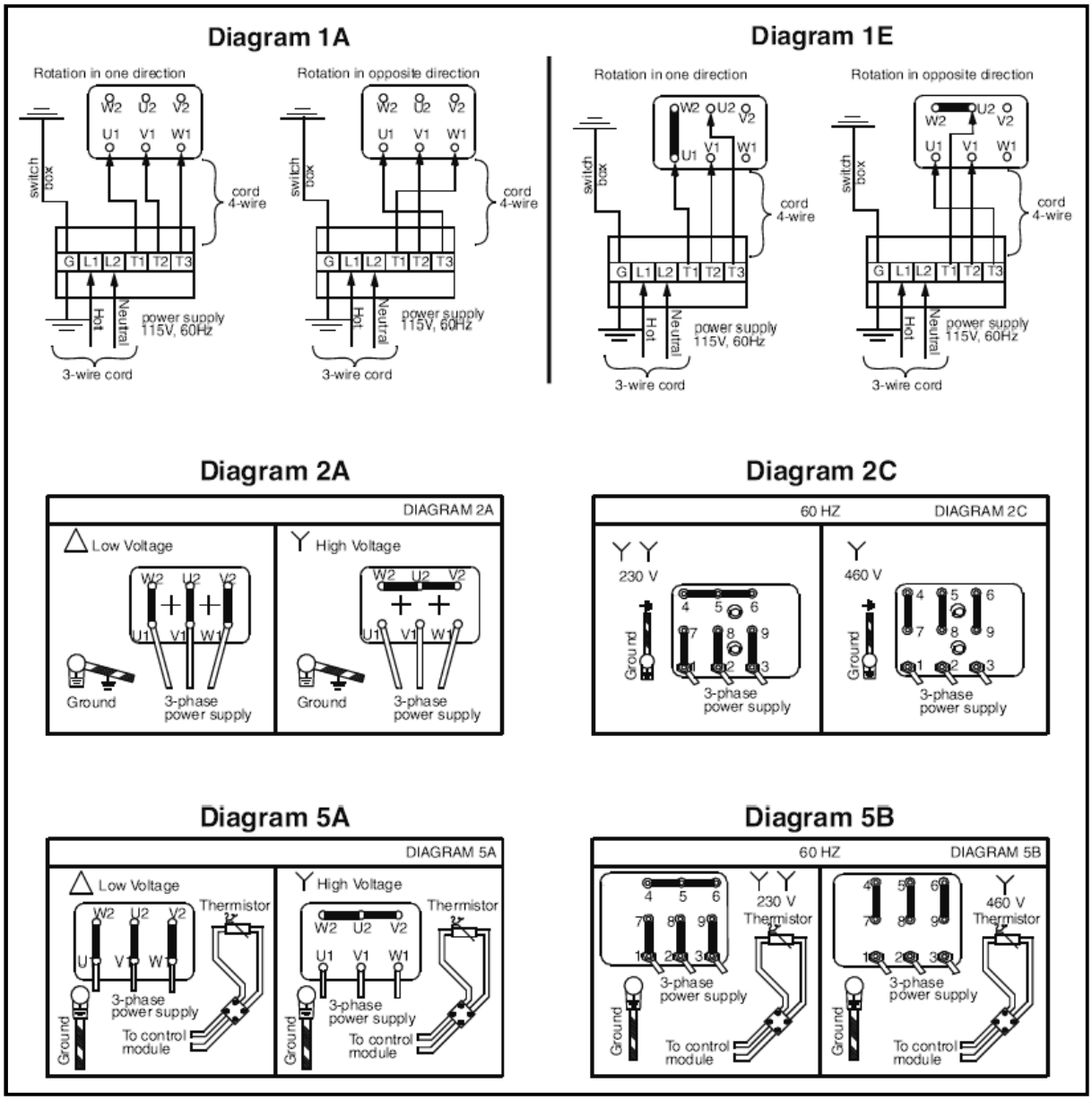


Figure 3. Wiring Diagrams (Models MVSI and MVSS)

Wiring Electric Vibrator (continued)

Table II. Wiring Diagram Identification (Models MVSI and MVSS)

00 through 01, single-phase, 3600 rpm	Diagram 1A
10 through 30, single phase, 3600 rpm	Diagram 1E
00 through 60, three-phase,1200,1800 & 3600 rpm; MVSI 9-590; 575-volt 900 rpm	Diagram 2A
40 through 60, three-phase, 900 rpm except 575V	Diagram 2C

Select a cord type that has a voltage rating not less than the power supply voltage, that has a minimum temperature rating of 105°C (221°F), and that has an overall jacket diameter within the range specified in Table III. This table also details the cord provided by the factory for reference. We recommend Coleman black portable cord SEOOW Seoprene rated 600 V and 105°C (221°F).

Table III. Cord Grip Chart

PLASTIC CORD GRIP CHART					
Frame Size	**Size mm x 1.5**	**Suitable Cord Diameter Range, mm**	**Cord Provided by Factory**		
			Size	**Nominal Diameter, in.**	**Distance Between Flats, in.**
00, 01, 10	M20	6.5-12	16/4	0.42	1/16 to 1/8
20-70	M25	9-16	14/4	0.575	1/16 to 1/8
Thermistor Circuit Cord	M20	6.5-12	16/3	0.39	1/16 to 1/8

(Models MVSS and MVSI)

METAL CORD GRIP CHART					
Frame Size	**Size mm x 1.5**	**Suitable Cord Diameter Range, mm**	**Cord Provided by Factory**		
			Size	**Nominal Diameter, in.**	**Distance Between Flats, in.**
00, 01, 10	M20	7-13	16/4	0.42	1/16 to 1/8
20-60	M25	10-17	14/4	0.575	1/8 to 3/16
70	M25	16-19	10/4	0.705	1/8 to 3/16
Thermistor Circuit Cord	M20	7-13	16/3	0.39	1/16 to 1/8

(Model MVSS)

Wiring Electric Vibrator (continued)

For CDX models select a 4-conductor cord for Class I only electric vibrators and a 6-conductor cord for Class I and Class II vibrators. Select a cord type that has a voltage rating not less than the power supply voltage that has a minimum temperature rating of 105°C (221°F). We recommend Coleman black portable cord SEOOW Seoprene rated 600 V and 105°C (221°F).

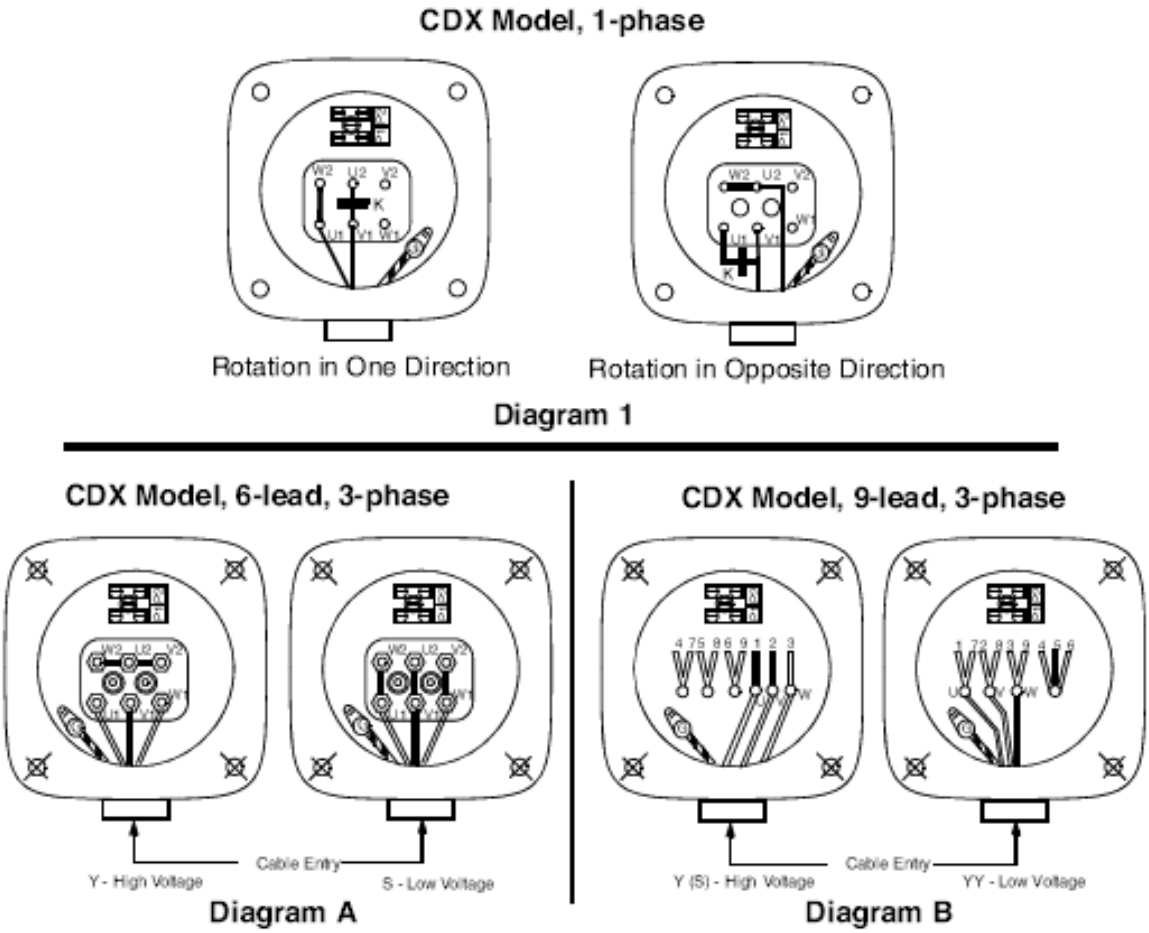


Figure 4. Wiring Diagrams (Model CDX)

Wiring Electric Vibrator (continued)

When wiring the electric vibrator, leave enough slack in the cord so that the cord does not become taut during operation causing stress on the connections. It is always best to position the cord down so that should there be any moisture present the moisture would tend to run down instead of into the vibrator wiring box.

Trim the cord by removing the jacket exposing the conductors and ground wire for approximately 6 inches. Be careful not to cut the conductor or ground wire insulation.

For MVSI and MVSS models, loosen the compression nut from the cord fitting assembled to the side wall of the wiring box on the electric vibrator. Position the compression nut on the cord and insert the cord through the opening in the side wall of the wiring compartment. Position the jacket of the cord approximately 1/2 inch beyond the inside wall of the wiring box wall and secure the compression nut by threading it to a position equal to the “Distance Between Flats” noted in Table III. Reference Figure 5 which pictorially defines “Distance Between Flats.”

For CDX models, insert the cord through the conduit fittings and then through the opening in the side wall of the wiring compartment. Position the jacket of the cord approximately 1/2 inch beyond the inside wall of the wiring box wall. Assemble all conduit fittings making sure that there is always minimum thread engagement of 5 full threads. Install the conduit seal following all instructions being certain to comply with Articles 501 and 502 of the NEC.

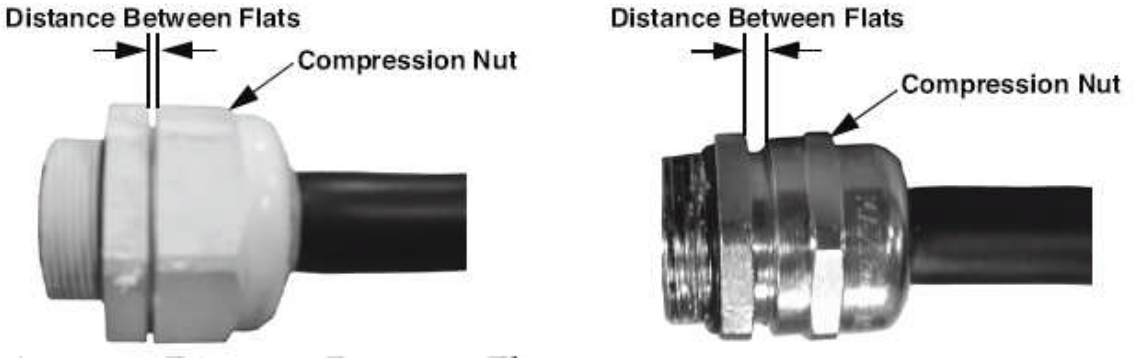


Figure 5. Distance Between Flats

Wiring Electric Vibrator (continued)

Trim the conductors within the wiring box leaving plenty of slack. Next, strip the conductor insulation for 1/4 inch to 3/8 inch. Crimp on closed loop wire connectors. Use only the intended crimping tool as designated by the wire connector manufacturer. The conductors should be neatly arranged on the floor of the wiring box. The wires should not cross over each other (see Figure 6).

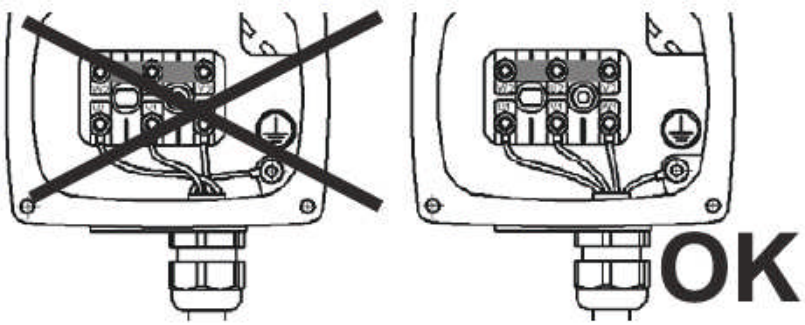


Figure 6. Proper Wiring Arrangement/Positioning

Secure the wire connectors and the shorting bars to the terminal block in the positions shown on the wiring diagram using the hardware provided. It is essential that the hardware be positioned as shown in Figure 7.

Note that the closed loop wire connectors provided on the power supply cord are positioned between the two flat washers. A drop or two of thread sealant such as Locktite is recommended. Do not use permanent thread sealant because the terminal block will be damaged should you wish to remove and replace the power supply cord. The terminal block nuts should not be over tightened since the possibility of damaging the plastic insulating body is high. Refer to Table IV for torque values. Make the connections hand-tight followed by a 1/4 turn but never put a ratchet on these nuts.

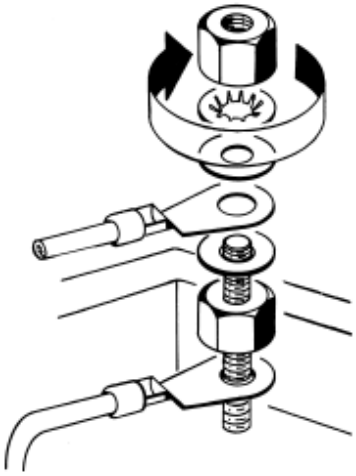


Figure 7. Terminal Block Hardware Installation

For MVSI and MVSS wiring diagrams 1A, 1E, 2A and 2C (see Figure 3) and CDX Class I electric vibrators, reinstall the rubber block over the power supply conductors and install the wiring box cover being careful not to pinch the o-ring (see Figure 8). Nut and screw torque is specified in Table IV.

For MVSI and MVSS wiring diagrams 5A and 5B (see Figure 3), you will note that there is a small 2-pole terminal block in the wiring box. This is the thermistor circuit. Proceed to next section “Thermistor Wiring” for details. For CDX electric vibrators for use in Class I and Class II hazardous locations includes a small 2-pole terminal block in the wiring box. This is the thermostat circuit. Proceed to following section “Thermostat Wiring”.

For constructions that do not incorporate terminal blocks, make the wire-to-wire connections using wire nuts. The nuts should be taped with electrical insulation.

Figure 8. Wiring Block Assembly

Thermistor Wiring (MVSI and MVSS)

Electric vibrators with Diagram 5A and 5B have thermistor circuits installed in the winding. These devices are intended to protect the winding from over-temperature. Connect the thermistors to the motor starter using a thermistor control module such as Siemens 3RN1012- 1CK00. Never apply line voltage to the thermistor circuit. It is a low voltage + /- 5V dc circuit. The thermistor control module is connected to the motor starter control circuit which commonly operates at 120 Vac. Follow the wiring diagram provided with the thermistor control module.

The thermistors are rated 130°C (266°F). There are three PTC thermistors wired in series that are installed in the vibrator winding and connected to blue or grey leads. These leads are secured to the small 2-pole terminal block mounted in the wiring box.

To assemble the thermistor cord, remove the threaded metal plug assembled in the side wall of the wiring box and install a M20 cord grip. Select a cord type that has a voltage rating not less than the power supply voltage, that has a minimum temperature rating of 105°C (221°F), and that has an overall jacket diameter within the range specified in Table III. This table also details the cord provided by the factory for reference. We recommend Coleman black portable cord SEOOW Seoprene rated 600 V and 105°C (221°F).

Trim the cord by removing the jacket exposing the conductors for approximately 6 inches. Be careful not to cut the conductor wire insulation. Loosen the compression nut from the cord fitting assembled to the side wall of the wiring box on the electric vibrator. Position the compression nut on the cord and insert the cord through the opening in the side wall of the wiring compartment. Position the jacket of the cord approximately 1/2 inch beyond the inside wall of the wiring box wall and secure the compression nut by threading it to a position equal to the “Distance Between Flats” noted in Table III. Reference Figure 5 which pictorially defines “Distance Between Flats”.

Trim the conductors within the wiring box leaving plenty of slack. Next, strip the conductor insulation for 1/4 inch to 3/8 inch. The conductors should be neatly arranged on the floor of the wiring box. The wires should not cross over each other. Secure the wires to the 2-pole terminal block by tightening the compression screws. Reinstall the rubber block over the power supply and thermistor circuit conductors and install the wiring box cover being careful not to pinch the o-ring (see Figure 8). Nut and screw torque is specified in Table IV.

Thermostat Wiring (CDX)

Class I and Class II electric vibrators have thermostat circuits installed in the winding. The thermostat terminals are identified as P1 and P2. These devices are intended to limit surface temperatures to no more than the marked operating temperature (code). Connect the thermostats to the motor starter as shown in Figure 9. The thermostat circuit is rated 600 V ac maximum and 720 VA. Use a manual momentary start switch.

Reinstall the rubber block over the power supply and thermistor circuit conductors and install the wiring box cover being careful not to pinch the o-ring (see Figure 8). Nut and screw torque is specified in Table IV.

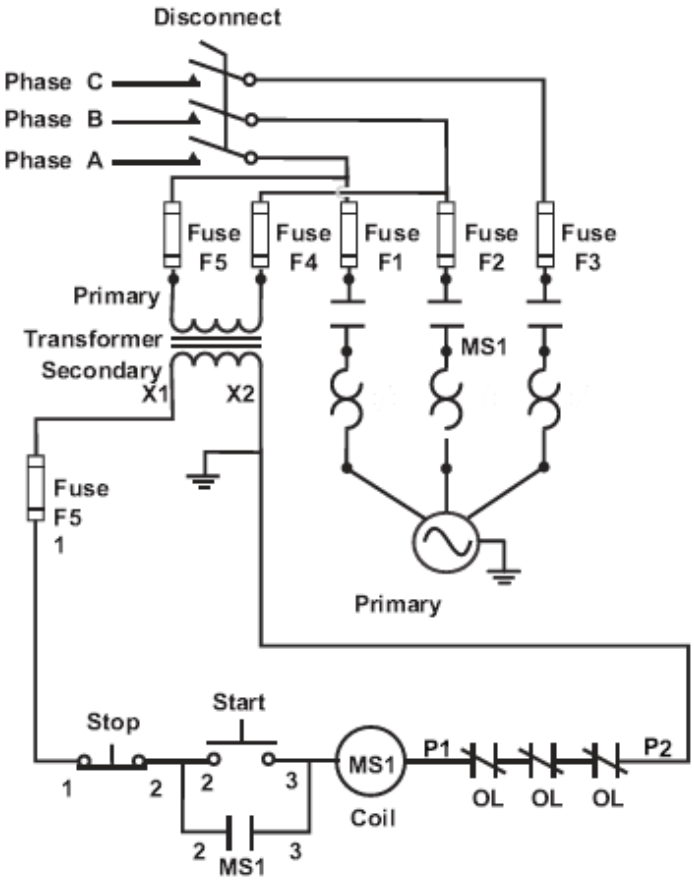
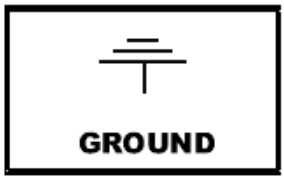


Figure 9. Manual Reset Connections (CDX)

Grounding and Bonding

The electric vibrator must be grounded using the ground wire provided in the cord. The ground wire shall be connected to a closed loop wire connector which is then connected to the ground terminal located within the wiring box (see Figure 6). The ground terminal is identified by the international symbol.



It may be necessary to bond the electric vibrator to ground using the external ground screw as shown in Figure 10. The external ground terminal is identified by the international symbol. Use a wire size no smaller than the internal ground wire.

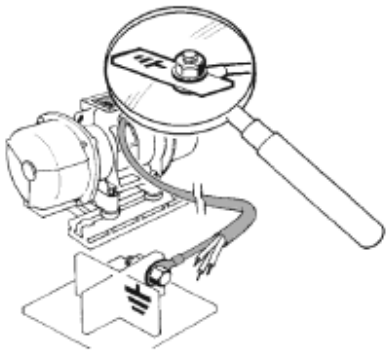


Figure 10. Ground Bonding Screw

Overload, Short-Circuit and Ground-Fault Protection

In the USA, The National Electrical Code, NFPA 70, and all applicable local codes, govern how to properly size, select and install overload protection (sometimes called heaters) and short-circuit and ground-fault protection (fuses or circuit breakers). Proper selection and installation of these devices is required and essential for not only protection of the electric vibrator and the power supply circuit but also for protection of personnel.

If the overload or short-circuit and ground fault protection operate, have qualified personnel locate and fix the problem before resetting.

When operating two electric vibrators, the vibrators should be controlled with a single motor starter that has overload protection dedicated to each electric vibrator. The overloads shall be electrically interlocked such that should there be a fault with one electric vibrator, both electric vibrators will be de-energized.

Variable Frequency Inverter

The electric vibrators may be supplied with a variable frequency inverter. Never operate the vibrators above the maximum frequency noted on the nameplate. If operating two vibrators, use one variable frequency inverter along with overload protection dedicated to each electric vibrator. The overloads shall be electrically interlocked such that should there be a fault with one electric vibrator, both electric vibrators will be de-energized.

The nameplate current should never be exceeded throughout the entire frequency range.

Eccentric Weight Adjustment

This operation must be performed exclusively by qualified personnel, after disconnecting the power supply.

⚠ **WARNING:** ***Replacement*** **vibrators are shipped from the factory with the eccentric weights set at 50%. Both replacement and existing vibrators MUST have the weight settings checked after installation and prior to initial start-up. Eccentric weights must be set for the individual application the unit will be used in. Failure to properly set the weights of the vibrator will cause property and vibrator damage.**

The eccentric weights may be adjusted to produce the desired centrifugal force output. It is always best to operate the electric vibrator at the lowest weight setting that produces the desired result. This will result in lower energy expense and extend the bearing life. The factory setting is 50% which would result in 50% of the centrifugal force noted on the nameplate. To adjust the force output, lockout/tag out the electric vibrator. Remove each weight cover and set it and the screws, washers and o-rings aside. The outer adjustable weight clamping screw or the shaft nut may be loosened and then the adjustable weights may be rotated to the desired position (see Figure 11).

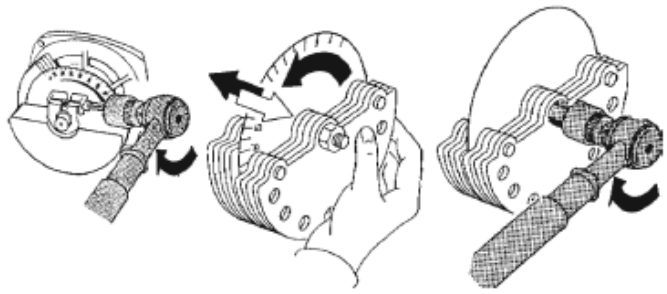


Figure 11. Eccentric Weight Adjustments

The eccentric weights must be adjusted to mirror images of each other at the same setting number as shown in Figure 12.

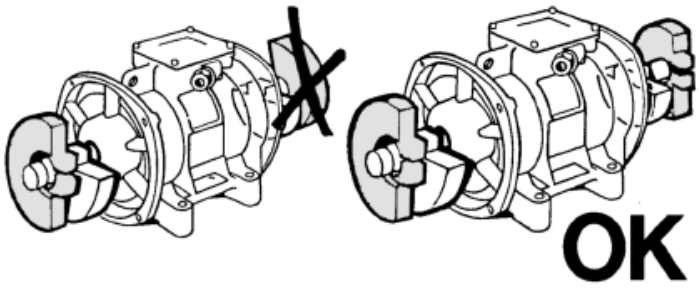


Figure 12. Setting Sets of Eccentric Weights to Mirror Images

Properly torque the clamping screw or shaft nut to secure the weights in position. Torque values are outlined in Table IV. Reinstall the weight covers making sure not to pinch the o-rings.

Eccentric Weight Adjustment (continued)

Check shaft rotation before replacing weight covers. Start vibrator for one second, stop and lockout / tag out. Observe direction of rotation. If desired to reverse the direction of rotation, switch two of the three power supply leads in the wiring box or at the motor starter for 3-phase electric vibrators. For 1-phase electric vibrators, refer to the wiring diagram for changing the direction of shaft rotation.

Replace weight covers using screws and washers being careful not to pinch the o-rings. The screw torque is outlined in Table IV. Never operate the electric vibrator without weight covers in place. They provide a degree of protection for the bearings and a shield for the rotating eccentric weights. Always replace broken weight covers immediately. Do not operate electric vibrator with weight covers removed or with damaged weight covers.

Starting Up

After making sure that the power supply voltage matches the voltage marked on the nameplate, that the mounting bolts are properly secured, that all covers are in place and secured, and that the motor starter is properly installed and adjusted, turn the electric vibrator on. Excessive noise would indicate a problem but slight bearing noise is normal due to the type of bearing used. After a few hours of operation, check each line current and verify that it does not exceed nameplate current. If the line current exceeds the nameplate current, then the mount needs to stiffened, the vibrator weights need to be reduced or the vibrator needs to be moved to a more rigid location. Never operate the vibrator above nameplate current.

After the first 8 hours of operation, check the line current to make sure that it does not exceed nameplate and check mounting bolt torque. See section “Mounting Hardware and Torque”.

Electric Vibrator Maintenance

CAUTION: This equipment must be installed, operated, and maintained by qualified personnel to avoid personal injury or damage to property.

WARNING: When installing or maintaining the equipment, shut off and lock out power. Follow all local and national electrical codes. Failure to comply could result in severe personal injury or property damage.

Every quarter, we recommend a thorough inspection of the electric vibrator as stated below:

1. Inspect cord for any visible damage or wear. Replace cord if there are any signs of damage or wear. This holds true for both the power supply cord and the thermistor circuit cord.
2. Remove wiring box cover and inspect for any foreign matter or liquid. Vacuum any foreign matter. If wet, remove electric vibrator from service and have the ground insulation tested by a trained, qualified and licensed technician.
3. Before replacing the wiring box cover, make sure the electrical connections are tight (do not over-tighten) and inspect the cover o-ring and rubber compression block. If the o-ring or rubber compression block is damaged or if they have lost their compression set, replace them.
4. Remove each weight cover and inspect for foreign matter. Vacuum if necessary. Replace o-rings if they are damaged or if they have lost their compression set.
5. Check mounting bolt torque (see Table IV) after 15 minutes of operation and periodically thereafter.
6. Replace any broken parts.

Electric Vibrator Torque Requirements

Table IV. Vibrator Nut and Screw Torque Requirements

Cap Screws	Ft/lb (kgm)	Shaft Nuts	Ft/lb (kgm)	Terminal Block Nuts	Ft/lb (kgm)
M6	7 (1)	M13x1	22 (3)	M4	0.87 (0.12)
M8	16.5 (2.3)	M15x1	36 (5)	M5	1.45 (0.20)
M10	35 (4.8)	M20x1	72 (10)	M6	2.17 (0.30)
M12	58 (8)	M25x1.5	123 (17)	M8	4.70 (0.65)
M14	95 (13)	M30x1.5	246 (34)	M10	9.80 (1.35)
M16	137 (19)	M45x1.5	360 (50)		
M18	195 (27)				
M20	275 (38)				

Electric Vibrator Lubrication

All electric vibrators are lubricated at the factory. If there are no external grease fittings, then the vibrator construction is lubricated for life. No grease will ever need to be added to these electric vibrators. If external grease fittings are provided, then it is intended that the bearings be periodically lubricated. **See following section "Electric Vibrator Technical Data" for individual vibrator technical data sheets for lubrication requirements.**

The lubrication frequency is every 2000 hours of operation unless otherwise specified. There is an exception - 3600 rpm electric vibrators operating continuously or for long periods of time should be lubricated in 1/2 the time specified using 1/2 the grease volume specified. For all other vibrators, follow technical data sheets except when the operating temperature exceeds 90°C (194°F). If the operating temperature exceeds 90°C (194°F), reduce the lubrication frequency and lubrication volume by 50% for every 10°C (50°F) increment above 90°C (194°F). Contact SWECO or your local Representative if the electric vibrator operating temperature exceeds 100°C (212°F). The electric vibrator should never operate above 120°C (248°F).

When adding grease through the grease fitting, make sure to clean the fitting so as not to introduce dirt into the bearing. Add the specified amount of grease shown on specific vibrator technical data sheet. Experiment with your grease gun to determine how many grams are introduced with each pump. Never over-grease a bearing since this will damage the bearing and cause high operating temperature.

Always use the correct grease. Never mix greases. When lubrication is required for models MVSI and MVSS, use Kluber NBU 8EP grease (SWECO part #00-695). When lubrication is required for models CDX, use Kluber ISOFLEX TOPAS NB 52 grease (SWECO part #2863029). The lubrication schedule and amount is indicated on the individual vibrator technical data sheets.

Electric Vibrator Repair

Before attempting any repairs during the warranty period, contact SWECO or your local Representative for repair and/or replacement instructions. Unauthorized repair attempts will void the warranty.

Electric Vibrator Technical Data

The SWECO-Italvibras vibrators, used in LX low profile units, are available in three (3) models: MVSI – continuous duty standard vibrator, MVSS – continuous duty stainless steel vibrator and CDX – continuous duty for use in hazardous locations. Refer to Figures 4-15 thru 4-17 for the technical data for these models. Following the tables are individual vibrator technical data sheets stating part numbers, drawing, dimensions, lubrication schedule (if required), and other pertinent technical information.

NOTES:

1. Refer to vibrator nameplate specifying voltage, speed, type and model of your equipment.
2. Periodically check and retighten 1/2" (M12) vibrator mounting bolts to 58 ft. lbs. (8 kgm) without lubricant. Retighten 5/8" (M16) vibrator mounting bolts to 137 ft. lbs. (19 kgm) without lubricant.
3. Any repairs performed by the customer will void warranty. Any vibrator that has been opened beyond the removal of the weight covers will not be replaced under warranty.
4. Technical data sheets are in order by model and then Italvibras part number.

Table V. Vibrator Technical Data (Model MVSI - Standard)

LX Size	Voltage	Hz	Phase	RPM	Sweco Part No.	Italvibras Part No.	Italvibras Model No.	Frame Size	Throw Force Lbs.	Hp	Current Draw in Amps	Wt. Lbs.	Motor Mount			
													D (in)	E (in)	Flange Thick-ness	Bolt
18	230/460	60	3	1200	EM1C22818-010	602297C	MVSI 12-300	10	299	0.12	0.30	27.5	3.54	4.92	1.1	1/2-13 NC (M12)
18	230/460	60	3	1800	EM1C22818-000	601367C	MVSI 18-480	10	469	0.13	0.40	25.7	3.54	4.92	1.1	1/2-13 NC (M12)
18	230/400	50	3	1500	EM1C22818-023	601367A	MVSI 18-480	10	469	0.13	0.41	27.5	3.54	4.92	1.1	1/2-13 NC (M12)
18	330/575	60	3	1200	EM1C22818-012	602297F	MVSI 12-300	10	299	0.12	0.24	27.5	3.54	4.92	1.1	1/2-13 NC (M12)
24	230/460	60	3	1200	EM1C22824-010	602298C	MVSI 12-580	20	581	0.16	0.50	41.8	4.13	5.51	1.18	1/2-13 NC (M12)
24	230/460	60	3	1800	EM1C22818-000	601367C	MVSI 18-480	10	469	0.13	0.40	25.7	3.54	4.92	1.1	1/2-13 NC (M12)
24	230/400	50	3	1500	EM1C22818-023	601367A	MVSI 18-480	10	469	0.13	0.41	27.5	3.54	4.92	1.1	1/2-13 NC (M12)
24	330/575	60	3	1200	EM1C22824-012	602298F	MVSI 12-580	20	581	0.16	0.40	41.8	4.13	5.51	1.18	1/2-13 NC (M12)
30	230/460	60	3	1200	EM1C22831-010	602314C	MVSI 12-760	30	744	0.37	0.68	57.6	4.72	6.69	1.77	5/8-11 NC (M16)
30	230/460	60	3	1800	EM1C22830-000	601373C	MVSI 18-1310	20	1302	0.37	0.60	41.8	4.13	5.51	1.18	1/2-13 NC (M12)
30	230/400	50	3	1500	EM1C22830-023	601373A	MVSI 18-1310	20	1214	0.29	0.60	44.9	4.13	5.51	1.18	1/2-13 NC (M12)
30	330/575	60	3	1200	EM1C22830-012	602314F	MVSI 12-760	30	744	0.37	0.54	57.6	4.72	6.69	1.77	5/8-11 NC (M16)
40	230/460	60	3	1200	EM1C22840-010	602402C	MVSI 12-1630	35	1621	0.36	0.68	80.3	4.72	6.69	2.13	5/8-11 NC (M16)
40	230/460	60	3	1800	EM1C22840-000	601408C	MVSI 18-1690	30	1672	0.66	0.98	57.6	4.72	6.69	1.77	5/8-11 NC (M16)
40	230/400	50	3	1500	EM1C22840-023	601408A	MVSI 18-1690	30	1584	0.51	0.92	60.5	4.72	6.69	1.77	5/8-11 NC (M16)
40	330/575	60	3	1200	EM1C22840-012	602402F	MVSI 12-1630	35	1621	0.36	0.54	80.3	4.72	6.69	2.13	5/8-11 NC (M16)
48	230/460	60	3	1200	EM1C22840-010	602402C	MVSI 12-1630	35	1621	0.36	0.68	80.3	4.72	6.69	2.13	5/8-11 NC (M16)
48	230/460	60	3	1800	EM1C22840-000	601408C	MVSI 18-1690	30	1672	0.66	0.98	57.6	4.72	6.69	1.77	5/8-11 NC (M16)
48	230/400	50	3	1500	EM1C22840-023	601408A	MVSI 18-1690	30	1584	0.51	0.92	60.5	4.72	6.69	1.77	5/8-11 NC (M16)
48	330/575	60	3	1200	EM1C22840-012	602402F	MVSI 12-1630	35	1621	0.36	0.54	80.3	4.72	6.69	2.13	5/8-11 NC (M16)
60/72	230/460	60	3	1200	EM1C22860-010	602380C	MVSI 12-1990	40	1991	0.69	1.35	96.8	5.51	7.48	2.13	5/8-11 NC (M16)
60/72	230/460	60	3	1800	EM1C22860-000	601524C	MVSI 18-2150	35	2160	0.67	0.95	67.1	4.72	6.69	2.13	5/8-11 NC (M16)
60/72	230/400	50	3	1500	EM1C22860-023	601524A	MVSI-18-2150	35	2299	0.54	0.95	67.1	4.72	6.69	2.13	5/8-11 NC (M16)
60/72	330/575	60	3	1200	EM1C22860-012	602380F	MVSI 12-1990	40	1991	0.69	1.08	96.8	5.51	7.48	2.13	5/8-11 NC (M16)

Table VI. Vibrator Technical Data (Model MVSS - Stainless Steel)

LX Size	Voltage	Hz	Phase	RPM	Sweco Part No.	Italvibras Part No.	Italvibras Model No.	Frame Size	Throw Force Lbs.	Hp	Current Draw in Amps	Wt. Lbs.	Motor Mount			
													D (in)	E (in)	Flange Thick-ness	Bolt
18	230/460	60	3	1200	EM1C22818-010S	602284C	MVSS 12-300	10	299	0.12	0.30	34.8	3.54	4.92	0.47	1/2-13 NC (M12)
18	230/460	60	3	1800	EM1C22818-000S	601344C	MVSS 18-480	10	471	0.13	0.40	67.5	3.54	4.92	0.47	1/2-13 NC (M12)
18	230/400	50	3	1500	EM1C22818-023S	601344A	MVSS 18-480	10	469	0.13	0.41	34.8	3.54	4.92	0.47	1/2-13 NC (M12)
18	330/575	60	3	1200	EM1C22818-012S	602284F	MVSS 12-300	10	299	0.12	0.24	34.8	3.54	4.92	0.47	1/2-13 NC (M12)
24	230/460	60	3	1200	EM1C22824-010S	602285C	MVSS 12-580	20	581	0.16	0.50	49.5	4.13	5.51	0.59	1/2-13 NC (M12)
24	230/460	60	3	1800	EM1C22818-000S	601344C	MVSS 18-480	10	471	0.13	0.40	67.5	3.54	4.92	0.47	1/2-13 NC (M12)
24	230/400	50	3	1500	EM1C22818-023S	601344A	MVSS 18-480	10	469	0.13	0.41	34.8	3.54	4.92	0.47	1/2-13 NC (M12)
24	330/575	60	3	1200	EM1C22824-012S	602285F	MVSS 12-580	20	581	0.16	0.40	49.5	4.13	5.51	0.59	1/2-13 NC (M12)
30	230/460	60	3	1200	EM1C22831-010S	602405C	MVSS 12-760	30	744	0.36	0.68	67.5	4.72	6.69	0.67	5/8-11 NC (M16)
30	230/460	60	3	1800	EM1C22830-000S	601346C	MVSS 18-1310	20	1302	0.37	0.60	49.5	4.13	5.51	0.59	1/2-13 NC (M12)
30	230/400	50	3	1500	EM1C22830-023S	601346A	MVSS 18-1310	20	1214	0.29	0.60	52.6	4.13	5.51	0.59	1/2-13 NC (M12)
30	330/575	60	3	1200	EM1C22830-012S	602405F	MVSS 12-760	30	744	0.36	0.54	67.5	4.72	6.69	0.67	5/8-11 NC (M16)
40	230/460	60	3	1200	EM1C22840-010S	602417C	MVSS 12-1630	35	1621	0.36	0.68	90.2	4.72	6.69	0.79	5/8-11 NC (M16)
40	230/460	60	3	1800	EM1C22840-000S	601526C	MVSS 18-1690	30	1672	0.66	0.98	67.5	4.72	6.69	0.67	5/8-11 NC (M16)
40	230/400	50	3	1500	EM1C22840-023S	601526A	MVSS 18-1690	30	1584	0.51	0.92	70.4	4.72	6.69	0.67	5/8-11 NC (M16)
40	330/575	60	3	1200	EM1C22840-012S	602417F	MVSS 12-1630	35	1621	0.36	0.54	90.2	4.72	6.69	0.79	5/8-11 NC (M16)
48	230/460	60	3	1200	EM1C22840-010S	602417C	MVSS 12-1630	35	1621	0.36	0.68	90.2	4.72	6.69	0.79	5/8-11 NC (M16)
48	230/460	60	3	1800	EM1C22840-000S	601526C	MVSS 18-1690	30	1672	0.66	0.98	67.5	4.72	6.69	0.67	5/8-11 NC (M16)
48	230/400	50	3	1500	EM1C22840-023S	601526A	MVSS 18-1690	30	1584	0.51	0.92	70.4	4.72	6.69	0.67	5/8-11 NC (M16)
48	330/575	60	3	1200	EM1C22840-012S	602417F	MVSS 12-1630	35	1621	0.36	0.54	90.2	4.72	6.69	0.79	5/8-11 NC (M16)
60/72	230/460	60	3	1200	EM1C22860-010S	602408C	MVSS 12-1990	40	1991	0.69	1.35	116	5.51	7.48	0.98	5/8-11 NC (M16)
60/72	230/460	60	3	1800	EM1C22860-000S	601348C	MVSS 18-2150	35	2160	0.67	0.95	82.5	4.72	6.69	0.79	5/8-11 NC (M16)
60/72	230/400	50	3	1500	EM1C22860-023S	601348A	MVSS 18-2150	35	2299	0.54	0.95	92.4	4.72	6.69	0.79	5/8-11 NC (M16)
60/72	330/575	60	3	1200	EM1C22860-012S	602408F	MVSS 12-1990	40	1991	0.69	1.08	116	5.51	7.48	0.98	5/8-11 NC (M16)

Table VII. Vibrator Technical Data (Model CDX for use in Hazardous Locations)

LX Size	Voltage	Hz	Phase	RPM	Sweco Part Number	Italvibras Part No.	Italvibras Model No.	Frame Size	Throw Force Lbs.	Hp	Current Draw in Amps	Wt. Lbs.	Motor Mount			
													D (in)	E (in)	Flange Thick-ness	Bolt
18	230/460	60	3	1200	EM1C22818-110	602315C	CDX 12-110	10	108	0.12	0.30	25.3	3.54	4.92	1.1	1/2-13 NC (M12)
18	230/460	60	3	1800	EM1C22818-100	601409C	CDX 18-470	10	471	0.13	0.40	28.6	3.54	4.92	1.1	1/2-13 NC (M12)
18	230/400	50	3	1500	EM1C22818-123	601409A	CDX 18-470	10	469	0.13	0.41	30.8	3.54	4.92	1.1	1/2-13 NC (M12)
18	330/575	60	3	1200	EM1C22818-112	602315F	CDX 12-110	10	108	0.12	0.24	25.3	3.54	4.92	1.1	1/2-13 NC (M12)
24	230/460	60	3	1200	EM1C22824-110	602317C	CDX 12-575	20	581	0.16	0.50	47.1	4.13	5.51	1.18	1/2-13 NC (M12)
24	230/460	60	3	1800	EM1C22818-100	601409C	CDX 18-470	10	471	0.13	0.40	28.6	3.54	4.92	1.1	1/2-13 NC (M12)
24	230/400	50	3	1500	EM1C22818-123	601409A	CDX 18-470	10	469	0.13	0.41	30.8	3.54	4.92	1.1	1/2-13 NC (M12)
24	330/575	60	3	1200	EM1C22824-112	602317F	CDX 12-575	20	581	0.16	0.40	47.1	4.13	5.51	1.18	1/2-13 NC (M12)
30	230/460	60	3	1200	EM1C22831-110	602318C	CDX 12-750	30	744	0.36	0.68	63.8	4.72	6.69	1.77	5/8-11 NC (M16)
30	230/460	60	3	1800	EM1C22830-100	601411C	CDX 18-1300	20	1302	0.37	0.60	47.1	4.13	5.51	1.18	1/2-13 NC (M12)
30	230/400	50	3	1500	EM1C22830-123	601411A	CDX18-1300	20	1214	0.29	0.60	50.2	4.13	5.51	1.18	1/2-13 NC (M12)
30	330/575	60	3	1200	EM1C22830-112	602318F	CDX 12-750	30	744	0.36	0.54	63.8	4.72	6.69	1.77	5/8-11 NC (M16)
40	230/460	60	3	1200	EM1C22840-110	602320C	CDX 12-1630	35	1621	0.30	0.61	105	4.72	6.69	2.05	5/8-11 NC (M16)
40	230/460	60	3	1800	EM1C22840-100	601412C	CDX 18-1670	30	1672	0.66	0.98	63.8	4.72	6.69	1.77	5/8-11 NC (M16)
40	230/400	50	3	1500	EM1C22840-123	601412A	CDX 18-1670	30	1584	0.51	0.92	66.7	4.72	6.69	1.77	5/8-11 NC (M16)
40	330/575	60	3	1200	EM1C22840-112	602320F	CDX 12-1630	35	1621	0.30	0.49	105	4.72	6.69	2.05	5/8-11 NC (M16)
48	230/460	60	3	1200	EM1C22840-110	602320C	CDX 12-1630	35	1621	0.30	0.61	105	4.72	6.69	2.05	5/8-11 NC (M16)
48	230/460	60	3	1800	EM1C22840-100	601412C	CDX 18-1670	30	1672	0.66	0.98	63.8	4.72	6.69	1.77	5/8-11 NC (M16)
48	230/400	50	3	1500	EM1C22840-123	601412A	CDX 18-1670	30	1584	0.51	0.92	66.7	4.72	6.69	1.77	5/8-11 NC (M16)
48	330/575	60	3	1200	EM1C22840-112	602320F	CDX 12-1630	35	1621	0.30	0.49	105	4.72	6.69	2.05	5/8-11 NC (M16)
60/72	230/460	60	3	1200	EM1C22860-110	602325C	CDX 12-1990	40	1991	0.59	1.30	144	5.51	7.48	2.56	5/8-11 NC (M16)
60/72	230/460	60	3	1800	EM1C22860-100	601413C	CDX 18-2150	35	2160	0.60	0.88	91.3	4.72	6.69	2.05	5/8-11 NC (M16)
60/72	230/400	50	3	1500	EM1C22860-123	601413A	CDX 18-2150	35	2299	0.49	0.81	101	4.72	6.69	2.05	5/8-11 NC (M16)
60/72	330/575	60	3	1200	EM1C22860-112	602325F	CDX 12-1990	40	1991	0.59	1.04	144	5.51	7.48	2.56	5/8-11 NC (M16)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 18-480 50Hz 3PH 1500 RPM**

SERIE: **AA** FRAME SIZE: **10**

ISSUED
11/28/2011

P/N: 601367A 230/400V SWECO PART #EM1C22818-023
P/N: 601367E 290/500V CONSULT SWECO

MECHANICAL CHARACTERISTICS

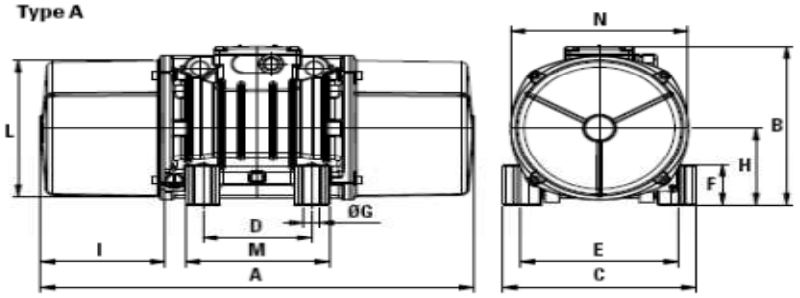
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**84.2**	**7.32**	**213**	**469**	**2.09**	**21067**	***46285***
90	*75.8*	6.59	*192*	*422*	*1.88*	*28764*	*63193*
80	*67.4*	5.86	*170*	*375*	*1.67*	*41438*	*91039*
70	*58.9*	5.12	*149*	*328*	*1.46*	*61544*	*>100000*
60	*50.5*	4.39	*128*	*281*	*1.25*	*97077*	*>100000*
50	*42.1*	3.66	*107*	*234*	*1.04*	*>100000*	*>100000*
40	*33.7*	2.93	*85*	*187*	*0.84*	*>100000*	*>100000*
30	*25.3*	2.20	*64*	*141*	*0.63*	*>100000*	*>100000*
20	*16.8*	1.46	*43*	*94*	*0.42*	*>100000*	*>100000*
10	*8.4*	0.73	*21*	*47*	*0.21*	*>100000*	*>100000*

Weight:	27.5 lb (12.5 kg)	Bearing:	6304.2Z.C3
Working Moment:	14.6 in-lb (168 kgmm)	Dynamic load:	3769 lb (1713 kg)
Max Static Moment:	7.3 in-lb (84.2 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque (in-lb):	5.8	0.65
Nominal current (amps):	0.71	0.41	0.57	0.33	Start torque (in-lb):	12.6	1.41
Start current (amps):	1.66	0.96	1.33	0.77	Maximum torque (in-lb):	12.9	1.45
Start/Nom. current ratio:	2.34				Start/nom. torque ratio:	2.17	
Input power (watts):	170				Max/nom. torque ratio:	2.23	
Output power (hp):	0.13				Starting time (sec):	1.05	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	57%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	0.6766	
Power factor:	0.60				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	88				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						

Type A



	in.	mm
A:	11.85	301
B:	7.05	179
C:	5.98	152
D:	**3.54**	**90**
E:	**4.92**	**125**
ØG:	0.51	13
F:	1.10	28
H:	2.87	73
I:	3.03	77
L:	5.00	127
M:	5.04	128
N:	5.55	141

External cable diam. (in):	1/2" NPT
Service length req. per side (in):	3.03
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 18-480** **60Hz 3PH 1800 RPM**

SERIE: **AA** FRAME SIZE: **10**

ISSUED
4/11/2011

P/N: 601367C 230/460V SWECO PART #EM1C22818-000
P/N: 601367F 330/575V CONSULT SWECO

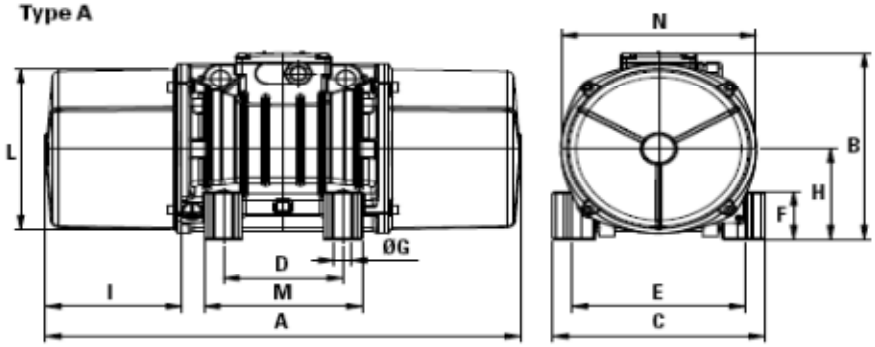
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**84.2**	**7.32**	**213**	**469**	**2.09**	**17556**	***38571***
90	*75.8*	6.59	*192*	*422*	*1.88*	*23970*	*52661*
80	*67.4*	5.86	*170*	*375*	*1.67*	*34532*	*75866*
70	*58.9*	5.12	*149*	*328*	*1.46*	*51287*	*>100000*
60	*50.5*	4.39	*128*	*281*	*1.25*	*80897*	*>100000*
50	*42.1*	3.66	*107*	*234*	*1.04*	*>100000*	*>100000*
40	*33.7*	2.93	*85*	*187*	*0.84*	*>100000*	*>100000*
30	*25.3*	2.20	*64*	*141*	*0.63*	*>100000*	*>100000*
20	*16.8*	1.46	*43*	*94*	*0.42*	*>100000*	*>100000*
10	*8.4*	0.73	*21*	*47*	*0.21*	*>100000*	*>100000*

Weight:	25.7 lb (11.7 kg)	Bearing:	6304.2Z.C3
Working Moment:	14.6 in-lb (168 kgmm)	Dynamic load:	3769 lb (1713 kg)
Max Static Moment:	7.3 in-lb (84 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	4.8	0.54
Nominal current (amps):	0.8	0.4	0.55	0.32	Start torque (in-lb):	10.9	1.2
Start current (amps):	2.2	1.1	1.51	0.88	Maximum torque (in-lb):	15.0	1.68
Start/Nom. current ratio:	2.75				Start/nom. torque ratio:	2.26	
Input power (watts):	170				Max/nom. torque ratio:	3.11	
Output power (hp):	0.13				Starting time (sec):	0.94	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	56%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	0.4409	
Power factor:	0.53				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	88				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	H						



	in.	mm
A:	11.85	301
B:	7.05	179
C:	5.98	152
D:	**3.54**	**90**
E:	**4.92**	**125**
ØG:	0.51	13
F:	1.10	28
H:	2.87	73
I:	3.03	77
L:	5.00	127
M:	5.04	128
N:	5.55	141

External cable diam. (in):	0.256 to 0.472
Service length req. per side (in):	3.03
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 18-1310** **50Hz 3PH 1500 RPM**

SERIE: **AA** FRAME SIZE: **20**

ISSUED
11/29/2011

P/N: 601373A 230/400V SWECO PART #EM1C22830-023
P/N: 601373E 290/500V CONSULT SWECO

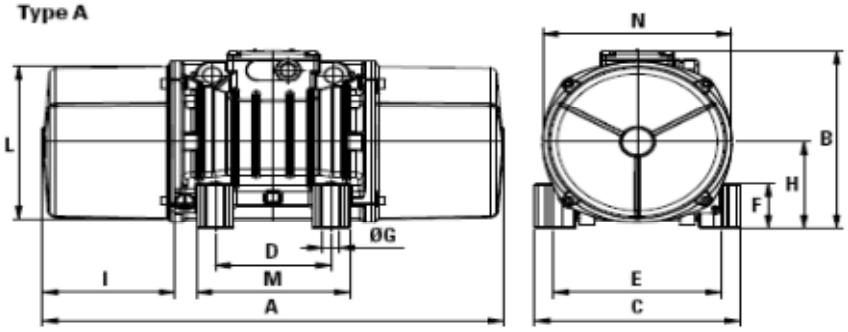
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**219**	**19.0**	**552**	**1214**	**5.41**	***6620***	***14545***
90	*197*	17.1	*497*	*1093*	*4.87*	*9070*	*19928*
80	*175*	15.2	*442*	*972*	*4.33*	*12895*	*28331*
70	*153*	13.3	*386*	*850*	*3.79*	*19361*	*42536*
60	*131*	11.4	*331*	*729*	*3.25*	*30705*	*67459*
50	*110*	9.52	*276*	*607*	*2.71*	*52962*	*>100000*
40	*88*	7.62	*221*	*486*	*2.17*	*>100000*	*>100000*
30	*66*	5.71	*166*	*364*	*1.62*	*>100000*	*>100000*
20	*44*	3.81	*110*	*243*	*1.08*	*>100000*	*>100000*
10	*22*	1.90	*55*	*121*	*0.54*	*>100000*	*>100000*

Weight:	44.9 lb (20.4 kg)	Bearing:	6306.2Z.C3
Working Moment:	38 in-lb (438 kgmm)	Dynamic load:	6640 lb (3018 kg)
Max Static Moment:	19 in-lb (219 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque (in-lb):	13.5	1.51
Nominal current (amps):	1.04	0.6	0.83	0.48	Start torque (in-lb):	24.5	2.75
Start current (amps):	3.46	2	2.76	1.6	Maximum torque (in-lb):	30.4	3.41
Start/Nom. current ratio:	3.33				Start/nom. torque ratio:	1.82	
Input power (watts):	300				Max/nom. torque ratio:	2.26	
Output power (hp):	0.29				Starting time (sec):	1.26	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	72%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	9%				Inertia (lb-ft²):	2.0077	
Power factor:	0.72				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	47				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	E						



	in.	mm
A:	15.20	386
B:	7.99	203
C:	6.57	167
D:	**4.13**	**105**
E:	**5.51**	**140**
ØG:	0.51	13
F:	1.18	30
H:	3.25	83
I:	4.49	114
L:	5.71	145
M:	5.51	140
N:	6.30	160

External cable diam. (in):	0.354 to 0.630
Service length req. per side (in):	4.49
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 18-1310 60Hz 3PH 1800 RPM**

SERIE: **AA** FRAME SIZE: **20**

P/N: 601373C 230/460V SWECO PART #EM1C22830-000

P/N: 601373F 330/575V CONSULT SWECO

ISSUED
4/11/2011

MECHANICAL CHARACTERISTICS

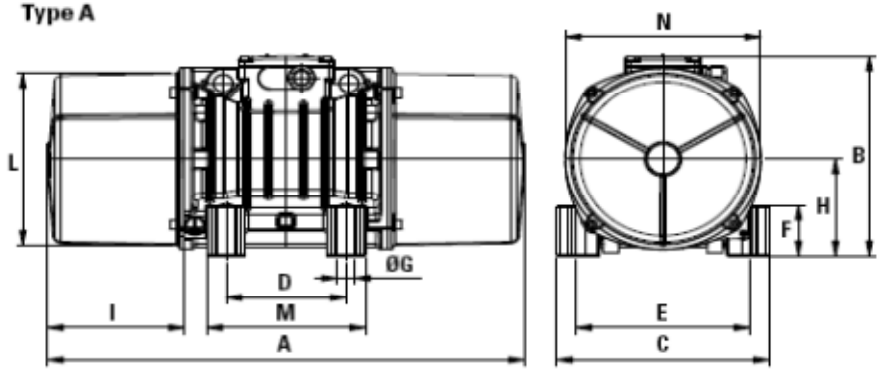
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**163**	**14.2**	**592**	**1302**	**5.81**	***4472***	***9826***
90	*147*	12.8	*533*	*1172*	*5.22*	*6128*	*13464*
80	*130*	11.3	*474*	*1042*	*4.64*	*8713*	*19143*
70	*114*	9.92	*414*	*912*	*4.06*	*13077*	*28730*
60	*98*	8.50	*355*	*781*	*3.48*	*20741*	*45568*
50	*82*	7.09	*296*	*651*	*2.90*	*35780*	*78608*
40	*65*	5.67	*237*	*521*	*2.32*	*69705*	*>100000*
30	*49*	4.25	*178*	*391*	*1.74*	*>100000*	*>100000*
20	*33*	2.83	*118*	*260*	*1.16*	*>100000*	*>100000*
10	*16*	1.42	*59*	*130*	*0.58*	*>100000*	*>100000*

Weight:	41.8 lb (19 kg)	Bearing:	6306.2Z.C3
Working Moment:	28.4 in-lb (326 kgmm)	Dynamic load:	6640 lb (3018 kg)
Max Static Moment:	14.2 in-lb (163 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	14.1	1.58
Nominal current (amps):	1.2	0.6	0.83	0.48	Start torque (in-lb):	23.8	2.67
Start current (amps):	4.2	2.1	2.91	1.7	Maximum torque (in-lb):	26.8	3.01
Start/Nom. current ratio:	3.5				Start/nom. torque ratio:	1.69	
Input power (watts):	350				Max/nom. torque ratio:	1.91	
Output power (hp):	0.37				Starting time (sec):	1.52	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	79%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	1.5584	
Power factor:	0.73				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	47				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	E						

Type A



	in.	mm
A:	15.20	386
B:	7.99	203
C:	6.57	167
D:	**4.13**	**105**
E:	**5.51**	**140**
ØG:	0.51	13
F:	1.18	30
H:	3.25	83
I:	4.49	114
L:	5.71	145
M:	5.51	140
N:	6.30	160

External cable diam. (in):	0.354 to 0.630
Service length req. per side(in):	4.49
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 18-1690 50Hz 3PH 1500 RPM**

SERIE: **AA** FRAME SIZE: **30**

ISSUED
11/17/2011

P/N: 601408A 230/400V SWECO PART #EM1C22840-023

P/N: 601408E 290/500V CONSULT SWECO

MECHANICAL CHARACTERISTICS

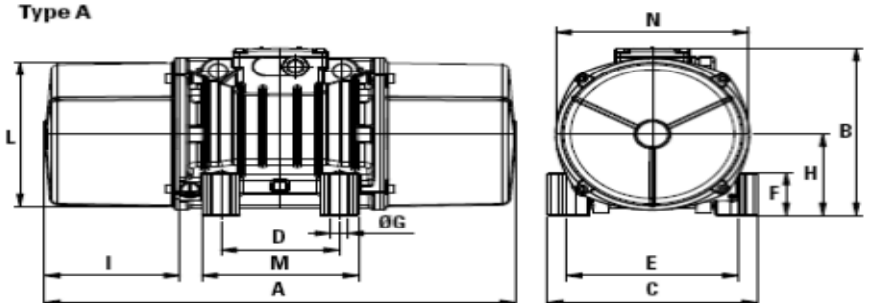
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**286**	**24.9**	**720**	**1584**	**7.06**	**19524**	***42739***
90	*257*	22.4	*648*	*1426*	*6.35*	*26781*	*58627*
80	*229*	19.9	*576*	*1267*	*5.65*	*38132*	*83475*
70	*200*	17.4	*504*	*1109*	*4.94*	*56920*	*>100000*
60	*172*	14.9	*432*	*950*	*4.24*	*90387*	*>100000*
50	*143*	12.4	*360*	*792*	*3.53*	*>100000*	*>100000*
40	*114*	9.9	*288*	*634*	*2.82*	*>100000*	*>100000*
30	*85.8*	7.5	*216*	*475*	*2.12*	*>100000*	*>100000*
20	*57.2*	5.0	*144*	*317*	*1.41*	*>100000*	*>100000*
10	*28.6*	2.5	*72*	*158*	*0.71*	*>100000*	*>100000*

Weight:	60.5 lb (27.5 kg)	Bearing:	6309.2Z.C4
Working Moment:	49.8 in-lb (572 kgmm)	Dynamic load:	12406 lb (5639 kg)
Max Static Moment:	24.9 in-lb (286 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque:	24.08	2.70
Nominal current (amps):	1.59	0.92	1.28	0.74	Start torque:	49.77	5.58
Start current (amps):	5.53	3.2	4.45	2.58	Maximum torque:	55.30	6.20
Start/Nom. current ratio:	3.48				Start/nom. torque ratio:	2.07	
Input power (watts):	525				Max/nom. torque ratio:	2.30	
Output power (hp):	0.51				Starting time (sec):	1.21	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	72%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	9%				Inertia (lb-ft²):	3.0087	
Power factor:	0.82				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	25				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						

Type A



	in.	mm
A:	15.51	394
B:	8.50	216
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	1.77	45
H:	3.68	93
I:	4.17	106
L:	6.69	170
M:	6.30	160
N:	7.17	182

External cable diam. (in):	0.354 to 0.630
Service length req. per side (in):	4.17
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 18-1690 60Hz 3PH 1800 RPM**

SERIE: **AA** FRAME SIZE: **30**

P/N: 601408C 230/460V SWECO PART #EM1C22840-000

P/N: 601408F 330/575V CONSULT SWECO

ISSUED
4/11/2011

MECHANICAL CHARACTERISTICS

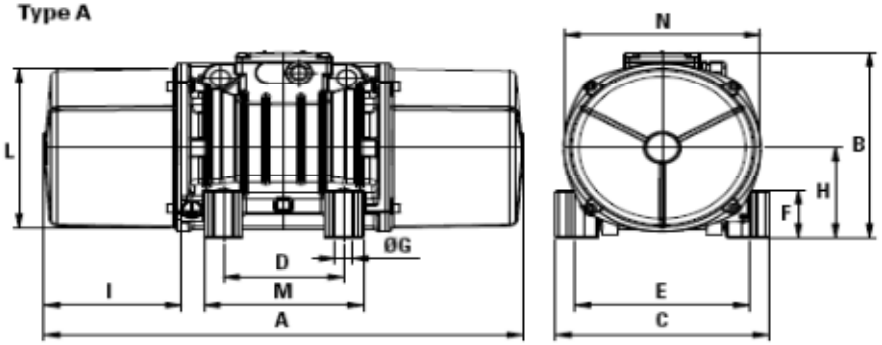
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**209**	**18.2**	**760**	**1672**	**7.45**	**13784**	***30283***
90	*188*	16.4	*684*	*1505*	*6.71*	*18908*	*41541*
80	*167*	14.5	*608*	*1338*	*5.96*	*26922*	*59147*
70	*146*	12.7	*532*	*1170*	*5.22*	*40186*	*88289*
60	*125*	10.9	*456*	*1003*	*4.47*	*63814*	*>100000*
50	*105*	9.1	*380*	*836*	*3.73*	*>100000*	*>100000*
40	*83.6*	7.3	*304*	*669*	*2.98*	*>100000*	*>100000*
30	*62.7*	5.5	*228*	*502*	*2.24*	*>100000*	*>100000*
20	*41.8*	3.6	*152*	*334*	*1.49*	*>100000*	*>100000*
10	*20.9*	1.8	*76*	*167*	*0.75*	*>100000*	*>100000*

Weight:	57.6 lb (26.2 kg)	Bearing:	6309.2Z.C4
Working Moment:	36.4 in-lb (418 kgmm)	Dynamic load:	12406 lb (5639 kg)
Max Static Moment:	18.2 in-lb (209 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	25.24	2.83
Nominal current (amps):	1.96	0.98	1.35	0.78	Start torque:	48.17	5.40
Start current (amps):	6.72	3.36	4.63	2.68	Maximum torque:	54.86	6.15
Start/Nom. current ratio:	3.43				Start/nom. torque ratio:	1.91	
Input power (watts):	665				Max/nom. torque ratio:	2.17	
Output power (hp):	0.66				Starting time (sec):	1.08	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	74%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	8%				Inertia (lb-ft²):	2.2101	
Power factor:	0.85				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	25				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						

Type A



	in.	mm
A:	15.51	394
B:	8.50	216
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	1.77	45
H:	3.68	93
I:	4.17	106
L:	6.69	170
M:	6.30	160
N:	7.17	182

External cable diam. (in):	0.354 to 0.630
Service length req. per side (in):	4.17
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 18-2150 50Hz 3PH 1500 RPM**
SERIE: **AA** FRAME SIZE: **35**
P/N: 601524A 230/400V SWECO PART #EM1C22860-023
P/N: 601524E 290/500V CONSULT SWECO

ISSUED
11/17/2011

MECHANICAL CHARACTERISTICS

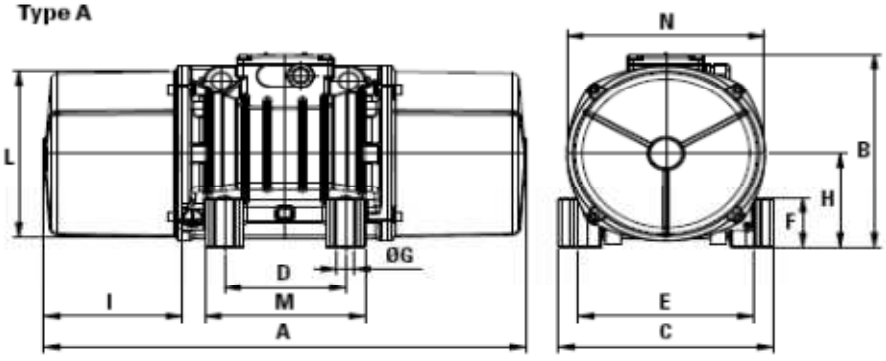
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**415**	**36.1**	**1045**	**2299**	**10.2**	***15572***	***37267***
90	*374*	32.5	*941*	*2069*	*9.22*	*22124*	*52854*
80	*332*	28.9	*836*	*1839*	*8.20*	*32763*	*78407*
70	*291*	25.3	*732*	*1609*	*7.17*	*51131*	*>100000*
60	*249*	21.7	*627*	*1379*	*6.15*	*85475*	*>100000*
50	*208*	18.0	*523*	*1150*	*5.12*	*>100000*	*>100000*
40	*166*	14.4	*418*	*920*	*4.10*	*>100000*	*>100000*
30	*124.5*	10.8	*314*	*690*	*3.07*	*>100000*	*>100000*
20	*83.0*	7.2	*209*	*460*	*2.05*	*>100000*	*>100000*
10	*41.5*	3.6	*105*	*230*	*1.02*	*>100000*	*>100000*

Weight:	67.1 lb (30.5 kg)	Bearing:	NJ 306 E C4
Working Moment:	47.2 in-lb (542 kgmm)	Dynamic load:	13123 lb (5965 kg)
Max Static Moment:	23.6 in-lb (271 kgmm)	Lube schedule:	7 grams Kluber NBU 8EP grease (SWECO part #00-695) every 2000 hours

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque:	24.35	2.73
Nominal current (amps):	1.65	0.95	1.32	0.76	Start torque:	49.95	5.60
Start current (amps):	7.34	4.2	5.87	3.4	Maximum torque:	58.01	6.50
Start/Nom. current ratio:	4.45				Start/nom. torque ratio:	2.05	
Input power (watts):	550				Max/nom. torque ratio:	2.38	
Output power (hp):	0.54				Starting time (sec):	1.59	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	73%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	4.1057	
Power factor:	0.84				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	24.1				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						

Type A



	in.	mm
A:	17.13	435
B:	8.86	225
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	2.13	54
H:	4.11	104
I:	4.63	118
L:	7.36	187
M:	6.38	162
N:	7.99	203

External cable diam. (in):	0.354 to 0.630
Service length req. per side (in):	4.63
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

VIBRATOR TECHNICAL DATA SHEET

ISSUED
4/11/2011

MODEL: **MVSI 18-2150 60Hz 3PH 1800 RPM**
SERIE: **AA** FRAME SIZE: **35**
P/N: 601524C 230/460V SWECO PART #EM1C22860-000
P/N: 601524F 330/575V CONSULT SWECO

MECHANICAL CHARACTERISTICS

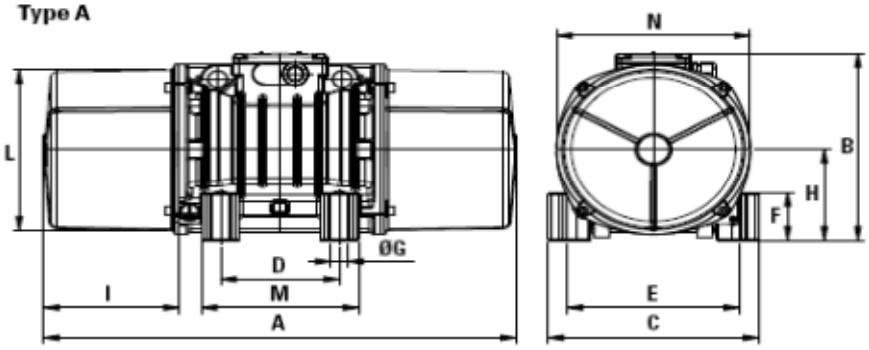
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**271**	**23.6**	**982**	**2160**	**9.63**	***15935***	***38208***
90	*244*	21.2	*884*	*1944*	*8.67*	*22623*	*54244*
80	*217*	18.9	*786*	*1728*	*7.70*	*33469*	*80252*
70	*190*	16.5	*687*	*1512*	*6.74*	*52424*	*>100000*
60	*163*	14.1	*589*	*1296*	*5.78*	*87566*	*>100000*
50	*136*	11.8	*491*	*1080*	*4.82*	*>100000*	*>100000*
40	*108*	9.4	*393*	*864*	*3.85*	*>100000*	*>100000*
30	*81.3*	7.1	*295*	*648*	*2.89*	*>100000*	*>100000*
20	*54.2*	4.7	*196*	*432*	*1.93*	*>100000*	*>100000*
10	*27.1*	2.4	*98*	*216*	*0.96*	*>100000*	*>100000*

Weight:	67.1 lb (30.5 kg)	Bearing:	NJ 306 E C4
Working Moment:	47.2 in-lb (542 kgmm)	Dynamic load:	13123 lb (5965 kg)
Max Static Moment:	23.6 in-lb (271 kgmm)	Lube schedule:	7 grams Kluber NBU 8EP grease (SWECO part #00-695) every 2000 hours

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	24.80	2.78
Nominal current (amps):	1.9	0.95	1.32	0.76	Start torque:	49.06	5.50
Start current (amps):	9.29	4.65	6.45	3.72	Maximum torque:	56.20	6.30
Start/Nom. current ratio:	4.89				Start/nom. torque ratio:	1.98	
Input power (watts):	680				Max/nom. torque ratio:	2.27	
Output power (hp):	0.67				Starting time (sec):	1.56	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	74%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	4%				Inertia (lb-ft²):	3.4086	
Power factor:	0.89				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	24.1				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						

Type A



	in.	mm
A:	17.13	435
B:	8.86	225
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	2.13	54
H:	4.11	104
I:	4.63	118
L:	7.36	187
M:	6.38	162
N:	7.99	203

External cable diam. (in):	0.354 to 0.630
Service length req.per side(in):	4.63
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

ISSUED
2/8/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 12-300 60Hz 3PH 1200 RPM**
SERIE: **AA** FRAME SIZE: **10**
P/N: 602297C 230/460V SWECO PART #EM1C22818-010
P/N: 602297F 330/575V SWECO PART #EM1C22818-012

MECHANICAL CHARACTERISTICS

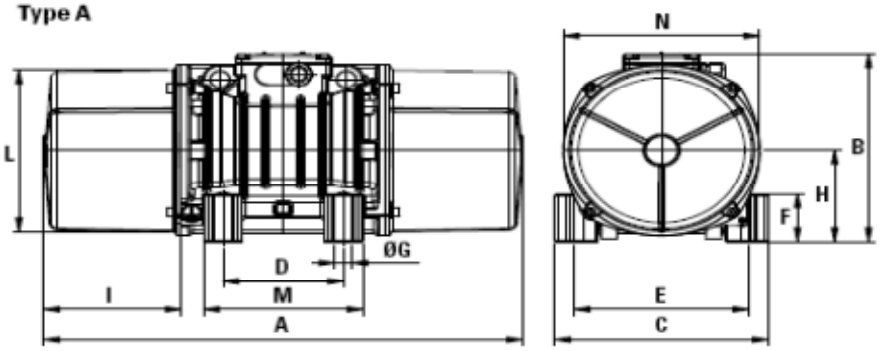
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**84.2**	**7.3**	**136**	**299**	**1.33**	**>100000**	***>100000***
90	*75.8*	6.6	*122*	*269*	*1.20*	*>100000*	*>100000*
80	*67.4*	5.9	*109*	*239*	*1.07*	*>100000*	*>100000*
70	*58.9*	5.1	*95*	*209*	*0.93*	*>100000*	*>100000*
60	*50.5*	4.4	*82*	*180*	*0.80*	*>100000*	*>100000*
50	*42.1*	3.7	*68*	*150*	*0.67*	*>100000*	*>100000*
40	*33.7*	2.9	*54*	*120*	*0.53*	*>100000*	*>100000*
30	*25.3*	2.2	*41*	*90*	*0.40*	*>100000*	*>100000*
20	*16.8*	1.5	*27*	*60*	*0.27*	*>100000*	*>100000*
10	*8.4*	0.7	*14*	*30*	*0.13*	*>100000*	*>100000*

Weight:	27.5 lb (12.5 kg)	Bearing:	6304.2Z.C3
Working Moment:	14.6 in-lb (168 kgmm)	Dynamic load:	3769 lb (1713 kg)
Max Static Moment:	7.3 in-lb (84.2 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	7.14	0.8
Nominal current (amps):	0.6	0.3	0.42	0.24	Start torque:	9.90	1.11
Start current (amps):	1.24	0.62	0.87	0.5	Maximum torque:	10.35	1.16
Start/Nom. current ratio:	2.07				Start/nom. torque ratio:	1.39	
Input power (watts):	135				Max/nom. torque ratio:	1.45	
Output power (hp):	0.12				Starting time (sec):	1.1	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	66%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	11%				Inertia (lb-ft²):	0.6766	
Power factor:	0.56				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	154				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						

Type A



	in.	mm
A:	11.85	301
B:	7.05	179
C:	5.98	152
D:	**3.54**	**90**
E:	**4.92**	**125**
ØG:	0.51	13
F:	1.10	28
H:	2.87	73
I:	3.03	77
L:	5.00	127
M:	5.04	128
N:	5.55	141

External cable diam. (in):	0.256 to 0.472
Service length req. per side (in):	3.03
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 12-580 60Hz 3PH 1200 RPM**

SERIE: **AA** FRAME SIZE: **20**

P/N: 602298C 230/460V SWECO PART #EM1C22824-010

P/N: 602298F 330/575V SWECO PART #EM1C22824-012

ISSUED 2/8/2011

MECHANICAL CHARACTERISTICS

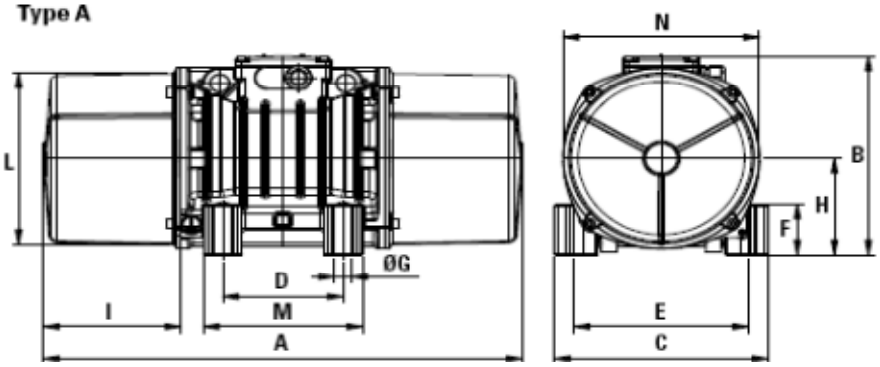
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**163**	**14.2**	**264**	**581**	**2.59**	**75647**	***>100000***
90	*147*	12.8	*238*	*523*	*2.33*	*>100000*	*>100000*
80	*130*	11.3	*211*	*465*	*2.07*	*>100000*	*>100000*
70	*114*	9.9	*185*	*407*	*1.81*	*>100000*	*>100000*
60	*97.8*	8.5	*158*	*348*	*1.55*	*>100000*	*>100000*
50	*81.5*	7.1	*132*	*290*	*1.29*	*>100000*	*>100000*
40	*65.2*	5.7	*106*	*232*	*1.04*	*>100000*	*>100000*
30	*48.9*	4.3	*79*	*174*	*0.78*	*>100000*	*>100000*
20	*32.6*	2.8	*53*	*116*	*0.52*	*>100000*	*>100000*
10	*16.3*	1.4	*26*	*58*	*0.26*	*>100000*	*>100000*

Weight:	41.8 lb (19 kg)	Bearing:	6306.2Z.C3
Working Moment:	28.4 in-lb (326 kgmm)	Dynamic load:	6640 lb (3018 kg)
Max Static Moment:	14.2 in-lb (163 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	8.83	0.99
Nominal current (amps):	1.0	0.50	0.69	0.40	Start torque:	17.48	1.96
Start current (amps):	3.1	1.55	2.14	1.24	Maximum torque:	28.01	3.14
Start/Nom. current ratio:	3.1				Start/nom. torque ratio:	1.98	
Input power (watts):	205				Max/nom. torque ratio:	3.17	
Output power (hp):	0.16				Starting time (sec):	1.33	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	59%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	4%				Inertia (lb-ft²):	1.5584	
Power factor:	0.52				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	68				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	J						

Type A



	in.	mm
A:	13.54	344
B:	7.99	203
C:	6.57	167
D:	**4.13**	**105**
E:	**5.51**	**140**
ØG:	0.51	13
F:	1.18	30
H:	3.25	83
I:	3.66	93
L:	5.71	145
M:	5.51	140
N:	6.30	160

External cable diam. (in):	0.354 to 0.630
Service length req. per side (in):	3.66
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

ISSUED
2/8/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 12-760 60Hz 3PH 1200 RPM**
SERIE: **AA** FRAME SIZE: **30**
P/N: 602314C 230/460V SWECO PART #EM1C22831-010
P/N: 602314F 330/575V SWECO PART #EM1C22830-012

MECHANICAL CHARACTERISTICS

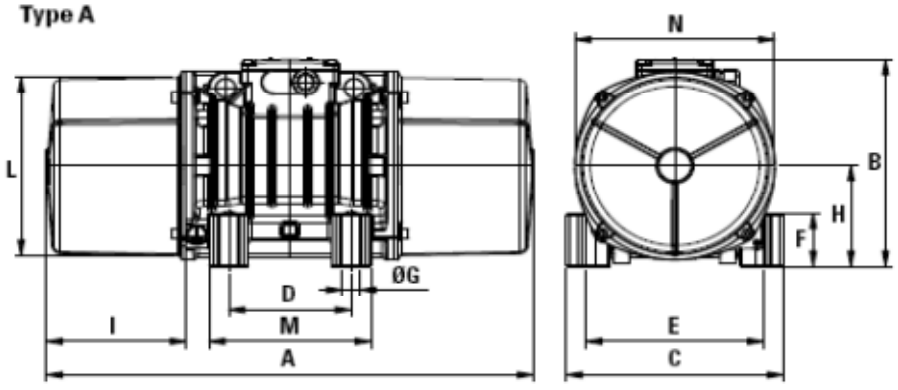
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**209**	**18.2**	**338**	**744**	**3.31**	**>100000**	***>100000***
90	*188*	16.4	*304*	*669*	*2.98*	*>100000*	*>100000*
80	*167*	14.5	*270*	*595*	*2.65*	*>100000*	*>100000*
70	*146*	12.7	*237*	*521*	*2.32*	*>100000*	*>100000*
60	*125.4*	10.9	*203*	*446*	*1.99*	*>100000*	*>100000*
50	*104.5*	9.1	*169*	*372*	*1.66*	*>100000*	*>100000*
40	*83.6*	7.3	*135*	*297*	*1.33*	*>100000*	*>100000*
30	*62.7*	5.5	*101*	*223*	*0.99*	*>100000*	*>100000*
20	*41.8*	3.6	*68*	*149*	*0.66*	*>100000*	*>100000*
10	*20.9*	1.8	*34*	*74*	*0.33*	*>100000*	*>100000*

Weight:	57.6 lb (26.2 kg)	Bearing:	6309.2Z.C4
Working Moment:	36.4 in-lb (418 kgmm)	Dynamic load:	12406 lb (5639 kg)
Max Static Moment:	18.2 in-lb (209 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	20.69	2.32
Nominal current (amps):	1.36	0.68	0.94	0.54	Start torque:	35.14	3.94
Start current (amps):	3.79	1.9	2.62	1.51	Maximum torque:	39.25	4.4
Start/Nom. current ratio:	2.79				Start/nom. torque ratio:	1.7	
Input power (watts):	380				Max/nom. torque ratio:	1.9	
Output power (hp):	0.37				Starting time (sec):	1.00	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	71%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	2.2544	
Power factor:	0.70				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	49				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						

Type A



	in.	mm
A:	15.51	394
B:	8.50	216
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	1.77	45
H:	3.68	93
I:	4.17	106
L:	6.69	170
M:	6.30	160
N:	7.17	182

External cable diam. (in):	0.354 to 0.630
Service length req. per side (in):	4.17
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

ISSUED
2/10/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 12-1990 60Hz 3PH 1200 RPM**
SERIE: **AA** FRAME SIZE: **40**
P/N: 602380C 230/460V SWECO PART #EM1C22860-010
P/N: 602380F 330/575V SWECO PART #EM1C22860-012

MECHANICAL CHARACTERISTICS

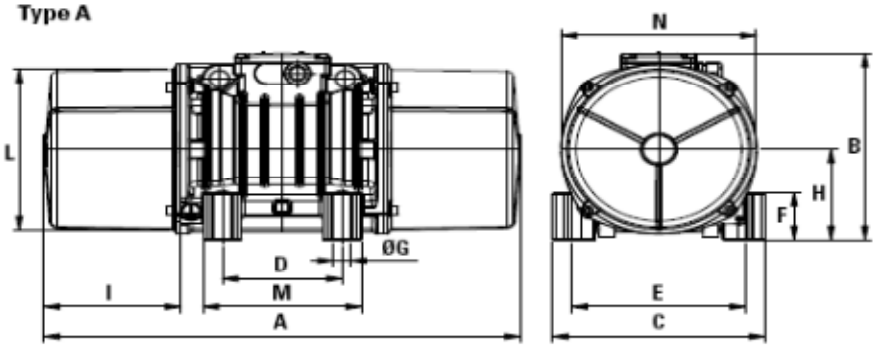
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**561**	**48.8**	**905**	**1991**	**8.87**	**5480**	***12040***
90	*505*	43.9	*815*	*1792*	*7.99*	*7504*	*16486*
80	*449*	39.0	*724*	*1593*	*7.10*	*10704*	*23516*
70	*393*	34.1	*634*	*1394*	*6.21*	*15940*	*35020*
60	*336.6*	29.3	*543*	*1195*	*5.32*	*25372*	*55742*
50	*280.5*	24.4	*453*	*996*	*4.44*	*43697*	*96003*
40	*224.4*	19.5	*362*	*796*	*3.55*	*85629*	*>100000*
30	*168.3*	14.6	*272*	*597*	*2.66*	*>100000*	*>100000*
20	*112.2*	9.8	*181*	*398*	*1.77*	*>100000*	*>100000*
10	*56.1*	4.9	*91*	*199*	*0.89*	*>100000*	*>100000*

Weight:	96.8 lb (44 kg)	Bearing:	6308.2Z.C3
Working Moment:	97.6 in-lb (1122 kgmm)	Dynamic load:	9489 lb (4313 kg)
Max Static Moment:	48.8 in-lb (561 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	39.69	4.45
Nominal current (amps):	2.7	1.35	1.87	1.08	Start torque:	85.81	9.62
Start current (amps):	8.99	4.5	6.23	3.6	Maximum torque:	94.11	10.6
Start/Nom. current ratio:	3.33				Start/nom. torque ratio:	2.16	
Input power (watts):	760				Max/nom. torque ratio:	2.37	
Output power (hp):	0.69				Starting time (sec):	1.30	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	68%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	7.1718	
Power factor:	0.71				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	19.5				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						

Type A



	in.	mm
A:	17.64	448
B:	9.69	246
C:	9.06	230
D:	**5.51**	**140**
E:	**7.48**	**190**
ØG:	0.67	17
F:	2.13	54
H:	4.57	116
I:	4.25	108
L:	8.15	207
M:	7.48	190
N:	8.86	225

External cable diam. (in):	0.354 to 0.630
Service length req. per side (in):	4.25
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

ISSUED
2/8/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSI 12-1630 60Hz 3PH 1200 RPM**
SERIE: **AA** FRAME SIZE: **35**
P/N: 602402C 230/460V SWECO PART #EM1C22840-010
P/N: 602402F 330/575V SWECO PART #EM1C22840-012

MECHANICAL CHARACTERISTICS

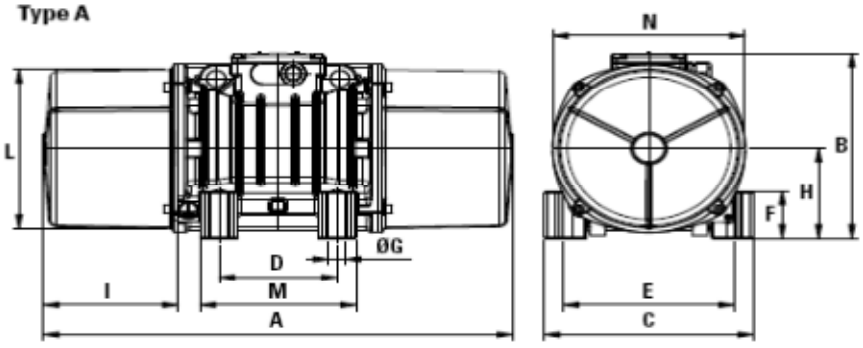
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**457**	**39.7**	**737**	**1621**	**7.23**	**10147**	***22293***
90	*411*	35.8	*663*	*1459*	*6.50*	*13938*	*30622*
80	*366*	31.8	*590*	*1297*	*5.78*	*19778*	*43453*
70	*320*	27.8	*516*	*1135*	*5.06*	*29567*	*64958*
60	*274.2*	23.8	*442*	*973*	*4.34*	*47042*	*>100000*
50	*228.5*	19.9	*369*	*811*	*3.61*	*80848*	*>100000*
40	*182.8*	15.9	*295*	*649*	*2.89*	*>100000*	*>100000*
30	*137.1*	11.9	*221*	*486*	*2.17*	*>100000*	*>100000*
20	*91.4*	7.9	*147*	*324*	*1.45*	*>100000*	*>100000*
10	*45.7*	4.0	*74*	*162*	*0.72*	*>100000*	*>100000*

Weight:	80.3 lb (36.5 kg)	Bearing:	6308.2Z.C3
Working Moment:	79.4 in-lb (914 kgmm)	Dynamic load:	9489 lb (4313 kg)
Max Static Moment:	39.7 in-lb (457 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	19.89	2.23
Nominal current (amps):	1.36	0.68	0.94	0.54	Start torque:	36.57	4.1
Start current (amps):	5.01	2.50	3.46	1.99	Maximum torque:	44.60	5.0
Start/Nom. current ratio:	3.68				Start/nom. torque ratio:	1.84	
Input power (watts):	380				Max/nom. torque ratio:	2.24	
Output power (hp):	0.36				Starting time (sec):	2.33	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	70%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	6%				Inertia (lb-ft²):	5.5701	
Power factor:	0.70				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	51				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						

Type A



	in.	mm
A:	17.13	435
B:	8.86	225
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	2.13	54
H:	4.11	104
I:	4.63	118
L:	7.36	187
M:	6.38	162
N:	7.99	203

External cable diam. (in):	0.354 to 0.630
Service length req. per side (in):	4.63
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 18-480** **50Hz 3PH 1500 RPM**

SERIE: **AA** FRAME SIZE: **10**

P/N:601344A 230/400V **SWECO PART #EM1C22818-023S**

P/N:601344E 290/500V **CONSULT SWECO**

ISSUED
6/12/2012

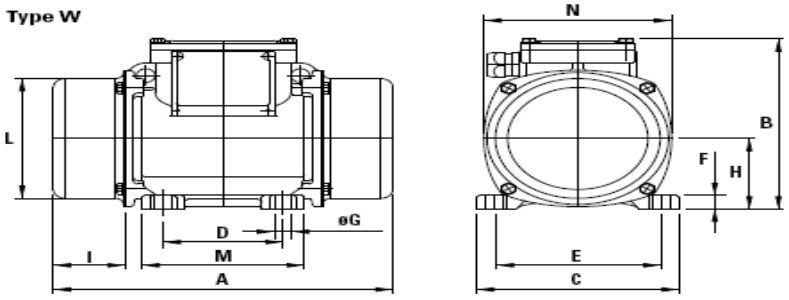
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**84.2**	**7.32**	**213**	**469**	**2.09**	**21067**	***46285***
90	*75.8*	6.59	*192*	*422*	*1.88*	*28764*	*63193*
80	*67.4*	5.86	*170*	*375*	*1.67*	*41438*	*91039*
70	*58.9*	5.12	*149*	*328*	*1.46*	*61544*	*>100000*
60	*50.5*	4.39	*128*	*281*	*1.25*	*97077*	*>100000*
50	*42.1*	3.66	*107*	*234*	*1.04*	*>100000*	*>100000*
40	*33.7*	2.93	*85*	*187*	*0.84*	*>100000*	*>100000*
30	*25.3*	2.20	*64*	*141*	*0.63*	*>100000*	*>100000*
20	*16.8*	1.46	*43*	*94*	*0.42*	*>100000*	*>100000*
10	*8.4*	0.73	*21*	*47*	*0.21*	*>100000*	*>100000*

Weight:	34.8 lb (15.8 kg)	Bearing:	6304.2Z.C3
Working Moment:	14.6 in-lb (168 kgmm)	Dynamic load:	3769 lb (1713 kg)
Max Static Moment:	7.3 in-lb (84.2 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque (in-lb):	5.8	0.65
Nominal current (amps):	0.71	0.41	0.57	0.33	Start torque (in-lb):	12.6	1.41
Start current (amps):	1.66	0.96	1.33	0.77	Maximum torque (in-lb):	12.9	1.45
Start/Nom. current ratio:	2.34				Start/nom. torque ratio:	2.17	
Input power (watts):	170				Max/nom. torque ratio:	2.23	
Output power (hp):	0.13				Starting time (sec):	1.05	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	57%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	0.6766	
Power factor:	0.60				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	88				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						



	in.	mm
A:	11.61	295
B:	6.93	176
C:	5.98	152
D:	**3.54**	**90**
E:	**4.92**	**125**
ØG:	0.51	13
F:	0.47	12
H:	2.87	73
I:	2.91	74
L:	4.88	124
M:	4.80	122
N:	5.55	141

External cable diam. (in):	0.256 to 0.472
Service length req. per side(in):	2.91
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 18-480 60Hz 3PH 1800 RPM**

SERIE: **AA** FRAME SIZE: **10**

ISSUED
1/26/2011

P/N: 601344C 230/460V **SWECO PART #EM1C22818-000S**

P/N: 601344F 330/575V **CONSULT SWECO**

MECHANICAL CHARACTERISTICS

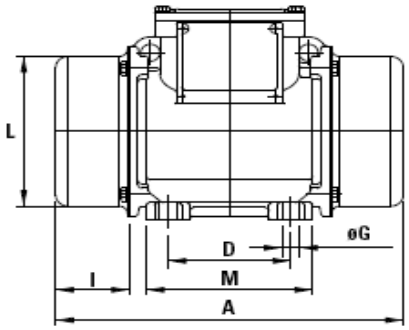
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**58.8**	**5.11**	**214**	**471**	**2.10**	**17311**	***38032***
90	*52.9*	4.60	*193*	*424*	*1.89*	*23599*	*51847*
80	*47.0*	4.09	*171*	*377*	*1.68*	*33929*	*74543*
70	*41.2*	3.58	*150*	*330*	*1.47*	*50268*	*>100000*
60	*35.3*	3.07	*128*	*282*	*1.26*	*80897*	*>100000*
50	*29.4*	2.56	*107*	*235*	*1.05*	*>100000*	*>100000*
40	*23.5*	2.05	*86*	*188*	*0.84*	*>100000*	*>100000*
30	*17.6*	1.53	*64*	*141*	*0.63*	*>100000*	*>100000*
20	*11.8*	1.02	*43*	*94*	*0.42*	*>100000*	*>100000*
10	*5.9*	0.51	*21*	*47*	*0.21*	*>100000*	*>100000*

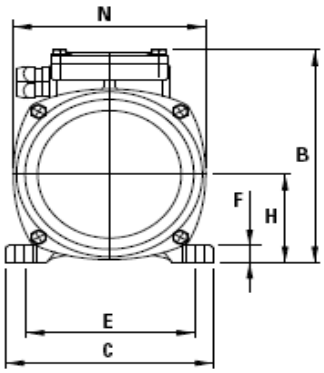
Weight:	67.5 lb (30.7 kg)	Bearing:	6304.2ZR.C3
Working Moment:	10.2 in-lb (117.6 kgmm)	Dynamic load:	3769 lb (1713 kg)
Max Static Moment:	5.11 in-lb (58.8 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	4.82
Nominal current (amps):	0.80	0.40	0.55	0.32	Start torque (in-lb):	10.9
Start current (amps):	2.2	1.1	1.51	0.88	Maximum torque (in-lb):	15.0
Start/Nom. current ratio:	2.75				Start/nom. torque ratio:	2.26
Input power (watts):	170				Max/nom. torque ratio:	3.11
Output power (hp):	0.13				Starting time (sec):	0.94
Service Factor:	1.0				Duty cycle:	continuous
Efficiency:	56%				Max. Ambient Temp.:	40° C (104° F)
Slip:	7%				Inertia (lb-ft²):	0.4409
Power factor:	0.53				Inverter Duty:	20Hz to 60Hz
Coil resist (Ω @ 20°C):	88 for 230/460V 60Hz				Operating Temp. Code:	N/A
Insulation class:	F				Capacitance (µF):	N/A
Locked Rotor Code:	H					

Type W





	in.	mm
A:	11.61	295
B:	6.93	176
C:	5.98	152
D:	**3.54**	**90**
E:	**4.92**	**125**
ØG:	0.51	13
F:	0.47	12
H:	2.87	73
I:	2.91	74
L:	4.88	124
M:	4.80	122
N:	5.55	141

External cable diam. (in):	0.256 to 0.472
Service length req. per side(in):	2.91
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 18-1310 50Hz 3PH 1500 RPM**

SERIE: **AA** FRAME SIZE: **20**

ISSUED
6/13/2012

P/N: 601346A 230/400V **SWECO PART #EM1C22830-023S**

P/N: 601346E 290/500V **CONSULT SWECO**

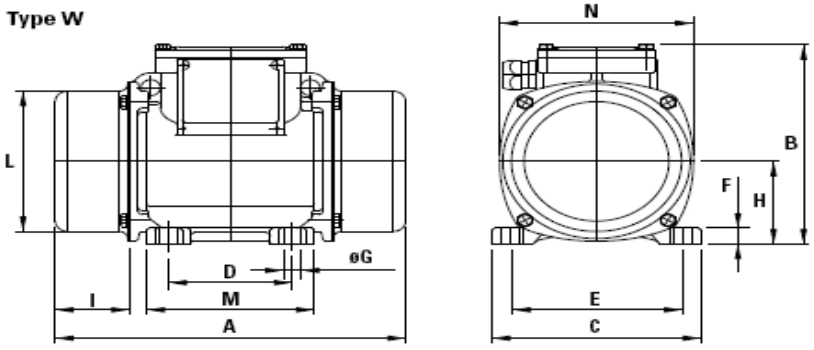
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**219**	**19.0**	**552**	**1214**	**5.41**	***6620***	***14545***
90	*197*	17.1	*497*	*1093*	*4.87*	*9070*	*19928*
80	*175*	15.2	*442*	*972*	*4.33*	*12895*	*28331*
70	*153*	13.3	*386*	*850*	*3.79*	*19361*	*42536*
60	*131*	11.4	*331*	*729*	*3.25*	*30705*	*67459*
50	*110*	9.52	*276*	*607*	*2.71*	*52962*	*>100000*
40	*88*	7.62	*221*	*486*	*2.17*	*>100000*	*>100000*
30	*66*	5.71	*166*	*364*	*1.62*	*>100000*	*>100000*
20	*44*	3.81	*110*	*243*	*1.08*	*>100000*	*>100000*
10	*22*	1.90	*55*	*121*	*0.54*	*>100000*	*>100000*

Weight:	52.6 lb (23.9 kg)	Bearing:	6306.2Z.C3
Working Moment:	38 in-lb (438 kgmm)	Dynamic load:	6640 lb (3018 kg)
Max Static Moment:	19 in-lb (219 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque (in-lb):	13.5	1.51
Nominal current (amps):	1.04	0.6	0.83	0.48	Start torque (in-lb):	24.5	2.75
Start current (amps):	3.46	2	2.76	1.6	Maximum torque (in-lb):	30.4	3.41
Start/Nom. current ratio:	3.33				Start/nom. torque ratio:	1.82	
Input power (watts):	300				Max/nom. torque ratio:	2.26	
Output power (hp):	0.29				Starting time (sec):	1.26	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	72%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	9%				Inertia (lb-ft²):	2.0077	
Power factor:	0.72				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	47				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	E						



	in.	mm
A:	14.96	380
B:	7.87	200
C:	6.57	167
D:	**4.13**	**105**
E:	**5.51**	**140**
ØG:	0.51	13
F:	0.59	15
H:	3.25	83
I:	4.37	111
L:	5.63	143
M:	5.39	137
N:	6.30	160

External cable diam. (in):	0.354 to 0.630
Service length req. per side(in):	4.37
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

ISSUED
11/10/2011

MODEL: **MVSS 18-1310 60Hz 3PH 1800 RPM**
SERIE: **AA** FRAME SIZE: **20**
P/N: 601346C 230/460V SWECO PART #EM1C22830-000S
P/N: 601346F 330/575V CONSULT SWECO

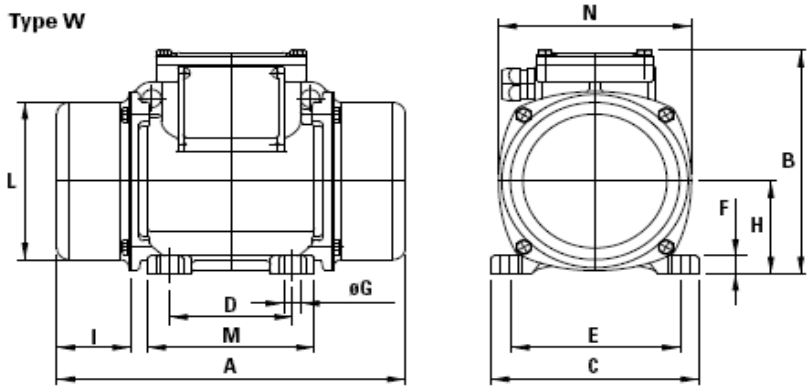
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**163**	**14.2**	**592**	**1302**	**5.81**	***4472***	***9826***
90	*147*	12.8	*533*	*1172*	*5.22*	*6128*	*13464*
80	*130*	11.3	*474*	*1042*	*4.64*	*8713*	*19143*
70	*114*	9.92	*414*	*912*	*4.06*	*13077*	*28730*
60	*98*	8.50	*355*	*781*	*3.48*	*20741*	*45568*
50	*82*	7.09	*296*	*651*	*2.90*	*35780*	*78608*
40	*65*	5.67	*237*	*521*	*2.32*	*69705*	*>100000*
30	*49*	4.25	*178*	*391*	*1.74*	*>100000*	*>100000*
20	*33*	2.83	*118*	*260*	*1.16*	*>100000*	*>100000*
10	*16*	1.42	*59*	*130*	*0.58*	*>100000*	*>100000*

Weight:	49.5 lb (22.5 kg)	Bearing:	6306.2Z.C3
Working Moment:	28.4 in-lb (326 kgmm)	Dynamic load:	6640 lb (3018 kg)
Max Static Moment:	14.2 in-lb (163 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	14.1	1.58
Nominal current (amps):	1.2	0.6	0.83	0.48	Start torque (in-lb):	23.8	2.67
Start current (amps):	4.2	2.1	2.91	1.68	Maximum torque (in-lb):	26.8	3.01
Start/Nom. current ratio:	3.5				Start/nom. torque ratio:	1.69	
Input power (watts):	350				Max/nom. torque ratio:	1.91	
Output power (hp):	0.37				Starting time (sec):	1.52	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	79%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	1.5584	
Power factor:	0.73				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	47				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	E						



	in.	mm
A:	14.96	380
B:	7.87	200
C:	6.57	167
D:	**4.13**	**105**
E:	**5.51**	**140**
ØG:	0.51	13
F:	0.59	15
H:	3.25	83
I:	4.37	111
L:	5.63	143
M:	5.39	137
N:	6.30	160

External cable diam. (in):	0.354 to 0.630
Service length req. per side(in):	4.37
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 18-2150** **50Hz 3PH 1500 RPM**
SERIE: **AA** FRAME SIZE: **35**

ISSUED
6/13/2012

P/N: 601348A 230/400V **SWECO PART #EM1C22860-023S**
P/N: 601348E 290/500V **CONSULT SWECO**

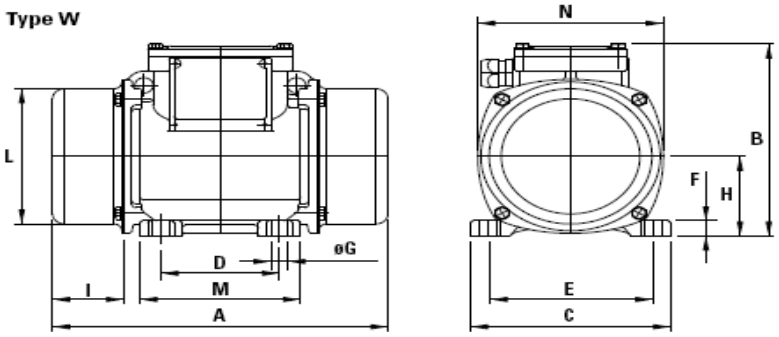
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**415**	**36.1**	**1045**	**2299**	**10.2**	***15572***	***37267***
90	*374*	32.5	*941*	*2069*	*9.22*	*22124*	*52854*
80	*332*	28.9	*836*	*1839*	*8.20*	*32763*	*78407*
70	*291*	25.3	*732*	*1609*	*7.17*	*51131*	*>100000*
60	*249*	21.7	*627*	*1379*	*6.15*	*85475*	*>100000*
50	*208*	18.0	*523*	*1150*	*5.12*	*>100000*	*>100000*
40	*166*	14.4	*418*	*920*	*4.10*	*>100000*	*>100000*
30	*124.5*	10.8	*314*	*690*	*3.07*	*>100000*	*>100000*
20	*83.0*	7.2	*209*	*460*	*2.05*	*>100000*	*>100000*
10	*41.5*	3.6	*105*	*230*	*1.02*	*>100000*	*>100000*

Weight:	92.4 lb (42.0 kg)	Bearing:	NJ 306 E C4
Working Moment:	47.2 in-lb (542 kgmm)	Dynamic load:	13123 lb (5965 kg)
Max Static Moment:	23.6 in-lb (271 kgmm)	Lube schedule:	7 grams Kluber NBU 8EP grease (SWECO part #00-695) every 2000 hours

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque:	24.35	2.73
Nominal current (amps):	1.65	0.95	1.32	0.76	Start torque:	49.95	5.60
Start current (amps):	7.34	4.23	5.87	3.38	Maximum torque:	58.01	6.50
Start/Nom. current ratio:	4.45				Start/nom. torque ratio:	2.05	
Input power (watts):	550				Max/nom. torque ratio:	2.38	
Output power (hp):	0.54				Starting time (sec):	1.59	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	73%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	4.1057	
Power factor:	0.84				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	24.1				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						



	in.	mm
A:	17.09	434
B:	9.13	232
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	0.79	20
H:	4.11	104
I:	4.61	117
L:	7.13	181
M:	6.38	162
N:	7.99	203

External cable diam. (in):	0.354 to 0.630
Service length req. per side(in):	4.61
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 18-2150** **60Hz 3PH 1800 RPM**

SERIE: **AA** FRAME SIZE: **35**

ISSUED
6/13/2012

P/N: 601348C 230/460V **SWECO PART #EM1C22860-000S**
P/N: 601348F 330/575V **CONSULT SWECO**

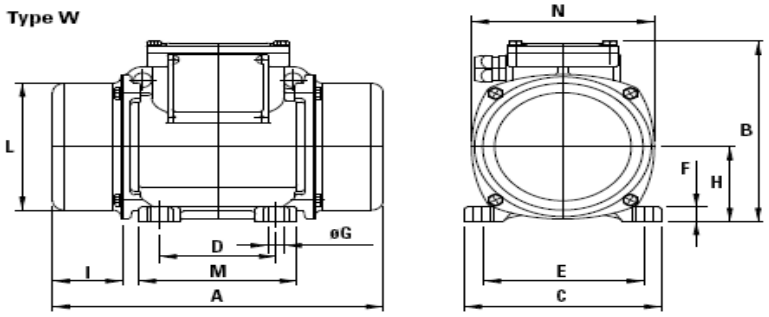
MECHANICAL CHARACTERISTICS

Weights Position	Static Moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**271**	**23.6**	**982**	**2160**	**9.63**	***15935***	***38208***
90	*244*	21.2	*884*	*1944*	*8.67*	*22623*	*54244*
80	*217*	18.9	*786*	*1728*	*7.70*	*33469*	*80252*
70	*190*	16.5	*687*	*1512*	*6.74*	*52424*	*>100000*
60	*163*	14.1	*589*	*1296*	*5.78*	*87566*	*>100000*
50	*136*	11.8	*491*	*1080*	*4.82*	*>100000*	*>100000*
40	*108*	9.4	*393*	*864*	*3.85*	*>100000*	*>100000*
30	*81.3*	7.1	*295*	*648*	*2.89*	*>100000*	*>100000*
20	*54.2*	4.7	*196*	*432*	*1.93*	*>100000*	*>100000*
10	*27.1*	2.4	*98*	*216*	*0.96*	*>100000*	*>100000*

Weight:	82.5 lb (37.5 kg)	Bearing:	NJ 306 E C4
Working Moment:	47.2 in-lb (542 kgmm)	Dynamic load:	13123 lb (5965 kg)
Max Static Moment:	23.6 in-lb (271 kgmm)	Lube schedule:	7 grams Kluber NBU 8EP grease (SWECO part #00-695) every 2000 hours

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	24.80	2.78
Nominal current (amps):	1.9	0.95	1.32	0.76	Start torque:	49.06	5.50
Start current (amps):	9.29	4.65	6.45	3.72	Maximum torque:	56.20	6.30
Start/Nom. current ratio:	4.89				Start/nom. torque ratio:	1.98	
Input power (watts):	680				Max/nom. torque ratio:	2.27	
Output power (hp):	0.67				Starting time (sec):	1.56	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	74%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	4%				Inertia (lb-ft²):	3.4086	
Power factor:	0.90				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	24.1				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						



	in.	mm
A:	17.09	434
B:	9.13	232
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	0.79	20
H:	4.11	104
I:	4.61	117
L:	7.13	181
M:	6.38	162
N:	7.99	203

External cable diam. (in):	0.354 to 0.630
Service length req. per side(in):	4.61
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 18-1690** **50Hz 3PH 1500 RPM**

SERIE: **AA** FRAME SIZE: **30**

ISSUED
6/13/2012

P/N: 601526A 230/400V **SWECO PART #EM1C22840-023S**
P/N: 601526E 290/500V **CONSULT SWECO**

MECHANICAL CHARACTERISTICS

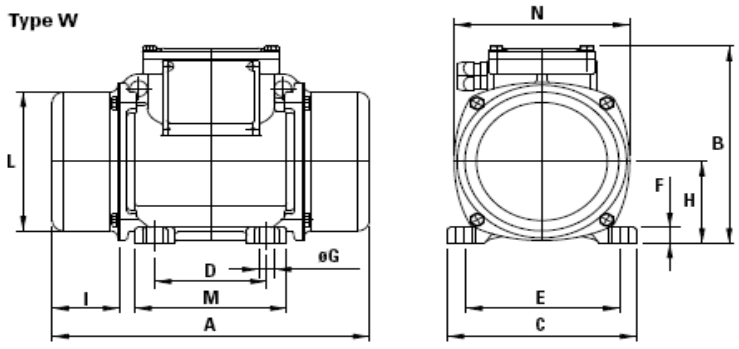
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**286**	**24.9**	**720**	**1584**	**7.06**	**19524**	***42739***
90	*257*	22.4	*648*	*1426*	*6.35*	*26781*	*58627*
80	*229*	19.9	*576*	*1267*	*5.65*	*38132*	*83475*
70	*200*	17.4	*504*	*1109*	*4.94*	*56920*	*>100000*
60	*172*	14.9	*432*	*950*	*4.24*	*90387*	*>100000*
50	*143*	12.4	*360*	*792*	*3.53*	*>100000*	*>100000*
40	*114*	9.9	*288*	*634*	*2.82*	*>100000*	*>100000*
30	*85.8*	7.5	*216*	*475*	*2.12*	*>100000*	*>100000*
20	*57.2*	5.0	*144*	*317*	*1.41*	*>100000*	*>100000*
10	*28.6*	2.5	*72*	*158*	*0.71*	*>100000*	*>100000*

Weight:	70.4 lb (32.0 kg)	Bearing:	6309.2Z.C4
Working Moment:	49.8 in-lb (572 kgmm)	Dynamic load:	12406 lb (5639 kg)
Max Static Moment:	24.9 in-lb (286 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque:	24.08	2.70
Nominal current (amps):	1.59	0.92	1.28	0.74	Start torque:	49.77	5.58
Start current (amps):	5.53	3.2	4.45	2.58	Maximum torque:	55.30	6.20
Start/Nom. current ratio:	3.48				Start/nom. torque ratio:	2.07	
Input power (watts):	525				Max/nom. torque ratio:	2.30	
Output power (hp):	0.51				Starting time (sec):	1.21	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	72%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	9%				Inertia (lb-ft²):	3.0087	
Power factor:	0.82				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	25				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						

Type W



	in.	mm
A:	14.88	378
B:	8.07	205
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	0.67	17
H:	3.68	93
I:	3.86	98
L:	6.61	168
M:	6.30	160
N:	7.17	182

External cable diam. (in):	0.354 to 0.630
Service length req. per side (in):	3.86
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

ISSUED
3/12/2012

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 18-1690 60Hz 3PH 1800 RPM**
SERIE: **AA** FRAME SIZE: **30**
P/N: 601526C 230/460V **SWECO PART #EM1C22840-000S**
P/N: 601526F 330/575V **CONSULT SWECO**

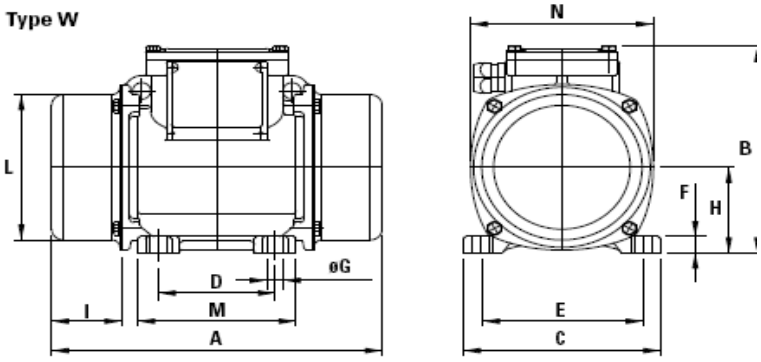
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**209**	**18.2**	**760**	**1672**	**7.45**	**13784**	***30283***
90	*188*	16.4	*684*	*1505*	*6.71*	*18908*	*41541*
80	*167*	14.5	*608*	*1338*	*5.96*	*26922*	*59147*
70	*146*	12.7	*532*	*1170*	*5.22*	*40186*	*88289*
60	*125*	10.9	*456*	*1003*	*4.47*	*63814*	*>100000*
50	*105*	9.1	*380*	*836*	*3.73*	*>100000*	*>100000*
40	*83.6*	7.3	*304*	*669*	*2.98*	*>100000*	*>100000*
30	*62.7*	5.5	*228*	*502*	*2.24*	*>100000*	*>100000*
20	*41.8*	3.6	*152*	*334*	*1.49*	*>100000*	*>100000*
10	*20.9*	1.8	*76*	*167*	*0.75*	*>100000*	*>100000*

Weight:	67.5 lb (30.7 kg)	Bearing:	6309.2Z.C4
Working Moment:	36.4 in-lb (418 kgmm)	Dynamic load:	12406 lb (5639 kg)
Max Static Moment:	18.2 in-lb (209 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	25.24	2.83
Nominal current (amps):	1.96	0.98	1.35	0.78	Start torque:	48.17	5.40
Start current (amps):	6.72	3.36	4.63	2.68	Maximum torque:	54.86	6.15
Start/Nom. current ratio:	3.43				Start/nom. torque ratio:	1.91	
Input power (watts):	665				Max/nom. torque ratio:	2.17	
Output power (hp):	0.66				Starting time (sec):	1.08	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	74%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	8%				Inertia (lb-ft²):	2.2101	
Power factor:	0.85				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	25				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						



	in.	mm
A:	14.88	378
B:	8.07	205
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	0.67	17
H:	3.68	93
I:	3.86	98
L:	6.61	168
M:	6.30	160
N:	7.17	182

External cable diam. (in):	0.354 to 0.630
Service length req. per side(in):	3.86
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 12-300** **60Hz 3PH 1200 RPM**

SERIE: **AA** FRAME SIZE: **10**

ISSUED
6/12/2012

P/N: 602284C 230/460V SWECO PART #EM1C22818-010S
P/N: 602284F 330/575V SWECO PART #EM1C22818-012S

MECHANICAL CHARACTERISTICS

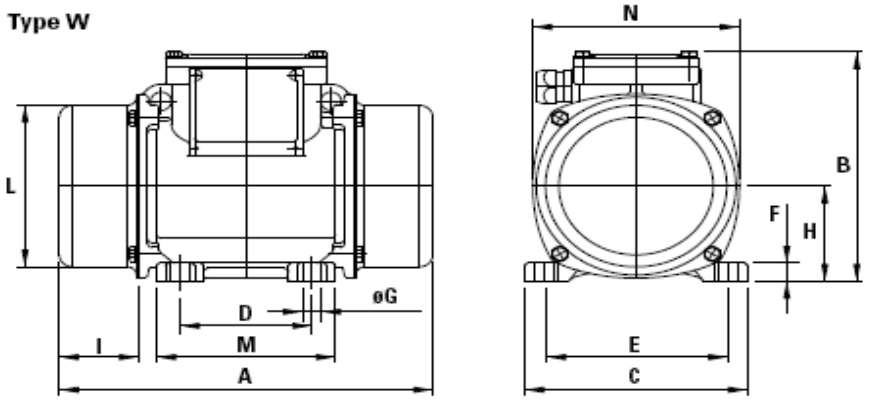
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**84.2**	**7.3**	**136**	**299**	**1.33**	**>100000**	***>100000***
90	*75.8*	6.6	*122*	*269*	*1.20*	>100000	>100000
80	*67.4*	5.9	*109*	*239*	*1.07*	>100000	>100000
70	*58.9*	5.1	*95*	*209*	*0.93*	>100000	>100000
60	*50.5*	4.4	*82*	*180*	*0.80*	>100000	>100000
50	*42.1*	3.7	*68*	*150*	*0.67*	>100000	>100000
40	*33.7*	2.9	*54*	*120*	*0.53*	>100000	>100000
30	*25.3*	2.2	*41*	*90*	*0.40*	>100000	>100000
20	*16.8*	1.5	*27*	*60*	*0.27*	>100000	>100000
10	*8.4*	0.7	*14*	*30*	*0.13*	>100000	>100000

Weight:	34.8 lb (15.8 kg)	Bearing:	6304.2Z.C3
Working Moment:	14.6 in-lb (168 kgmm)	Dynamic load:	3769 lb (1713 kg)
Max Static Moment:	7.3 in-lb (84.2 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	7.14	0.8
Nominal current (amps):	0.6	0.3	0.42	0.24	Start torque:	9.90	1.11
Start current (amps):	1.242	0.621	0.869	0.497	Maximum torque:	10.35	1.16
Start/Nom. current ratio:	2.07				Start/nom. torque ratio:	1.39	
Input power (watts):	135				Max/nom. torque ratio:	1.45	
Output power (hp):	0.12				Starting time (sec):	1.1	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	66%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	11%				Inertia (lb-ft²):	0.6766	
Power factor:	0.56				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	154				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						

Type W



	in.	mm
A:	11.61	295
B:	6.93	176
C:	5.98	152
D:	**3.54**	**90**
E:	**4.92**	**125**
ØG:	0.51	13
F:	0.47	12
H:	2.87	73
I:	2.91	74
L:	4.88	124
M:	4.80	122
N:	5.55	141

External cable diam. (in):	0.256 to 0.472
Serv. length req. per side(in):	2.91
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

ISSUED
6/12/2012

MODEL: **MVSS 12-580** **60Hz 3PH 1200 RPM**
SERIE: **AA** FRAME SIZE: **20**
P/N: 602285C 230/460V **SWECO PART #EM1C22824-010S**
P/N: 602285F 330/575V **SWECO PART #EM1C22824-012S**

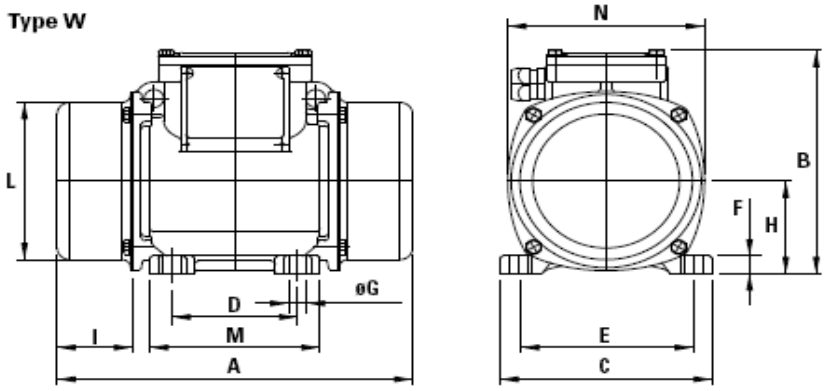
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**163**	**14.2**	**264**	**581**	**2.59**	**75647**	***>100000***
90	*147*	12.8	*238*	*523*	*2.33*	*>100000*	*>100000*
80	*130*	11.3	*211*	*465*	*2.07*	*>100000*	*>100000*
70	*114*	9.9	*185*	*407*	*1.81*	*>100000*	*>100000*
60	*97.8*	8.5	*158*	*348*	*1.55*	*>100000*	*>100000*
50	*81.5*	7.1	*132*	*290*	*1.29*	*>100000*	*>100000*
40	*65.2*	5.7	*106*	*232*	*1.04*	*>100000*	*>100000*
30	*48.9*	4.3	*79*	*174*	*0.78*	*>100000*	*>100000*
20	*32.6*	2.8	*53*	*116*	*0.52*	*>100000*	*>100000*
10	*16.3*	1.4	*26*	*58*	*0.26*	*>100000*	*>100000*

Weight:	49.5 lb (22.5 kg)	Bearing:	6306.2Z.C3
Working Moment:	28.4 in-lb (326 kgmm)	Dynamic load:	6640 lb (3018 kg)
Max Static Moment:	14.2 in-lb (163 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	8.83	0.99
Nominal current (amps):	1.0	0.50	0.69	0.40	Start torque:	17.48	1.96
Start current (amps):	3.1	1.55	2.139	1.24	Maximum torque:	28.01	3.14
Start/Nom. current ratio:	3.1				Start/nom. torque ratio:	1.98	
Input power (watts):	205				Max/nom. torque ratio:	3.17	
Output power (hp):	0.16				Starting time (sec):	1.33	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	59%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	4%				Inertia (lb-ft²):	1.5584	
Power factor:	0.51				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	68				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	J						



	in.	mm
A:	13.39	340
B:	7.87	200
C:	6.57	167
D:	**4.13**	**105**
E:	**5.51**	**140**
ØG:	0.51	13
F:	0.59	15
H:	3.25	83
I:	3.58	91
L:	5.63	143
M:	5.39	137
N:	6.30	160

External cable diam. (in):	0.354 to 0.630
Serv. length req. per side(in):	3.58
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 12-760** **60Hz 3PH 1200 RPM**

SERIE: **AA** FRAME SIZE: **30**

ISSUED
11/5/2011

P/N: 602405C 230/460V **SWECO PART #EM1C22831-010S**
P/N: 602405F 330/575V **SWECO PART #EM1C22830-012S**

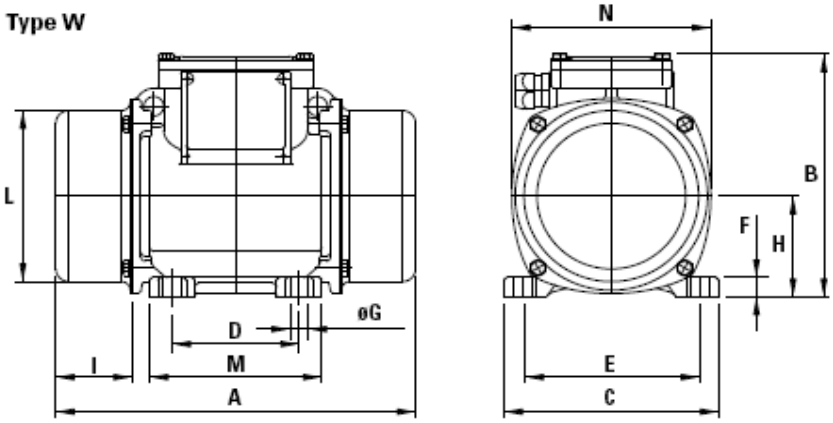
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**209.0**	**18.2**	**338**	**744**	**3.31**	**>100000**	***>100000***
90	*188.1*	16.4	*304*	*669*	*2.98*	*>100000*	*>100000*
80	*167.2*	14.5	*270*	*595*	*2.65*	*>100000*	*>100000*
70	*146.3*	12.7	*237*	*521*	*2.32*	*>100000*	*>100000*
60	*125.4*	10.9	*203*	*446*	*1.99*	*>100000*	*>100000*
50	*104.5*	9.1	*169*	*372*	*1.66*	*>100000*	*>100000*
40	*83.6*	7.3	*135*	*297*	*1.33*	*>100000*	*>100000*
30	*62.7*	5.5	*101*	*223*	*0.99*	*>100000*	*>100000*
20	*41.8*	3.6	*68*	*149*	*0.66*	*>100000*	*>100000*
10	*20.9*	1.8	*34*	*74*	*0.33*	*>100000*	*>100000*

Weight:	67.5 lb (30.7 kg)	Bearing:	6309.2Z.C4 WT
Working Moment:	36.4 in-lb (418 kgmm)	Dynamic load:	12406 lb (5639 kg)
Max Static Moment:	18.2 in-lb (209 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	20.7
Nominal current (amps):	1.36	0.68	0.94	0.54	Start torque (in-lb):	35.1
Start current (amps):	3.8	1.9	2.6	1.5	Maximum torque (in-lb):	39.2
Start/Nom. current ratio:	2.79				Start/nom. torque ratio:	1.7
Input power (watts):	380				Max/nom. torque ratio:	1.9
Output power (hp):	0.36				Starting time (sec):	1
Service Factor:	1.0				Duty cycle:	continuous
Efficiency:	71%				Max. Ambient Temp.:	40° C (104° F)
Slip:	7%				Inertia (lb-ft²):	2.254
Power factor:	0.70				Inverter Duty:	20Hz to 60Hz
Coil resist (Ω @ 20°C):	49				Operating Temp. Code:	N/A
Insulation class:	F				Capacitance (µF):	N/A
Locked Rotor Code:	D					



	in.	mm
A:	14.88	378
B:	8.07	205
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	0.67	17
H:	3.68	93
I:	3.86	98
L:	6.61	168
M:	6.30	160
N:	7.17	182

External cable diam. (in):	0.354 to 0.630
Service length req. per side(in):	3.86
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

ISSUED
6/13/2012

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 12-1990** **60Hz 3PH 1200 RPM**
SERIE: **AA** FRAME SIZE: **40**
P/N: 602408C 230/460V **SWECO PART #EM1C22860-010S**
P/N: 602408F 330/575V **SWECO PART #EM1C22860-012S**

MECHANICAL CHARACTERISTICS

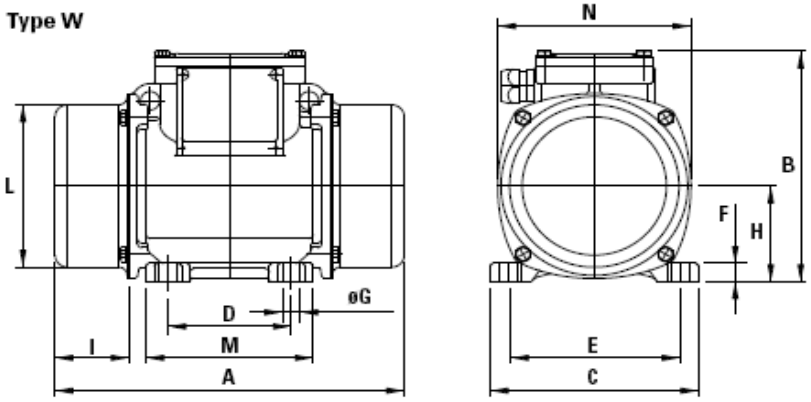
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**561**	**48.8**	**905**	**1991**	**8.87**	**5480**	***12040***
90	*505*	43.9	*815*	*1792*	*7.99*	*7504*	*16486*
80	*449*	39.0	*724*	*1593*	*7.10*	*10704*	*23516*
70	*393*	34.1	*634*	*1394*	*6.21*	*15940*	*35020*
60	*337*	29.3	*543*	*1195*	*5.32*	*25372*	*55742*
50	*281*	24.4	*453*	*996*	*4.44*	*43697*	*96003*
40	*224*	19.5	*362*	*796*	*3.55*	*85629*	*>100000*
30	*168*	14.6	*272*	*597*	*2.66*	*>100000*	*>100000*
20	*112*	9.8	*181*	*398*	*1.77*	*>100000*	*>100000*
10	*56.1*	4.9	*91*	*199*	*0.89*	*>100000*	*>100000*

Weight:	116 lb (52.6 kg)	Bearing:	6308.2Z.C3
Working Moment:	97.6 in-lb (1122 kgmm)	Dynamic load:	9489 lb (4313 kg)
Max Static Moment:	48.8 in-lb (561 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	39.69	4.45
Nominal current (amps):	2.7	1.35	1.87	1.08	Start torque:	85.81	9.62
Start current (amps):	8.991	4.496	6.227	3.596	Maximum torque:	94.11	10.6
Start/Nom. current ratio:	3.33				Start/nom. torque ratio:	2.16	
Input power (watts):	760				Max/nom. torque ratio:	2.37	
Output power (hp):	0.69				Starting time (sec):	1.30	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	68%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	7.1718	
Power factor:	0.71				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	19.5				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						

Type W



	in.	mm
A:	17.40	442
B:	9.65	245
C:	9.06	230
D:	**5.51**	**140**
E:	**7.48**	**190**
ØG:	0.67	17
F:	0.98	25
H:	4.57	116
I:	4.13	105
L:	7.91	201
M:	7.09	180
N:	8.86	225

External cable diam. (in):	0.354 to 0.630
Service length req. per side(in):	4.13
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **MVSS 12-1630 60Hz 3PH**

SERIE: **AA** FRAME SIZE: **35**

ISSUED
6/13/2012

P/N: 602417C 230/460V SWECO PART #EM1C22840-010S
P/N: 602417F 330/575V SWECO PART #EM1C22840-012S

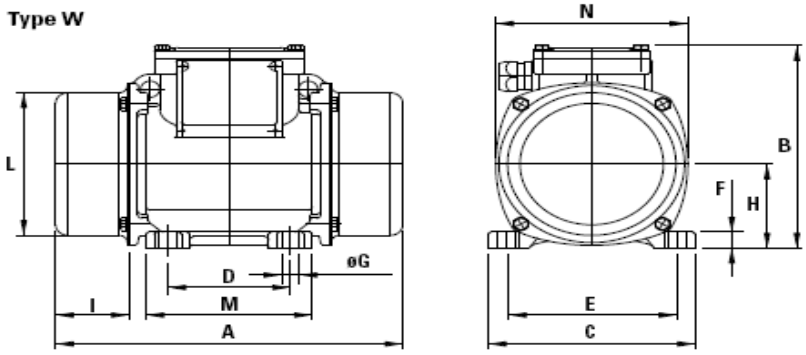
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**457**	**39.7**	**737**	**1621**	**7.23**	**10147**	***22293***
90	*411*	35.8	*663*	*1459*	*6.50*	*13938*	*30622*
80	*366*	31.8	*590*	*1297*	*5.78*	*19778*	*43453*
70	*320*	27.8	*516*	*1135*	*5.06*	*29567*	*64958*
60	*274*	23.8	*442*	*973*	*4.34*	*47042*	*>100000*
50	*229*	19.9	*369*	*811*	*3.61*	*80848*	*>100000*
40	*183*	15.9	*295*	*649*	*2.89*	*>100000*	*>100000*
30	*137*	11.9	*221*	*486*	*2.17*	*>100000*	*>100000*
20	*91.4*	7.9	*147*	*324*	*1.45*	*>100000*	*>100000*
10	*45.7*	4.0	*74*	*162*	*0.72*	*>100000*	*>100000*

Weight:	90.2 lb (41.0 kg)	Bearing:	6308.2Z.C3
Working Moment:	79.4 in-lb (914 kgmm)	Dynamic load:	9489 lb (4313kg)
Max Static Moment:	39.7 in-lb (457 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	19.89	2.23
Nominal current (amps):	1.36	0.68	0.94	0.54	Start torque:	36.57	4.1
Start current (amps):	5	2.5	3.46	1.99	Maximum torque:	44.60	5.0
Start/Nom. current ratio:	3.68				Start/nom. torque ratio:	1.84	
Input power (watts):	380				Max/nom. torque ratio:	2.24	
Output power (hp):	0.36				Starting time (sec):	2.33	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	70%				Max. Ambient Temp.:	104° F	
Slip:	6%				Inertia (lb-ft²):	5.5701	
Power factor:	0.70				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	51				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						



	in.	mm
A:	17.09	434
B:	9.13	232
C:	8.07	205
D:	4.72	120
E:	6.69	170
ØG:	0.67	17
F:	0.79	20
H:	4.11	104
I:	4.61	117
L:	7.13	181
M:	6.38	162
N:	7.99	203

External cable diam. (in):	0.354 to 0.630
Serv. length req.per side(in):	4.61
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 18-470** **50Hz 3PH 1500 RPM**

SERIE: **AA** FRAME SIZE: **10**

ISSUED
11/28/2011

P/N: 601409A 230/400V SWECO PART #EM1C22818-123
P/N: 601409E 290/500V CONSULT SWECO

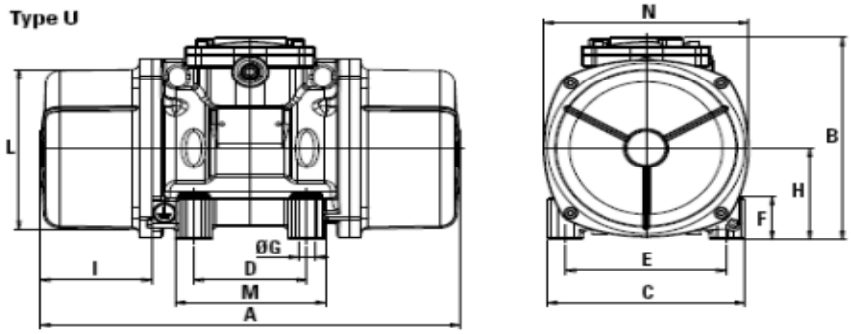
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**84.2**	**7.32**	**213**	**469**	**2.09**	**21067**	***46285***
90	*75.8*	6.59	*192*	*422*	*1.88*	*28764*	*63193*
80	*67.4*	5.86	*170*	*375*	*1.67*	*41438*	*91039*
70	*58.9*	5.12	*149*	*328*	*1.46*	*61544*	*>100000*
60	*50.5*	4.39	*128*	*281*	*1.25*	*97077*	*>100000*
50	*42.1*	3.66	*107*	*234*	*1.04*	*>100000*	*>100000*
40	*33.7*	2.93	*85*	*187*	*0.84*	*>100000*	*>100000*
30	*25.3*	2.20	*64*	*141*	*0.63*	*>100000*	*>100000*
20	*16.8*	1.46	*43*	*94*	*0.42*	*>100000*	*>100000*
10	*8.4*	0.73	*21*	*47*	*0.21*	*>100000*	*>100000*

Weight:	30.8 lb (14.0 kg)	Bearing:	6304.2Z.C3
Working Moment:	14.6 in-lb (168 kgmm)	Dynamic load:	3769 lb (1713 kg)
Max Static Moment:	7.3 in-lb (84.2 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque (in-lb):	5.8	0.65
Nominal current (amps):	0.71	0.41	0.57	0.33	Start torque (in-lb):	12.6	1.41
Start current (amps):	1.66	0.96	1.33	0.77	Maximum torque (in-lb):	12.9	1.45
Start/Nom. current ratio:	2.34				Start/nom. torque ratio:	2.17	
Input power (watts):	170				Max/nom. torque ratio:	2.23	
Output power (hp):	0.13				Starting time (sec):	1.05	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	57%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	0.6766	
Power factor:	0.60				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	88				Operating Temp. Code:	T4	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	F						



	in.	mm
A:	11.85	301
B:	7.52	191
C:	5.98	152
D:	**3.54**	**90**
E:	**4.92**	**125**
ØG:	0.51	13
F:	1.10	28
H:	3.05	77
I:	3.03	77
L:	5.12	130
M:	5.04	128
N:	5.91	150

External cable diam. (in):	1/2" NPT
Service length req. per side (in):	3.03
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

Approvals and certifications	
cSPus	Class I, gr.C,D. Class II, gr. E,F,G. Temp.Class T4 (135°C)

ISSUED
4/13/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 18-470 60Hz 3PH 1800 RPM**
SERIE: **AA** FRAME SIZE: **10**
P/N: 601409C 230/460V SWECO PART #EM1C22818-100
P/N: 601409F 330/575V CONSULT SWECO

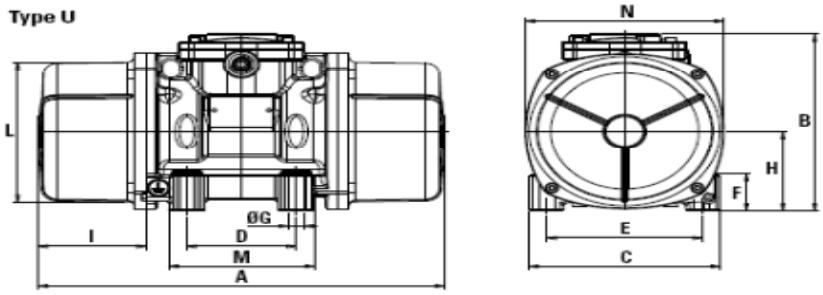
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**58.8**	**5.11**	**214**	**471**	**2.10**	**17311**	***38032***
90	*52.9*	4.60	*193*	*424*	*1.89*	*23599*	*51847*
80	*47.0*	4.09	*171*	*377*	*1.68*	*33929*	*74543*
70	*41.2*	3.58	*150*	*330*	*1.47*	*50268*	*>100000*
60	*35.3*	3.07	*128*	*282*	*1.26*	*80897*	*>100000*
50	*29.4*	2.56	*107*	*235*	*1.05*	*>100000*	*>100000*
40	*23.5*	2.05	*86*	*188*	*0.84*	*>100000*	*>100000*
30	*17.6*	1.53	*64*	*141*	*0.63*	*>100000*	*>100000*
20	*11.8*	1.02	*43*	*94*	*0.42*	*>100000*	*>100000*
10	*5.9*	0.51	*21*	*47*	*0.21*	*>100000*	*>100000*

Weight:	28.6 lb (13.0 kg)	Bearing:	6304.2Z.C3
Working Moment:	10.2 in-lb (118 kgmm)	Dynamic load:	3769 lb (1713 kg)
Max Static Moment:	5.11 in-lb (58.8 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	4.8	0.54
Nominal current (amps):	0.8	0.4	0.55	0.32	Start torque (in-lb):	10.9	1.2
Start current (amps):	2.2	1.1	1.51	0.88	Maximum torque (in-lb):	15.0	1.68
Start/Nom. current ratio:	2.75				Start/nom. torque ratio:	2.26	
Input power (watts):	170				Max/nom. torque ratio:	3.11	
Output power (hp):	0.13				Starting time (sec):	0.94	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	56%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	0.4409	
Power factor:	0.53				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	88				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	H						



	in.	mm
A:	11.85	301
B:	7.52	191
C:	5.98	152
D:	**3.54**	**90**
E:	**4.92**	**125**
ØG:	0.51	13
F:	1.10	28
H:	3.05	77
I:	3.03	77
L:	5.12	130
M:	5.04	128
N:	5.91	150

External cable diam. (in):	1/2" NPT
Service length req. per side (in):	3.03
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

Approvals and certifications

c SP us	Class I, gr.C,D. Class II, gr. E,F,G. Temp.Class T4 (135°C)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 18-1300 50Hz 3PH 1500 RPM**
SERIE: **AA** FRAME SIZE: **20**

ISSUED
12/2/2011

P/N: 601411A 230/400V SWECO PART #EM1C22830-123
P/N: 601411E 290/500V CONSULT SWECO

MECHANICAL CHARACTERISTICS

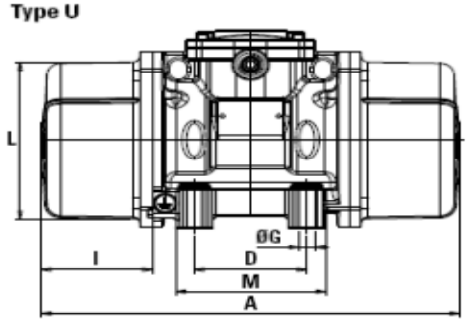
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**219**	**19.0**	**552**	**1214**	**5.41**	***6620***	***14545***
90	*197*	17.1	*497*	*1093*	*4.87*	*9070*	*19928*
80	*175*	15.2	*442*	*972*	*4.33*	*12895*	*28331*
70	*153*	13.3	*386*	*850*	*3.79*	*19361*	*42536*
60	*131*	11.4	*331*	*729*	*3.25*	*30705*	*67459*
50	*110*	9.52	*276*	*607*	*2.71*	*52962*	*>100000*
40	*88*	7.62	*221*	*486*	*2.17*	*>100000*	*>100000*
30	*66*	5.71	*166*	*364*	*1.62*	*>100000*	*>100000*
20	*44*	3.81	*110*	*243*	*1.08*	*>100000*	*>100000*
10	*22*	1.90	*55*	*121*	*0.54*	*>100000*	*>100000*

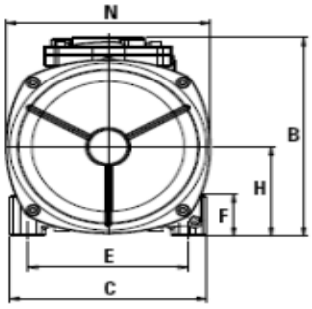
Weight:	50.2 lb (22.8 kg)	Bearing:	6306.2Z.C3
Working Moment:	38 in-lb (438 kgmm)	Dynamic load:	6640 lb (3018 kg)
Max Static Moment:	19 in-lb (219 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque (in-lb):	13.5	1.51
Nominal current (amps):	1.04	0.6	0.83	0.48	Start torque (in-lb):	24.5	2.75
Start current (amps):	3.46	2	2.76	1.6	Maximum torque (in-lb):	30.4	3.41
Start/Nom. current ratio:	3.33				Start/nom. torque ratio:	1.82	
Input power (watts):	300				Max/nom. torque ratio:	2.26	
Output power (hp):	0.29				Starting time (sec):	1.26	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	72%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	9%				Inertia (lb-ft²):	2.0077	
Power factor:	0.72				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	47				Operating Temp. Code:	T4	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	E						

Type U





	in.	mm
A:	15.43	392
B:	8.58	218
C:	6.57	167
D:	**4.13**	**105**
E:	**5.51**	**140**
ØG:	0.51	13
F:	1.18	30
H:	3.54	90
I:	4.61	117
L:	5.91	150
M:	5.51	140
N:	6.89	175

External cable diam. (in):	1/2" NPT
Service length req. per side (in):	4.61
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

Approvals and certifications

c SP us	Class I, gr.C,D. Class II, gr. E,F,G. Temp.Class T4 (135°C)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 18-1300 60Hz 3PH 1800 RPM**
SERIE: **AA** FRAME SIZE: **20**
P/N: 601411C 230/460V SWECO PART #EM1C22830-100
P/N: 601411F 330/575V CONSULT SWECO

ISSUED
4/13/2011

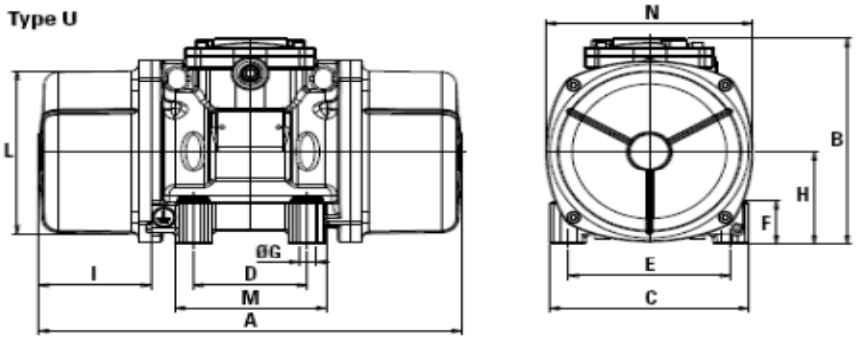
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**163**	**14.2**	**592**	**1302**	**5.81**	***4472***	***9826***
90	*147*	12.8	*533*	*1172*	*5.22*	*6128*	*13464*
80	*130*	11.3	*474*	*1042*	*4.64*	*8713*	*19143*
70	*114*	9.92	*414*	*912*	*4.06*	*13077*	*28730*
60	*97.8*	8.50	*355*	*781*	*3.48*	*20741*	*45568*
50	*81.5*	7.09	*296*	*651*	*2.90*	*35780*	*78608*
40	*65.2*	5.67	*237*	*521*	*2.32*	*69705*	*>100000*
30	*48.9*	4.25	*178*	*391*	*1.74*	*>100000*	*>100000*
20	*32.6*	2.83	*118*	*260*	*1.16*	*>100000*	*>100000*
10	*16.3*	1.42	*59*	*130*	*0.58*	*>100000*	*>100000*

Weight:	47.1 lb (21.4 kg)	Bearing:	6306.2Z.C3
Working Moment:	28.4 in-lb (326 kgmm)	Dynamic load:	6640 lb (3018 kg)
Max Static Moment:	14.2 in-lb (163 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	14.1	1.58
Nominal current (amps):	1.2	0.6	0.83	0.48	Start torque (in-lb):	23.8	2.67
Start current (amps):	4.2	2.1	2.91	1.68	Maximum torque (in-lb):	26.8	3.01
Start/Nom. current ratio:	3.5				Start/nom. torque ratio:	1.69	
Input power (watts):	350				Max/nom. torque ratio:	1.91	
Output power (hp):	0.37				Starting time (sec):	1.52	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	79%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	1.5584	
Power factor:	0.73				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	47				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	E						



	in.	mm
A:	15.43	392
B:	8.58	218
C:	6.57	167
D:	**4.13**	**105**
E:	**5.51**	**140**
ØG:	0.51	13
F:	1.18	30
H:	3.54	90
I:	4.61	117
L:	5.91	150
M:	5.51	140
N:	6.89	175

External cable diam. (in):	1/2" NPT
Service length req. per side (in):	4.61
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

Approvals and certifications

c SP us	Class I, gr.C,D. Class II, gr. E,F,G. Temp.Class T4 (135°C)

ISSUED
12/2/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 18-1670** **50Hz 3PH 1500 RPM**

SERIE: **AA** FRAME SIZE: **30**

P/N: 601412A 230/400V SWECO PART #EM1C22840-123
P/N: 601412E 290/500V CONSULT SWECO

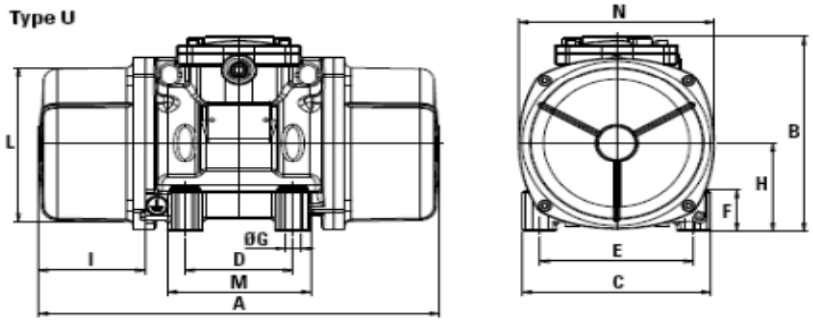
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**286**	**24.9**	**720**	**1584**	**7.06**	**19524**	***42739***
90	*257*	22.4	*648*	*1426*	*6.35*	*26781*	*58627*
80	*229*	19.9	*576*	*1267*	*5.65*	*38132*	*83475*
70	*200*	17.4	*504*	*1109*	*4.94*	*56920*	*>100000*
60	*172*	14.9	*432*	*950*	*4.24*	*90387*	*>100000*
50	*143*	12.4	*360*	*792*	*3.53*	*>100000*	*>100000*
40	*114*	9.9	*288*	*634*	*2.82*	*>100000*	*>100000*
30	*85.8*	7.5	*216*	*475*	*2.12*	*>100000*	*>100000*
20	*57.2*	5.0	*144*	*317*	*1.41*	*>100000*	*>100000*
10	*28.6*	2.5	*72*	*158*	*0.71*	*>100000*	*>100000*

Weight:	66.7 lb (30.3 kg)	Bearing:	6309.2Z.C4
Working Moment:	49.8 in-lb (572 kgmm)	Dynamic load:	12406 lb (5639 kg)
Max Static Moment:	24.9 in-lb (286 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque:	24.08	2.70
Nominal current (amps):	1.59	0.92	1.28	0.74	Start torque:	49.77	5.58
Start current (amps):	5.53	3.2	4.45	2.58	Maximum torque:	55.30	6.20
Start/Nom. current ratio:	3.48				Start/nom. torque ratio:	2.07	
Input power (watts):	525				Max/nom. torque ratio:	2.30	
Output power (hp):	0.51				Starting time (sec):	1.21	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	72%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	9%				Inertia (lb-ft²):	3.0087	
Power factor:	0.82				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	25				Operating Temp. Code:	T4	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						



	in.	mm
A:	15.51	394
B:	9.07	230
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	1.77	45
H:	4.02	102
I:	4.17	106
L:	6.97	177
M:	6.38	162
N:	7.87	200

External cable diam. (in):	1/2" NPT
Service length req. per side (in):	4.17
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

Approvals and certifications

c SP us	Class I, gr.C,D. Class II, gr. E,F,G. Temp.Class T4 (135°C)

ISSUED
4/13/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 18-1670** **60Hz 3PH 1800 RPM**

SERIE: **AA** FRAME SIZE: **30**

P/N: 601412C 230/460V SWECO PART #EM1C22840-100

P/N: 601412F 330/575V CONSULT SWECO

MECHANICAL CHARACTERISTICS

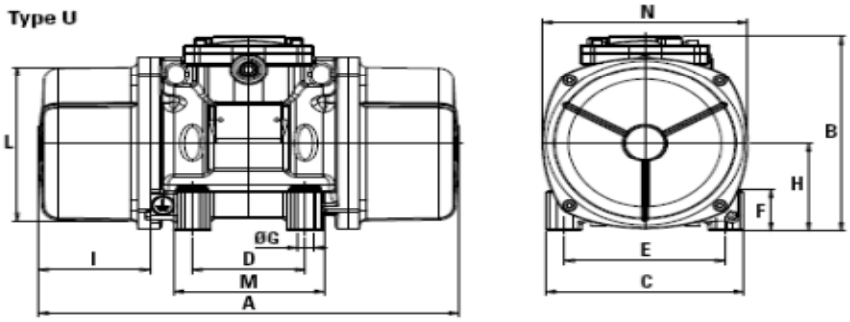
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**209**	**18.2**	**760**	**1672**	**7.45**	**13784**	***30283***
90	*188*	16.4	*684*	*1505*	*6.71*	*18908*	*41541*
80	*167*	14.5	*608*	*1338*	*5.96*	*26922*	*59147*
70	*146*	12.72	*532*	*1170*	*5.22*	*40186*	*88289*
60	*125.4*	10.90	*456*	*1003*	*4.47*	*63814*	*>100000*
50	*104.5*	9.09	*380*	*836*	*3.73*	*>100000*	*>100000*
40	*83.6*	7.27	*304*	*669*	*2.98*	*>100000*	*>100000*
30	*62.7*	5.45	*228*	*502*	*2.24*	*>100000*	*>100000*
20	*41.8*	3.63	*152*	*334*	*1.49*	*>100000*	*>100000*
10	*20.9*	1.82	*76*	*167*	*0.75*	*>100000*	*>100000*

Weight:	63.8 lb (29 kg)	Bearing:	6309.2Z.C4
Working Moment:	36.4 in-lb (418 kgmm)	Dynamic load:	12406 lb (5639 kg)
Max Static Moment:	18.2 in-lb (209 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	25.24	2.83
Nominal current (amps):	1.96	0.98	1.35	0.78	Start torque:	48.17	5.40
Start current (amps):	6.723	3.361	4.631	2.675	Maximum torque:	54.86	6.15
Start/Nom. current ratio:	3.43				Start/nom. torque ratio:	1.91	
Input power (watts):	665				Max/nom. torque ratio:	2.17	
Output power (hp):	0.66				Starting time (sec):	1.08	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	74%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	8%				Inertia (lb-ft²):	2.2101	
Power factor:	0.85				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	25				Operating Temp. Code:	N/A	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						

Type U



	in.	mm
A:	15.51	394
B:	9.07	230
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	1.77	45
H:	4.02	102
I:	4.17	106
L:	6.97	177
M:	6.38	162
N:	7.87	200

External cable diam. (in):	1/2" NPT
Service length req. per side (in):	4.17
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

Approvals and certifications

cSAus	Class I, gr.C,D. Class II, gr. E,F,G. Temp.Class T4 (135°C)

ISSUED
12/2/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 18-2150 50Hz 3PH 1500 RPM**

SERIE: **AA** FRAME SIZE: **35**

P/N: 601413A 230/400V SWECO PART #EM1C22860-123

P/N: 601413E 290/500V CONSULT SWECO

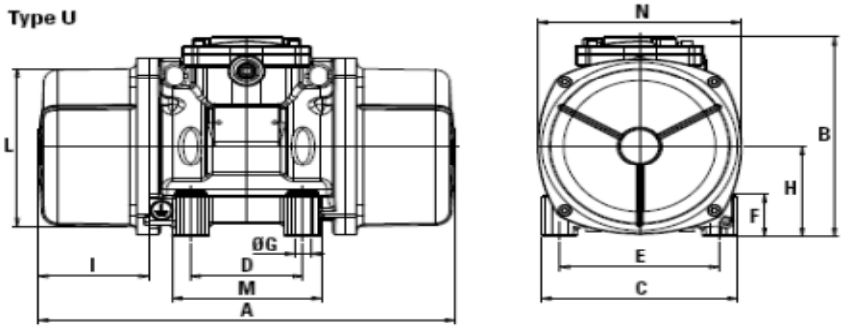
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**415**	**36.1**	**1045**	**2299**	**10.2**	***15542***	***37267***
90	*374*	32.5	*941*	*2069*	*9.22*	*22043*	*52854*
80	*332*	28.9	*836*	*1839*	*8.20*	*32700*	*78407*
70	*291*	25.3	*732*	*1609*	*7.17*	*50917*	*>100000*
60	*249*	21.7	*627*	*1379*	*6.15*	*85311*	*>100000*
50	*208*	18.0	*523*	*1150*	*5.12*	*>100000*	*>100000*
40	*166*	14.4	*418*	*920*	*4.10*	*>100000*	*>100000*
30	*125*	10.8	*314*	*690*	*3.07*	*>100000*	*>100000*
20	*83*	7.2	*209*	*460*	*2.05*	*>100000*	*>100000*
10	*42*	3.6	*105*	*230*	*1.02*	*>100000*	*>100000*

Weight:	101 lb (46 kg)	Bearing:	NJ 306 E C4
Working Moment:	72.2 in-lb (830 kgmm)	Dynamic load:	13123 lb (5965 kg)
Max Static Moment:	36.1 in-lb (415 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	400	290	500	Nominal torque (in-lb):	22.57	2.53
Nominal current (amps):	1.40	0.81	1.12	0.65	Start torque (in-lb):	49.95	5.60
Start current (amps):	6.51	3.77	5.21	3.02	Maximum torque (in-lb):	57.98	6.50
Start/Nom. current ratio:	4.65				Start/nom. torque ratio:	2.21	
Input power (watts):	520				Max/nom. torque ratio:	2.57	
Output power (hp):	0.49				Starting time (sec):	1.59	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	71%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	4.1057	
Power factor:	0.93				Inverter Duty:	20Hz to 50Hz	
Coil resist (Ω @ 20°C):	24.1				Operating Temp. Code:	T4 (135°C)	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	G						



	in.	mm
A:	17.56	446
B:	9.78	248
C:	8.27	210
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	2.05	52
H:	4.41	112
I:	4.65	118
L:	7.56	192
M:	6.30	160
N:	8.58	218

External cable diam. (in):	3/4" NPT
Service length req. per side (in):	4.65
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

Approvals and certifications	
c UL us	Class I, gr.C,D. Class II, gr.E,F,G. Class III. Temp.Class T4 (135°C)
Ex	ATEX 94/9/EC II2G,D Ex d IIB 120°C, tD A21 IP66 cert. n° DEMKO 07 ATEX 0612032X
IECEx	IECEx std. IEC 60079-0, -1, 61241-0, -1 cert. n° IECEx UL 09.0034X
PG	GOST-R & GGTN Permit std.n°GOST R 51330.0-99,.1-99, IEC61241-1-1-99

ISSUED
4/13/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 18-2150 60Hz 3PH 1800 RPM**
SERIE: **AA** FRAME SIZE: **35**
P/N: 601413C 230/460V SWECO PART #EM1C22860-100
P/N: 601413F 330/575V CONSULT SWECO

MECHANICAL CHARACTERISTICS

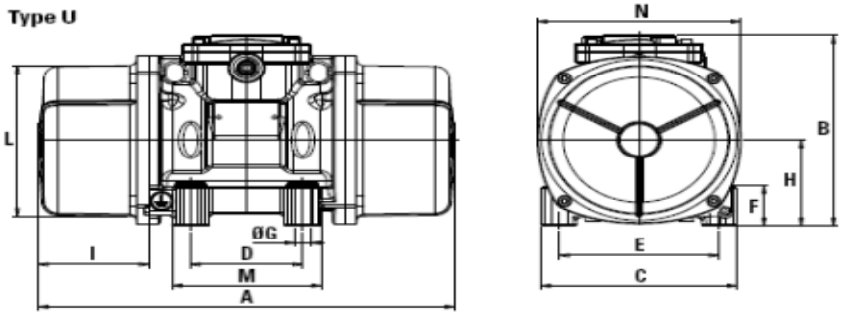
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**271**	**23.6**	**982**	**2160**	**9.63**	***15935***	***38208***
90	*244*	21.2	*884*	*1944*	*8.67*	*22623*	*54244*
80	*217*	18.9	*786*	*1728*	*7.70*	*33469*	*80252*
70	*190*	16.5	*687*	*1512*	*6.74*	*52424*	*>100000*
60	*163*	14.1	*589*	*1296*	*5.78*	*87566*	*>100000*
50	*136*	11.8	*491*	*1080*	*4.82*	*>100000*	*>100000*
40	*108*	9.4	*393*	*864*	*3.85*	*>100000*	*>100000*
30	*81*	7.1	*295*	*648*	*2.89*	*>100000*	*>100000*
20	*54*	4.7	*196*	*432*	*1.93*	*>100000*	*>100000*
10	*27*	2.4	*98*	*216*	*0.96*	*>100000*	*>100000*

Weight:	91.3 lb (41.5 kg)	Bearing:	NJ 306 E C4
Working Moment:	47.2 in-lb (542 kgmm)	Dynamic load:	13123 lb (5965 kg)
Max Static Moment:	23.6 in-lb (271 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	21.85	2.45
Nominal current (amps):	1.76	0.88	1.22	0.70	Start torque (in-lb):	41.75	4.68
Start current (amps):	8.518	4.259	5.905	3.388	Maximum torque (in-lb):	36.93	4.14
Start/Nom. current ratio:	4.84				Start/nom. torque ratio:	1.91	
Input power (watts):	660				Max/nom. torque ratio:	1.69	
Output power (hp):	0.60				Starting time (sec):	1.79	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	67%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	4%				Inertia (lb-ft²):	3.4086	
Power factor:	0.94				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	24.1				Operating Temp. Code:	T4 (135°C)	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	G						

Type U



	in.	mm
A:	17.56	446
B:	9.78	248
C:	8.27	210
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	2.05	52
H:	4.41	112
I:	4.65	118
L:	7.56	192
M:	6.30	160
N:	8.58	218

External cable diam. (in):	3/4" NPT
Service length req. per side (in):	4.65
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

Approvals and certifications	
c UL us	Class I, gr.C,D. Class II, gr.E,F,G. Class III. Temp.Class T4 (135°C)
Ex	ATEX 94/9/EC II2G,D Ex d IIB 120°C, tD A21 IP66 cert. n° DEMKO 07 ATEX 0612032X
IECEx	IECEx std. IEC 60079-0, -1, 61241-0, -1 cert. n° IECEx UL 09.0034X
PG	**GOST-R & GGTN Permit** std.n°GOST R 51330.0-99,.1-99, IEC61241-1-1-99

ISSUED
1/13/2012

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 12-110** **60Hz 3PH 1200 RPM**
SERIE: **AA** FRAME SIZE: **10**
P/N: 602315C 230/460V SWECO PART #EM1C22818-110
P/N: 602315F 330/575V SWECO PART #EM1C22818-112

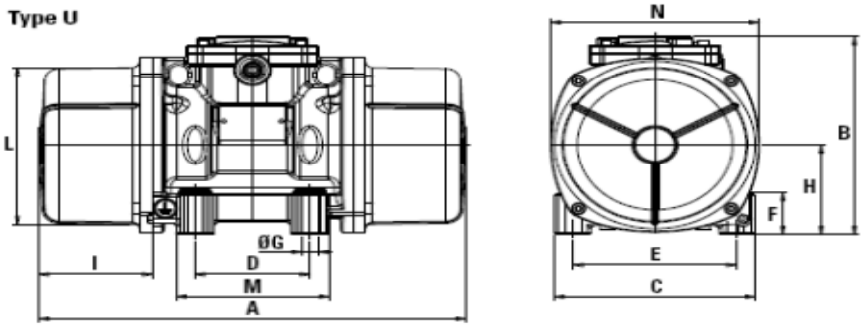
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**30.1**	**2.62**	**49**	**108**	**0.48**	**>100000**	***>100000***
90	*27.1*	2.36	*44*	*97*	*0.43*	>100000	>100000
80	*24.1*	2.09	*39*	*86*	*0.38*	>100000	>100000
70	*21.1*	1.83	*34*	*75*	*0.34*	>100000	>100000
60	*18.1*	1.57	*29*	*65*	*0.29*	>100000	>100000
50	*15.1*	1.31	*25*	*54*	*0.24*	>100000	>100000
40	*12.0*	1.05	*20*	*43*	*0.19*	>100000	>100000
30	*9.0*	0.79	*15*	*32*	*0.14*	>100000	>100000
20	*6.0*	0.52	*10*	*22*	*0.10*	>100000	>100000
10	*3.0*	0.26	*5*	*11*	*0.05*	>100000	>100000

Weight:	25.3 lb (11.5 kg)	Bearing:	6304.2Z.C3
Working Moment:	5.24 in-lb (60.2 kgmm)	Dynamic load:	3769 lb (1713 kg)
Max Static Moment:	2.62 in-lb (30.1 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	7.14	0.8
Nominal current (amps):	0.6	0.3	0.42	0.24	Start torque (in-lb):	9.90	1.11
Start current (amps):	1.24	0.62	0.87	0.5	Maximum torque (in-lb):	10.35	1.16
Start/Nom. current ratio:	2.07				Start/nom. torque ratio:	1.39	
Input power (watts):	135				Max/nom. torque ratio:	1.45	
Output power (hp):	0.12				Starting time (sec):	1.1	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	66%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	11%				Inertia (lb-ft²):	0.6766	
Power factor:	0.56				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	154				Operating Temp. Code:	T4	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						



	in.	mm
A:	10.04	255
B:	7.52	191
C:	5.98	152
D:	**3.54**	**90**
E:	**4.92**	**125**
ØG:	0.51	13
F:	1.10	28
H:	3.05	77
I:	2.13	54
L:	5.12	130
M:	5.04	128
N:	5.91	150

External cable diam. (in):	1/2" NPT
Service length req. per side (in):	2.13
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

Approvals and certifications

c SP us	Class I, gr.C,D. Class II, gr. E,F,G. Temp.Class T4 (135°C)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 12-575 60Hz 3PH 1200 RPM**
SERIE: **AA** FRAME SIZE: **20**
P/N: 602317C 230/460V SWECO PART #EM1C22824-110
P/N: 602317F 330/575V SWECO PART #EM1C22824-112

ISSUED
11/21/2011

MECHANICAL CHARACTERISTICS

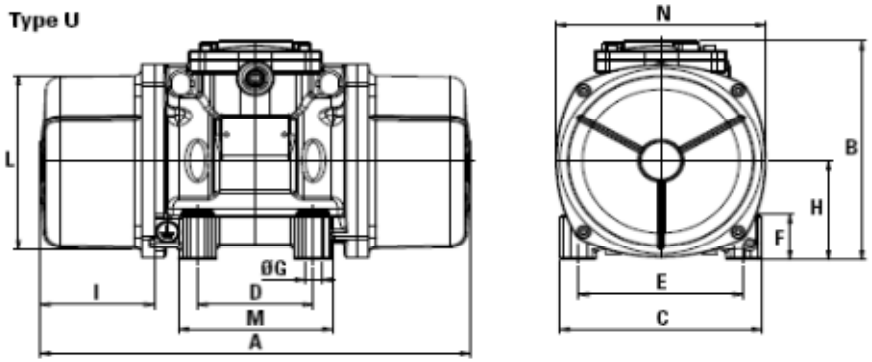
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**163**	**14.2**	**264**	**581**	**2.59**	**75647**	***>100000***
90	*147*	12.8	*238*	*523*	*2.33*	*>100000*	*>100000*
80	*130*	11.3	*211*	*465*	*2.07*	*>100000*	*>100000*
70	*114*	9.9	*185*	*407*	*1.81*	*>100000*	*>100000*
60	*97.8*	8.5	*158*	*348*	*1.55*	*>100000*	*>100000*
50	*81.5*	7.1	*132*	*290*	*1.29*	*>100000*	*>100000*
40	*65.2*	5.7	*106*	*232*	*1.04*	*>100000*	*>100000*
30	*48.9*	4.3	*79*	*174*	*0.78*	*>100000*	*>100000*
20	*32.6*	2.8	*53*	*116*	*0.52*	*>100000*	*>100000*
10	*16.3*	1.4	*26*	*58*	*0.26*	*>100000*	*>100000*

Weight:	47.1 lb (21.4 kg)	Bearing:	6306.2Z.C3
Working Moment:	28.4 in-lb (326 kgmm)	Dynamic load:	6640 lb (3018 kg)
Max Static Moment:	14.2 in-lb (163 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	8.83	0.99
Nominal current (amps):	1.0	0.50	0.69	0.40	Start torque:	17.48	1.96
Start current (amps):	3.1	1.55	2.14	1.24	Maximum torque:	28.01	3.14
Start/Nom. current ratio:	3.1				Start/nom. torque ratio:	1.98	
Input power (watts):	205				Max/nom. torque ratio:	3.17	
Output power (hp):	0.16				Starting time (sec):	1.33	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	59%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	4%				Inertia (lb-ft²):	1.5584	
Power factor:	0.51				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	68				Operating Temp. Code:	T4	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	J						

Type U



	in.	mm
A:	13.78	350
B:	8.58	218
C:	6.57	167
D:	**4.13**	**105**
E:	**5.51**	**140**
ØG:	0.51	13
F:	1.18	30
H:	3.54	90
I:	3.78	96
L:	5.91	150
M:	5.51	140
N:	6.89	175

External cable diam. (in):	1/2" NPT
Service length req. per side (in):	3.78
Mounting bolts:	1/2" - (M12)
Mounting bolt torque:	58 ft-lb (8 kgm)

Approvals and certifications

cSAus	Class I, gr.C,D. Class II, gr. E,F,G. Temp.Class T4 (135°C)

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 12-750 60Hz 3PH 1200 RPM**

SERIE: **AA** FRAME SIZE: **30**

ISSUED
11/24/2011

P/N: 602318C 230/460V SWECO PART #EM1C22831-110

P/N: 602318F 330/575V SWECO PART #EM1C22830-112

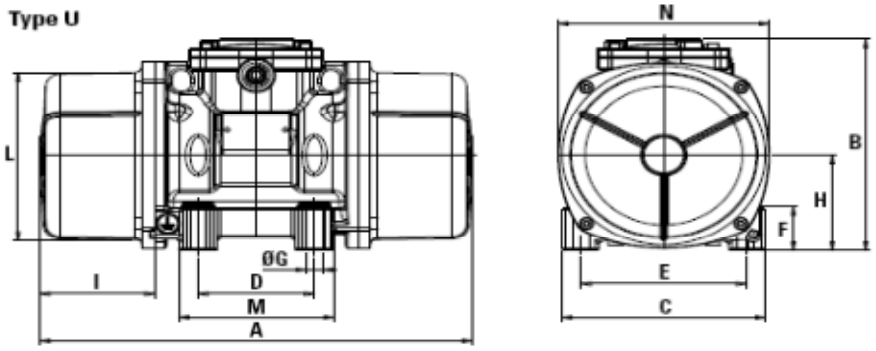
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	*kgmm*	*in.-lb*	*kg*	*lb*	*kN*	*w/1.3 Load Factor*	*w/1.0 Load Factor*
100	**209**	**18.2**	**338**	**744**	**3.31**	**>100000**	***>100000***
90	*188*	16.4	*304*	*669*	*2.98*	*>100000*	*>100000*
80	*167*	14.5	*270*	*595*	*2.65*	*>100000*	*>100000*
70	*146*	12.7	*237*	*521*	*2.32*	*>100000*	*>100000*
60	*125*	10.9	*203*	*446*	*1.99*	*>100000*	*>100000*
50	*105*	9.1	*169*	*372*	*1.66*	*>100000*	*>100000*
40	*83.6*	7.3	*135*	*297*	*1.33*	*>100000*	*>100000*
30	*62.7*	5.5	*101*	*223*	*0.99*	*>100000*	*>100000*
20	*41.8*	3.6	*68*	*149*	*0.66*	*>100000*	*>100000*
10	*20.9*	1.8	*34*	*74*	*0.33*	*>100000*	*>100000*

Weight:	63.8 lb (29 kg)	Bearing:	6309.2Z.C4
Working Moment:	36.4 in-lb (418 kgmm)	Dynamic load:	12406 lb (5639 kg)
Max Static Moment:	18.2 in-lb (209 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque:	20.69	2.32
Nominal current (amps):	1.36	0.68	0.94	0.54	Start torque:	35.14	3.94
Start current (amps):	3.79	1.9	2.62	1.51	Maximum torque:	39.25	4.40
Start/Nom. current ratio:	2.79				Start/nom. torque ratio:	1.70	
Input power (watts):	380				Max/nom. torque ratio:	1.90	
Output power (hp):	0.36				Starting time (sec):	1.00	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	71%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	7%				Inertia (lb-ft²):	2.2544	
Power factor:	0.70				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	50				Operating Temp. Code:	T4	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	D						



	in.	mm
A:	15.51	394
B:	9.07	230
C:	8.07	205
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	1.77	45
H:	4.02	102
I:	4.17	106
L:	6.97	177
M:	6.38	162
N:	7.87	200

External cable diam. (in):	1/2" NPT
Service length req. per side (in):	4.17
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

Approvals and certifications	
c SP us	Class I, gr.C,D. Class II, gr. E,F,G. Temp.Class T4 (135°C)

ISSUED
1/21/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 12-1630 60Hz 3PH 1200 RPM**

SERIE: **AA** FRAME SIZE: **35**

P/N: 602320C 230/460V SWECO PART #EM1C22840-110

P/N: 602320F 330/575V SWECO PART #EM1C22840-112

MECHANICAL CHARACTERISTICS

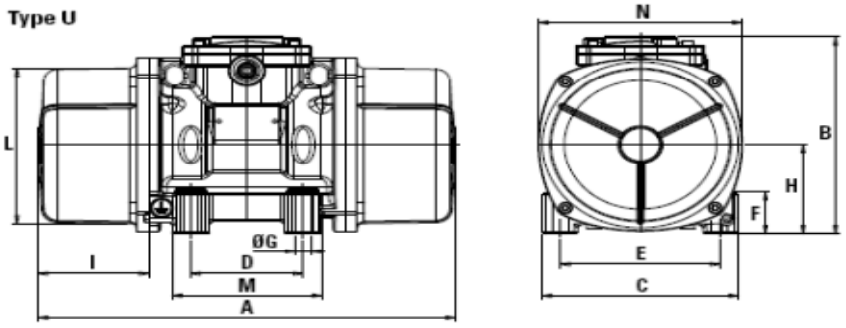
Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**457**	**39.7**	**737**	**1621**	**7.23**	**62218**	***>100000***
90	*411*	35.8	*663*	*1459*	*6.50*	*88531*	*>100000*
80	*366*	31.8	*590*	*1297*	*5.78*	*>100000*	*>100000*
70	*320*	27.8	*516*	*1135*	*5.06*	*>100000*	*>100000*
60	*274*	23.8	*442*	*973*	*4.34*	*>100000*	*>100000*
50	*229*	19.9	*369*	*811*	*3.61*	*>100000*	*>100000*
40	*183*	15.9	*295*	*649*	*2.89*	*>100000*	*>100000*
30	*137*	11.9	*221*	*486*	*2.17*	*>100000*	*>100000*
20	*91*	7.9	*147*	*324*	*1.45*	*>100000*	*>100000*
10	*46*	4.0	*74*	*162*	*0.72*	*>100000*	*>100000*

Weight:	105 lb (47.5 kg)	Bearing:	NJ 306 E C4
Working Moment:	80 in-lb (914 kgmm)	Dynamic load:	13123 lb (5965 kg)
Max Static Moment:	40 in-lb (457 kgmm)	Lube schedule:	Lubricated for life

ELECTRICAL CHARACTERISTICS

						In-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	18.7	2.11
Nominal current (amps):	1.22	0.61	0.85	0.49	Start torque (in-lb):	36.6	4.13
Start current (amps):	4.6	2.3	3.2	1.85	Maximum torque (in-lb):	44.6	5.03
Start/Nom. current ratio:	3.77				Start/nom. torque ratio:	1.95	
Input power (watts):	310				Max/nom. torque ratio:	2.38	
Output power (hp):	0.30				Starting time (sec):	2.52	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	74%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	6%				Inertia (lb-ft²):	5.57	
Power factor:	0.65				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	51				Operating Temp. Code:	T4 (135°C)	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	G						

Type U



	in.	mm
A:	17.56	446
B:	9.78	248
C:	8.27	210
D:	**4.72**	**120**
E:	**6.69**	**170**
ØG:	0.67	17
F:	2.05	52
H:	4.41	112
I:	4.65	118
L:	7.56	192
M:	6.30	160
N:	8.58	218

External cable diam. (in):	3/4" NPT
Service length req. per side (in):	4.65
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

Approvals and certifications	
c UL us LISTED	Class I, gr.C,D. Class II, gr.E,F,G. Class III. Temp.Class T4 (135°C)
Ex d	ATEX 94/9/EC II2G,D Ex d IIB 120°C, tD A21 IP66 cert. n° DEMKO 07 ATEX 0612032X
IECEx	IECEx std. IEC 60079-0, -1, 61241-0, -1 cert. n° IECEx UL 09.0034X
PG	GOST-R & GGTN Permit std.n°GOST R 51330.0-99,.1-99, IEC61241-1-1-99

ISSUED
11/25/2011

VIBRATOR TECHNICAL DATA SHEET

MODEL: **CDX 12-1990 60Hz 3PH 1200 RPM**

SERIE: **AA** FRAME SIZE: **40**

P/N: 602325C 230/460V SWECO PART #EM1C22860-110

P/N: 602325F 330/575V SWECO PART #EM1C22860-112

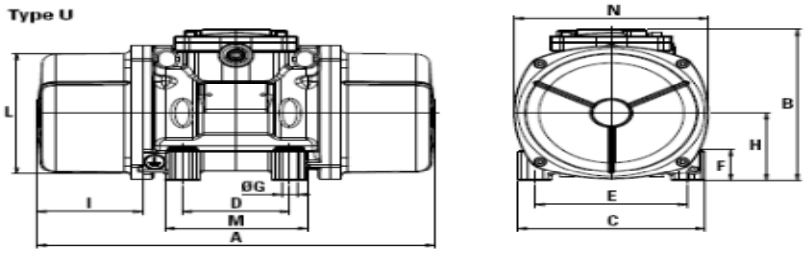
MECHANICAL CHARACTERISTICS

Weights Position	Static moment		Centrifugal Force			Bearing Life (hrs)	Bearing Life (hrs)
%	kgmm	in.-lb	kg	lb	kN	w/1.3 Load Factor	w/1.0 Load Factor
100	**561**	**48.8**	**905**	**1991**	**8.87**	***>100000***	***>100000***
90	*505*	43.9	*815*	*1792*	*7.99*	*>100000*	*>100000*
80	*449*	39.0	*724*	*1593*	*7.10*	*>100000*	*>100000*
70	*393*	34.1	*634*	*1394*	*6.21*	*>100000*	*>100000*
60	*337*	29.3	*543*	*1195*	*5.32*	*>100000*	*>100000*
50	*281*	24.4	*453*	*996*	*4.44*	*>100000*	*>100000*
40	*224*	19.5	*362*	*796*	*3.55*	*>100000*	*>100000*
30	*168*	14.6	*272*	*597*	*2.66*	*>100000*	*>100000*
20	*112*	9.8	*181*	*398*	*1.77*	*>100000*	*>100000*
10	*56*	4.9	*91*	*199*	*0.89*	*>100000*	*>100000*

Weight:	144 lb (65.4 kg)	Bearing:	NJ 308 E C4
Working Moment:	97.6 in-lb (1122 kgmm)	Dynamic load:	20863 lb (9483 kg)
Max Static Moment:	48.8 in-lb (561 kgmm)	Lube schedule: Must temporarily install 1/8-NPT grease fitting for lubrication	12 grams Kluber ISOFLEX TOPAS NB 52 grease (SWECO part #2863029) every 2000 hours

ELECTRICAL CHARACTERISTICS

						in-lb	Nm
Nominal input voltage:	230	460	330	575	Nominal torque (in-lb):	32.11	3.60
Nominal current (amps):	2.6	1.3	1.80	1.04	Start torque (in-lb):	96.34	10.8
Start current (amps):	9.59	4.8	6.64	3.84	Maximum torque (in-lb):	134.69	15.1
Start/Nom. current ratio:	3.69				Start/nom. torque ratio:	3.00	
Input power (watts):	680				Max/nom. torque ratio:	4.19	
Output power (hp):	0.59				Starting time (sec):	1.18	
Service Factor:	1.0				Duty cycle:	continuous	
Efficiency:	65%				Max. Ambient Temp.:	40° C (104° F)	
Slip:	5%				Inertia (lb-ft²):	7.7259	
Power factor:	0.66				Inverter Duty:	20Hz to 60Hz	
Coil resist (Ω @ 20°C):	16				Operating Temp. Code:	T4 (135°C)	
Insulation class:	F				Capacitance (µF):	N/A	
Locked Rotor Code:	H						



	in.	mm
A:	18.43	468
B:	10.96	278
C:	9.25	235
D:	**5.51**	**140**
E:	**7.48**	**190**
ØG:	0.67	17
F:	2.56	65
H:	4.57	116
I:	4.25	108
L:	8.27	210
M:	7.28	185
N:	8.86	225

External cable diam. (in):	3/4" NPT
Service length req. per side (in):	4.25
Mounting bolts:	5/8" - (M16)
Mounting bolt torque:	137 ft-lb (19 kgm)

Approvals and certifications	
c UL us LISTED	Class I, gr.C,D. Class II, gr.E,F,G. Class III. Temp.Class T4 (135°C)
Ex d	ATEX 94/9/EC II2G,D Ex d IIB 120°C, tD A21 IP66 cert. n° DEMKO 07 ATEX 0612032X
IECEx	IECEx std. IEC 60079-0, -1, 61241-0, -1 cert. n° IECEx UL 09.0034X
PG	GOST-R & GGTN Permit std.n°GOST R 51330.0-99,.1-99, IEC61241-1-1-99

NOTES

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SWECO has sales agents and/or licensees in most countries

CERTIFICATIONS

Standard U.L. 674. C.S.A. C22.2 N.145 - File n° E129825 Class I, Groups C and D; Class II, Groups E, Groups F and G – Explosion-proof vibrators for use in explosive atmospheres (North America).

Standard C22.2 n°100-95, file n° LR100948-4 part A – Class 4228 01; Class I, Division 2, Groups A, B, C and D - Explosion-proof vibrators for use in explosive atmospheres (North America).

Standard C22.2 n°100-95, file n° LR100948 part B. Class 4211 01 – Motors and generators (North America).

Standard C22.2, U.L. 674 - File n° LR100948-1, class 4228 01; Class I, Groups C and D; Class II, Groups E, F and G. Class III. Temperature class: T4. Explosion-proof vibrators for use in explosive atmospheres (North America and Canada).

CER-97/033411 and CER-96/038019 Mechanical protection IP66 IK08 in compliance with standards IEC 529, CEI EN 60529.

II 2 G, D – Class Ex e II T4 and T3 (G) – tD A21 IP 66. CENELEC IEC/EN 60079-0, IEC/EN 60079-7, IEC/EN 61241-0, IEC/EN 61241-1, Cert. n° LCIE 06 ATEX 6092 X. European Directive 94/9/EC- Increased safety vibrators for potentially explosive gas atmosphere and combustible dust atmosphere.

II 2 D – CENELEC IEC/EN 61241-0, IEC/EN 61241-1 Certificate n° LCIE 05 ATEX 6163 X – European Directive 94/9/EC - Vibrators for potentially explosive dust atmosphere.

II 2 G, D - Class Ex d IIB 120°C, tD A21 IP66 T120°C - IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 61241-0, IEC/EN 61241-1. Certificate n° DEMKO 07 ATEX 0612032 X. European Directive 94/9/EC Explosion-proof vibrators for potentially explosive gas atmosphere and combustible dust atmosphere.

II 2 G – Class Ex d IIB T4 CENELEC IEC/EN 60079-0, IEC/EN 60079-1. Certificate n° SIRA 00ATEX 1026 Explosion-proof vibrators for potentially explosive gas atmosphere.

Gost-R certificate for all models of vibrators following standard: GOST R 50615, GOST 17770, GOST 12.2.030, GOST R 51318.14.1, GOST R 51318.14.2, GOST R 51317.3.2, GOST R 51317.3.3.

GGTN Permit and Gost-R certificate for explosion-proof Ex d models following standards: GOST R 51330.0-99, GOST R 51330.1-99, GOST R IEC 61241-1-1-99.

GGTN Permit and Gost-R certificate for increased safety Ex e models following standards: GOST R 51330.0-99, GOST R 51330.8-99, GOST R IEC 61241-1-1-99.

Certification: CMRI and DGMS for India. Category: Ex d II B 120°C, IP 66 Regulations: IS2148-2004, IS 13346-2004, IS4691-1985. Areas of use: 1, 2

All Italvibras electric vibrators comply with the applicable European Union Directives (2006/95/EC - 2004/108/EC, 94/9/EC) and thus bear CE marking.

Production quality assurance notification. Directive 94/9/CE n° CESI 00 ATEX 061 Q.

Certificate of Conformity n° IECEx CES 09.0001X following standards IEC 61241-0, IEC 61241-1

Certificate of Conformity n° IECEx LCI 10.0003X following standards IEC 61241-0, IEC 61241-1, IEC 60079-0, IEC 60079-7.

Certificate of Conformity n° IECEx UL 09.0034X following standards IEC 61241-0, IEC 61241-1, IEC 60079-0, IEC 60079-1

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