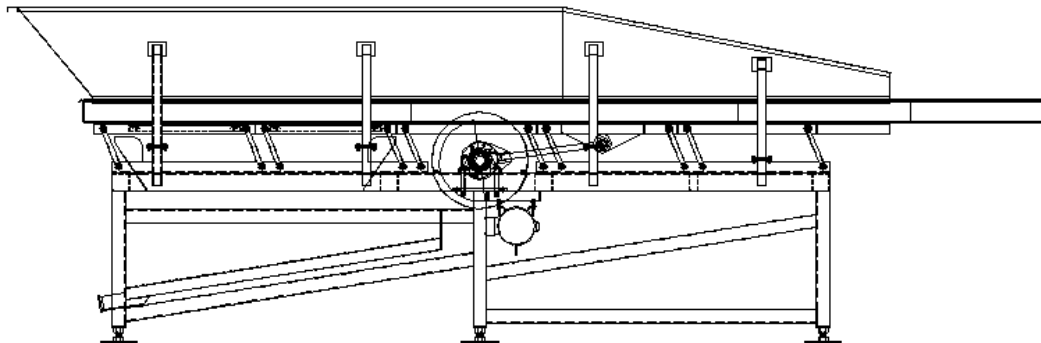
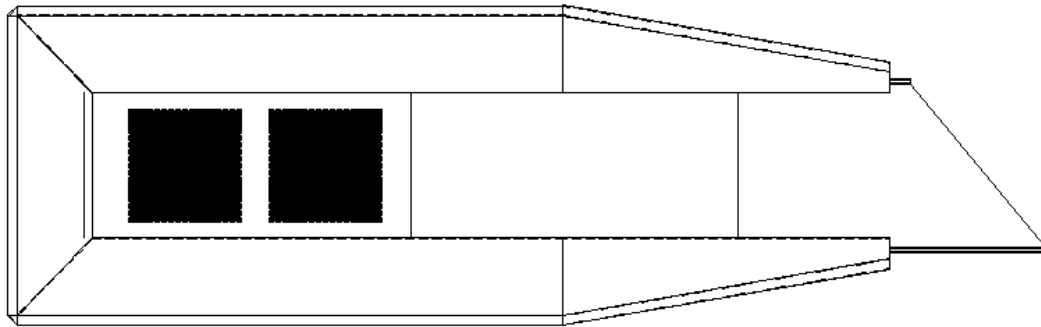




P&L SPECIALTIES

MANUFACTURING THE FINEST STAINLESS STEEL EQUIPMENT



Cluster Thruster™ (Oscillating Conveyor)
OPERATION MANUAL

SERIAL NO. _____ **DATE OF MANUFACTURE** _____

EQUIPMENT DESCRIPTION

The Cluster Thruster™ is a motorized sorting and distribution device. It couples high capacity (up to 20 tons/hour) with extended length offering more even product distribution and increased **MOG** (**M**aterial **O**ther than **G**rape) separation if a sorting screen option has been selected. The sorting process allows for juice, loose “shot” berries, stem jacks, and raisins to pass through the wedge wire sorting screens, while the Cluster Thrusters™ gentle shaking motion allows the evenly distributed clusters or whole berries to easily pass on to the next stage.

When an even flow of product is required, this device can be integrated into a system and will greatly aid in the re-distribution of product at an even rate. When post destemmer sorting is required, this device can be integrated into the sorting system underneath or downstream from the destemmer and dramatically reduces the labor required for post destemmer sorting.

The Cluster Thruster™ features include: all stainless steel construction for ease of cleaning, a programmable VFD (Variable Frequency Drive) for a complete range of speed control with an optional remote pendant control, an integrated juice pan, a removable directional wedge wire sorting screen option, and a removable MOG collector option.



WARNING

Always ensure that ALL personnel are free and clear of the equipment prior to and during operation. Always power down and let the unit come to full and complete stop then disconnect the power prior to performing service or maintenance on the unit.

INSTALLATION AND INITIAL START UP

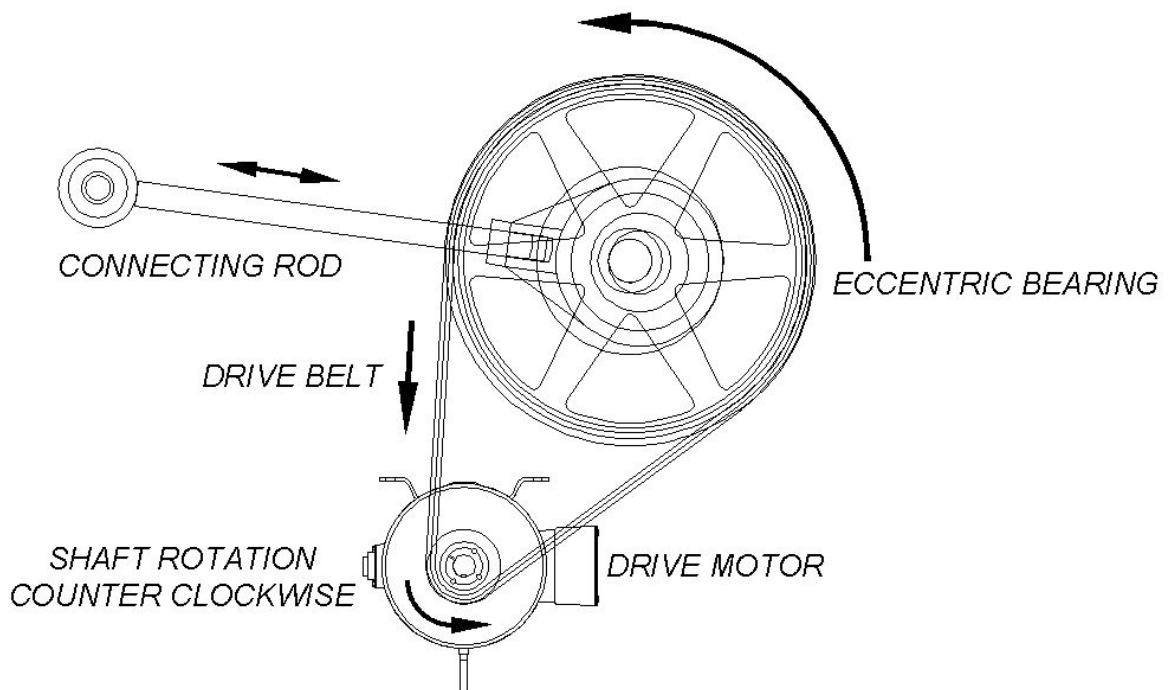
WARNING

Prior to start up, disconnect the power to the unit and inspect the inside of the control panel for accumulated water or moisture. Ensure that the desiccant packs are dry and that all components are free from electrical short circuit. NEVER open the panel with the unit connected to power.

1. Visually inspect the unit for any signs of damage, cracks, fatigue or loose components. Any damaged components should be repaired or replaced immediately. See P&L Specialties' contact information on the last page of this manual.
2. Position and level the unit to ensure safe and stable operation.
3. Secure the unit to the floor with the appropriate wedge anchors at all leg locations.
4. Connect the unit to the appropriate power source (voltage/phase).
5. Set the ON/OFF switch to the ON position.
6. Set the START/STOP switch to the START position and slowly increase the speed.
7. Adjust the speed control so that the unit is operating properly.

The function of the unit is designed specifically to even the product flow by leveling it. If the performance is poor then it may become necessary to ensure that the motor and eccentric bearing are rotating in the proper direction.

To do so remove the drive belt cover and verify by referring to the figure below.



If the rotation is not as indicated, correct by swapping the two power leads at the drive motor junction box.

OPTIONAL SORTING SCREENS

The unit may be equipped with one or more optional wedge wire sorting screens. The screens may be installed in either direction. A typical installation has the slots running parallel to the flow of product. As an option the screens may be rotated perpendicular to the flow. Screen orientation changes the characteristics of the sortation process. Typical sorting screens have a 3/16" slot opening. Other sizes are available upon request. (See page 7 for installation details)

OPERATION

Adjust the speed control as needed to increase or decrease the flow of product.

SERVICE AND MAINTENANCE

WARNING

Always ensure that ALL personnel are free and clear of the equipment prior to and during operation. Always power down and let the unit come to full and complete stop then disconnect the power prior to performing service or maintenance on the unit.

WARNING

Never power wash the control panel or pendant control.

Visually inspect the unit daily for any signs of damage, cracks, fatigue or loose components. Any damaged components should be repaired or replaced immediately. See P&L Specialties contact information on the last page of this manual.

Daily: Remove any accumulated or loose material from the unit.

Monthly: Lubricate ALL bearings using Shell Alvania EP2 (NLGI #2) or equivalent grease.

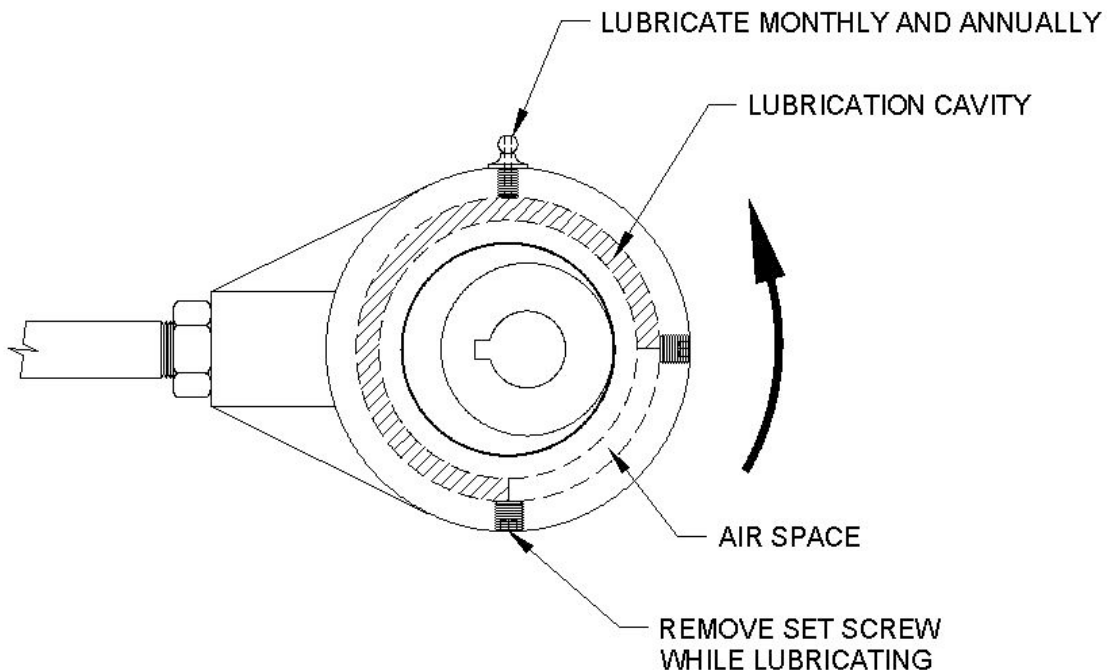
ECCENTRIC BEARING MAINTENANCE

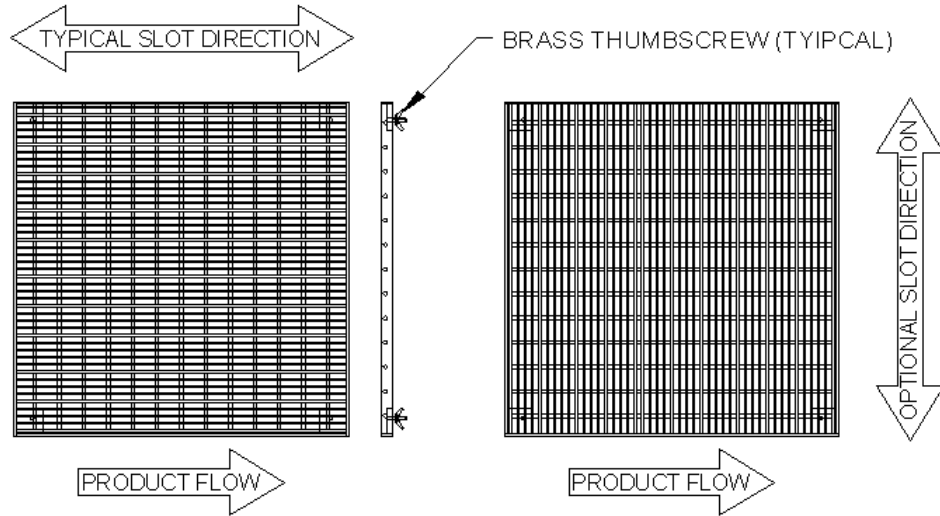
Monthly lubricate the eccentric bearing using Shell Alvania EP2 (NLGI #2) or equivalent grease.

1. Locate the bearings to be serviced.
2. Add a small amount (1 oz.) of lubricant at the grease fitting. Applying too much lubricant in the bearing will cause the bearing to overheat and cause more damage than applying too little.

At the end of the season it is recommended that a large amount of lubricant be pumped through the bearings' felt seal to force out any water that may have been forced in by the cleaning process.

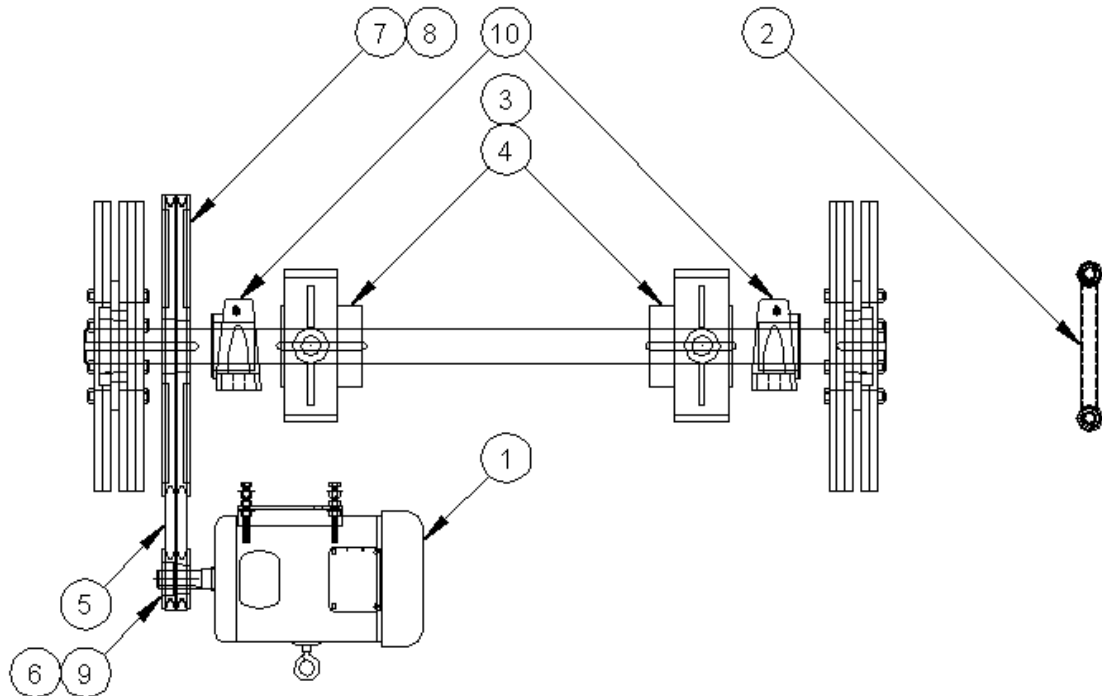
1. Remove the bottom set screw and pump the lubricant in until clean lubricant discharges through the lower set screw opening.
2. Carefully remove a small amount of lubricant using a sump gun to create a space for expansion when the bearing becomes heated.
3. Reinstall and tighten the set screw.





To service the screens:

1. Disconnect the power to the unit
2. Remove the four (4) brass thumbscrews on the bottom side of the screen
3. Lift the screen up and out from the top side of the pan
4. Re-insert the screen
5. Replace and tighten the thumbscrews



PARTS LIST (See previous page for diagram)

ITEM 1

Drive Motor - 5 HP - 1750 RPM – 1 1/8" diameter shaft - 184T frame
3 Phase, 208-230/460 Volt
Full Load Amperage - 15.4-14.2 / 7.1

ITEM 2

Shaker Hangers - 9" long

ITEM 3

Eccentric Bearing – 1/2" throw - 1" travel – 2-3/16" shaft

ITEM 4

Connecting Rod with bushing – 1-1/4" diameter rod - 23" long rod

ITEM 5

B-Section V-Belt w/ 70.8" datum length

ITEM 6

Taper Lock Integral Key Type Bushing – 1-1/8" bore

ITEM 7

Taper Lock Keyway Type Bushing – 2-3/16" bore

ITEM 8 Pulley 18.75" OD – 2 groove

ITEM 9

Pulley 3.75" OD – 2 groove

ITEM 10

Pillow Block Bearing – 2-3/16" diameter bore

ITEM 11 (Not pictured)

(SMVector SERIES VFD) Control Panel w/ Pendant- 5 HP
NEMA 4X (IP65) Indoor/Outdoor



P&L SPECIALTIES

MANUFACTURING THE FINEST STAINLESS STEEL EQUIPMENT

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