Shibuya Hoppmann™

# Model EH Series Horizontal Discharge Elevating Prefeeder

## ANSI/Metric Installation & Maintenance Manual

Refer all servicing to qualified personnel.

This manual is intended for use by qualified mechanics and electricians who install or service the Hoppmann EH Series Prefeeders.

Record your serial plate information here for future reference ➲

| Model Number | Serial Number/Date |
|---|---|
| | |



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# Quick Start

## Thank You for Choosing Shibuya Hoppmann

Thank you for purchasing a system from Shibuya Hoppmann. Our prefeeders, feeders, and automated systems possess an industry-wide reputation of excellence for their quiet and rapid handling of parts, ease of use and low maintenance requirements.

## About This Manual

### Assumptions

Shibuya Hoppmann Corporation assumes that all procedures contained in this manual will be performed by a qualified mechanic or electrician who must install or service the EH Series prefeeders. All procedures in this manual should be performed by qualified personnel or under their direction.

### Models Covered

This manual covers the EH Style Horizontal Discharge, Elevating Prefeeder. There are different variations of this prefeeder, based on elevator extensions and hopper extensions. If you are unsure of your exact model, locate the inventory number on the serial plate of your prefeeder.

## Before You Start

### Tools You Will Need

The EH Series prefeeders are both "soft ANSI" and metric construction, meaning that metric threads and hardware are used throughout. The prefeeders require metric tools for repair and/or adjustment.

**Equipment Improvements & Document Revisions Notice**

Shibuya Hoppmann Corporation (SHC) continually improves its products, and reserves the right to change or discontinue specifications and designs shown in this manual without notice and without incurring obligation. Occasionally older versions of equipment may have different spare parts/replacement parts requirements. Please be sure to contact SHC before ordering specific parts for older style prefeeders. SHC has made every effort to verify the information contained in this manual, but reserves the right to correct any error at the time of the manual's next revision. 4.2015.

# Important - Read First

## Caution Symbols & Messages

**Caution Symbols and Messages**

Caution symbols and messages in this manual call attention to hazardous voltages, moving parts, and other hazardous conditions. Please understand what the different warning labels and indicators refer to and how to avoid possible injury and/or damage to personnel and equipment.

The lightning bolt symbol serves as a caution to denote possible personal injury and/or damage to the equipment due to electrical hazards.

The exclamation point symbol serves as a caution to denote possible personal injury and/or damage to the equipment.

## Danger - Electrical/Voltage Hazard

The voltages in this system can cause death or serious injury. **Service should be performed only by qualified service personnel.** Read the safety precautions in Chapter 2 before operating or servicing this system, including any Lockout/Tagout procedures.

## Danger - Mechanical Hazard

To reduce the risk of injury from moving parts, keep all safety covers in place, secure loose clothing, and wear safety glasses or other protective eye wear when operating machine.

To reduce the risk of injury from moving parts, padlock and tag the main electrical and pneumatic disconnects before adjusting or replacing change parts or performing mechanical maintenance. Ensure that power is off and cannot be reactivated accidentally.



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# Description & Specifications

# 1

## The EH Series Prefeeder: An Overview

**Function**

The EH Series Horizontal Discharge, Elevating Prefeeders are designed to load parts into a feeder or other equipment for singulation and/or orientation. The supply hopper capacity ranges from 8 cubic feet (EH-08) to 50 cubic foot (EH-50).

Parts are loaded into the hopper at floor level. The product is then gently raised out of the hopper using a modular, plastic cleated chain to vertically and then horizontally transport the parts to the recipient feeder bowl or other equipment on demand of a bowl level sensor. This prefeeder allows the discharge to be closer to the bowl, helping to eliminate the potential to scuff or scrape parts while being able to reach over existing equipment. Refer to Figure 1-1 for a diagram of the various parts of an EH prefeeder.

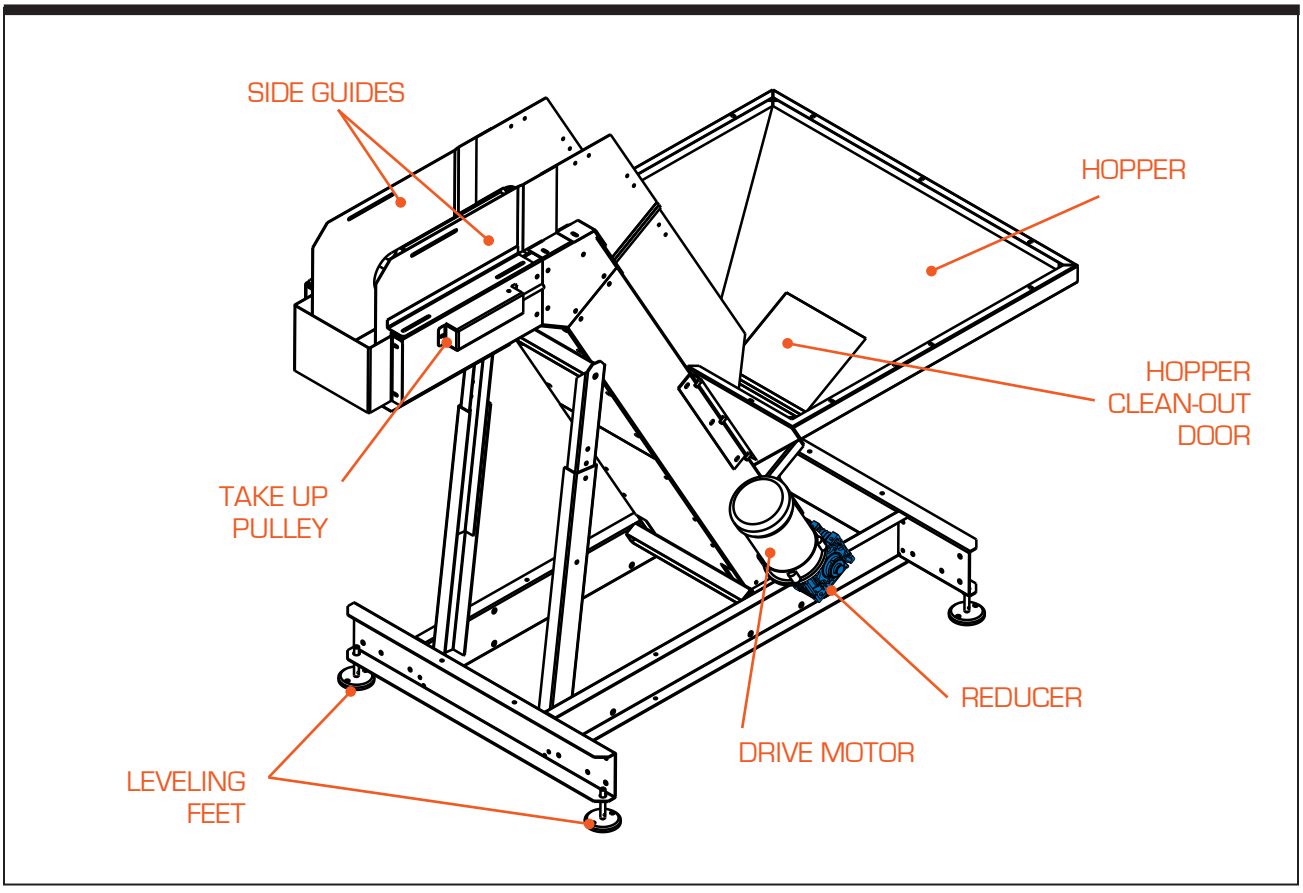


Figure 1-1. EH Series Elevating Prefeeder (EH-08 Shown for Clarity)

# Specifications of the EH-08/15/25 Horizontal Discharge, Elevating Prefeeder

**Standard Features**

The EH series Prefeeders are standard with stainless steel exterior construction, modular plastic chain, hopper cleanout door, elevator and hopper covers, and a one piece formed hopper (for the 8 cubic foot capacity prefeeder).

**Optional Features**

The prefeeders can be modified to include: elevator extensions, continuous welded seams on the EH-15 and EH-25, washdown motors, NEMA 1 encased controller, pneumatic hopper agitator or casters.

**Specifications**

Please refer to the tables below for EH Series specifications:

| Specifications | DC | AC |
|---|---|---|
| Motor Size | 1/3hp | 1/3hp |
| Motor Frame Size | 56C | 56C |
| Supply Voltage | 90VDC | 230/460 VAC |
| Average Belt Speed | 35 ft/min | 35 ft/min |
| Cleat Height (Nominal) | 2" [1] | 2" |
| Cleat Pitch | 6" | 6" |
| EH-08 Hopper Capacity | 8 $ft^3$ | 227 liters |
| EH-15 Hopper Capacity | 15 $ft^3$ | 425 liters |
| EH-25 Hopper Capacity | 25 $ft^3$ | 708 liters |

Table 1-1. EH-08/15/25 Specifications

[1] Optional 1" cleat height available.

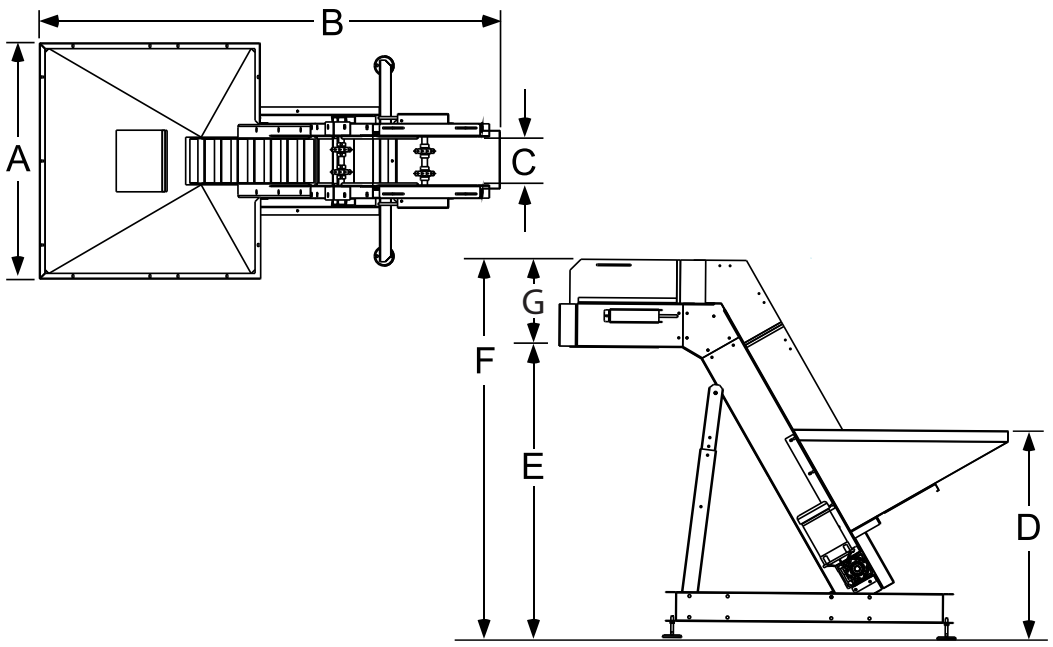


Figure 1-2. EH-08/15/25 Dimension Views

| Dimension Specifications | | ANSI | Metric |
|---|---|---|---|
| A | Overall Width | 42.13" | 1070mm |
| B | Overall Length | 79.11" | 2009mm |
| C | Modular Chain Width | 8" | 203mm |
| D | Hopper Load Height (EH-08) | 33.56" | 852mm |
| D | Hopper Load Height (EH-15) | 41" | 1041mm |
| D | Hopper Load Height (EH-25) | 50" | 1270mm |
| E | Discharge Height | 48.38" | 1229mm |
| F | Overall Height | 65.45" | 1637mm |
| G | Conveyor Channel Height | 7.8" ± 9.3" | 198 ± 236mm |
| Overall Weight | | ≈ 1000 lbs. | ≈ 454 kg |

Table 1-2. EH-08/15/25 Dimension Specifications

# Specifications of the EH-35/50 Horizontal Discharge, Elevating Prefeeder

**Standard Features**

The EH series Prefeeders are standard with stainless steel exterior construction, modular plastic chain, hopper cleanout door, elevator and hopper covers, and a one piece formed hopper (for the 8 cubic foot capacity prefeeder).

**Optional Features**

The prefeeders can be modified to include: elevator extensions, continuous welded seams on the EH-50, washdown motors, NEMA 1 encased controller, pneumatic hopper agitator or casters.

**Specifications**

Please refer to the tables below for EH Series specifications:

| Specifications | DC | AC |
|---|---|---|
| Motor Size | 1/3hp | 1/3hp |
| Motor Frame Size | 56C | 56C |
| Supply Voltage | 90VDC | 208-230/460 VAC |
| Average Belt Speed | 35 ft/min | 35 ft/min |
| Cleat Height (Nominal) | 2" or 3" | 2" or 3" |
| Cleat Pitch | 10" | 10" |
| EH-35 Hopper Capacity | 35 $ft^3$ | 991 liters |
| EH-50 Hopper Capacity | 50 $ft^3$ | 1416 liters |

Table 1-3. EH-35/50 Specifications

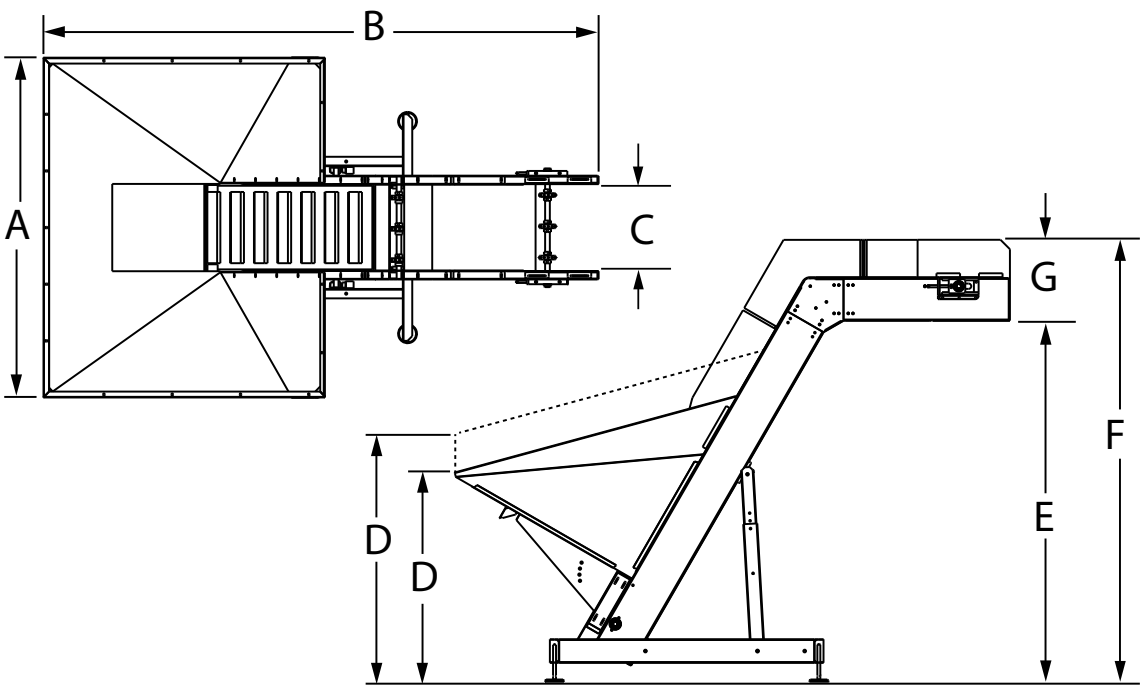


Figure 1-3. EH-35/50 Dimension Views

| Dimension Specifications | | ANSI | Metric |
|---|---|---|---|
| A | Overall Width | 72" | 1829mm |
| B | Overall Length | 117.62" | 2986mm |
| C | Modular Chain Width | 17.72" | 450mm |
| D | Hopper Load Height (EH-35) | 44.37" | 1127mm |
| D | Hopper Load Height (EH-50) | 50.00" | 1270mm |
| E | Discharge Height | 85.54" | 2173mm |
| F | Overall Height | 93.64" | 2379mm |
| G | Conveyor Channel Height | 15.1" ± 17.12" | 198 ± 236mm |
| Overall Weight | | ≈ 2500 lbs. | ≈ 1134kg |

Table 1-4. EH-35/50 Dimension Specifications

# Notes

# Safety Precautions

2

## Safety Precautions

This prefeeder has been designed to be as safe as possible for operators. However, even well-built machines can be installed or operated in a hazardous manner. Safety precautions must be observed by users.

## Specific Warnings & Cautions

**Turn Power Off!** Before servicing the prefeeder, make sure you have turned off compressed air and electrical power in a way that prevents accidental reactivation. Padlock, and clearly tag, the appropriate electrical and pneumatic disconnects. Lockout/ Tagout procedures are covered in the United States Code of Federal Regulation (CFR), Title 29, Part 1910.147, "The Control of Hazardous Energy."

**Dress Properly.** To reduce the risk of injury from moving parts, secure loose clothing. Do not wear jewelry or neckties near the prefeeder. Wear safety glasses or other protective eye wear when operating or performing maintenance on the prefeeder. Never place hands or tools in the prefeeder while it is operating.

**Install Safety Covers.** Make sure the prefeeder remains safe to operate. Be sure all safety covers have been installed before returning the prefeeder to normal operations. Safety covers on the prefeeder include any covers installed by your direct supplier, as well as standard, permanent guarding.

## Operating & Maintenance: Do's & Don'ts

**Don't Install the Prefeeder Near Flammable Gas, Vapor or Dust.** You must install additional approved explosion-proof or dust-ignition-proof enclosures if installation occurs under these conditions. Without such additional enclosures, normal sparking of the brushes inside the (DC) motor could ignite flammable gas, vapor, or dust.

**Do Not Overfill The Hopper.** Overfilling the hopper can cause parts to jam inside the hopper, and may damage the prefeeder belt and associated guides.

**Do Use the Same or Identical Mounting Screws if Replacing the Motor.** If longer mounting screws are used, they may come into contact with parts of the motor that conduct electricity.

**Ensure Air is On.** Before turning on the system, be sure air is on, or parts may jam. This only applies to systems operating with air.

**Do Not Speed Up Prefeeder.** Never raise the prefeeder speed to increase the delivery rate. Too many parts in the feeder may prevent it from operating properly.

**Avoid Solvents.** Do not use solvents for cleaning unless specified, as they may damage surfaces, causing jams or lowered output rates.

**Avoid Routine Use of EMERGENCY STOP or E-STOP.** Use of EMERGENCY STOP (E-STOP) to shut down the system may cause jams or misoriented parts.

# Installation & Start-Up

# 3

## If the Prefeeder is Already Set Up

If you've bought a prefeeder as part of a Shibuya Hoppmann feeder system, then your direct supplier will have performed all the procedures in this chapter. However, you will still need to:

- ❒ **Position Your Prefeeder.** Follow the equipment layout drawing provided by your direct supplier.
- ❒ **Connect Electrical Wiring.** Follow as-built electrical diagrams provided by your direct supplier.
- ❒ **Make Pneumatic Connections.** If your prefeeder has a hopper agitator, your direct supplier will give you setup specifications.
- ❒ **Install & Test the Rest of the System.** Installation is complete.

**Note: If the prefeeder is drop-shipped to your location, follow the procedures in this chapter to finish setting up the prefeeder.**

## Unpacking and Inspection

**Step 1.** **Inspect and Unpack the Crate.** Remove packing materials from sensors, covers and/or moving parts. Make a visual check to be sure parts have not come loose during shipping. If you find any concealed damage, call the shipping carrier and your direct supplier immediately. **Do not attempt to fix the problem yourself unless told to do so by your direct supplier.**

**Step 2.** **Record Serial Number of Prefeeder.** If you have not already done so, record the prefeeder's model and serial number on the front of this manual. This information is helpful when ordering replacement parts or service.

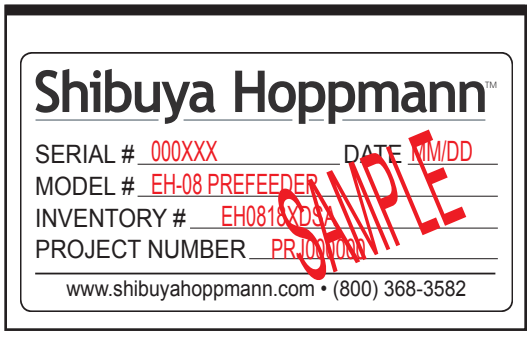


Figure 3-1. Sample Serial Plate

## Physical Setup

**Step 1.** **Position the Prefeeder.** Place the prefeeder as shown on the equipment layout drawing provided by your direct supplier.

**Step 2.** **Position the Feeder.** If you are using a Shibuya Hoppmann Centrifugal Feeder, position the prefeeder so discharged product falls halfway between the center and the inside radius of the bowl (opposite from the point where product loads onto the rim for qualification—refer to Centrifugal Feeder manual). Avoid positioning the prefeeder in a way that allows product to bounce up onto the rim of the bowl and disturb parts that are already oriented. If you are not using a Shibuya Hoppmann Centrifugal Feeder, follow the equipment layout drawing provided by your direct supplier, or the prefeeder may not operate correctly. Level the unit by adjusting the leveling feet and tighten the locknuts.

**Step 3.** **Connect Power and Air.** Connect the prefeeder to power and compressed air (if applicable). If your prefeeder has a hopper agitator, your direct supplier will provide you with setup specifications.

## Installing Hopper Extensions

Hopper extensions can be added to the EH-08 (to create a 15 or 25 $ft^3$ hopper) or to the EH-35 (for a 50 $ft^3$ hopper.) When installing hopper extensions, be sure that the prefeeder is powered off, and that the electrical system is locked out and tagged out.

**Step 1.** **Remove Any Existing Safety Covers From The Hopper.** Keep all the hardware for the safety covers to reinstall the covers once the extension has been installed.

**Step 2.** **Remove Elevator Side Guides Hardware (as necessary).** The side guides of the elevator are held in place by hex head screws. Based on the size hopper extension you are installing, remove the corresponding hardware on the side guides. When you install the extension, you will reuse the same hardware to attach the extension to the side guides.

**Step 3.** **Align New Hopper Extension.** The hopper extension is a welded, one-piece unit that fits atop the existing hopper. Align the extension, using the predrilled holes in the extension and the existing hopper as guides. Once aligned, use the hardware provided with the extension to secure it into place atop the base hopper.

**Step 4.** **Reinstall Side Guide Hardware & Safety Covers.** Reinstall all side guide screws (through new hopper extension holes and side guide holes). Reinstall all safety covers (if necessary).

## Installing Elevator Extensions

When adding elevator extensions, the prefeeder's higher center of gravity may cause it to tip. **Before installation, take necessary steps to stabilize the prefeeder. To avoid possible injury, have someone assist you by supporting the head section during removal and installation.**

| Elevator Extension Reference Chart | | | | |
|---|---|---|---|---|
| Prefeeder Variations | Extension Kit(s) Used | Overall Height | Overall Length | Discharge Height |
| STANDARD | No Extension | 64.45" | 79.11" | 48.38" |
| With 12" Extension | 12" Extension Kit | 74.84" | 85.04" | 58.77" |
| With 18" Extension | 18" Extension Kit | 80.03" | 88.11" | 63.97" |
| With 24" Extension | 24" Extension Kit | 85.23" | 91.11" | 69.17" |
| With 30" Extension | 18" kit + 12" Extension Kit | 90.43" | 94.04" | 74.36" |
| With 36" Extension | 36" Extension Kit | 95.62" | 97.11" | 79.56" |
| With 42" Extension | 24" kit + 18" Extension Kit | 100.82" | 100.11" | 84.76" |
| With 48" Extension | 24" kit + 24" Extension Kit | 106.02" | 103.11" | 89.95" |
| With 54" Extension | 54" Extension Kit | 111.21" | 106.04" | 95.15" |
| With 60" Extension | 36" kit + 24" Extension Kit | 116.41" | 109.11" | 100.34" |
| With 66" Extension | 54" kit + 12" Extension Kit | 121.60" | 112.04" | 105.54" |
| With 72" Extension | 36" kit + 36" Extension Kit | 126.80" | 115.11" | 110.74" |
| With 78" Extension | 54" kit + 24" Extension Kit | 132.00" | 118.04" | 115.93" |
| With 90" Extension | 54" kit + 36" Extension Kit | 142.39" | 124.04" | 126.32" |
| With 108" Extension | 54" kit + 54" Extension Kit | 157.98" | 133.04" | 141.91" |

Table 3-1. Elevator Extension Reference Chart

**Step 1.** **Disconnect Power and Lockout/Tag Out the Prefeeder.** If power has already been supplied to the prefeeder, first lock out and tag out the power supply, then disconnect the wiring to the drive motor (undo the nut at the base of the motor connection box and disconnect wiring).

**Step 2.** **Remove Elevator Channel Side Guides/Covers.** Located on the neck of the prefeeder's elevator are side guides that overlap the chain (see Figure 3-2). Undo the bolts that holding the side guides in place, and remove the guides to access the chain (belt).

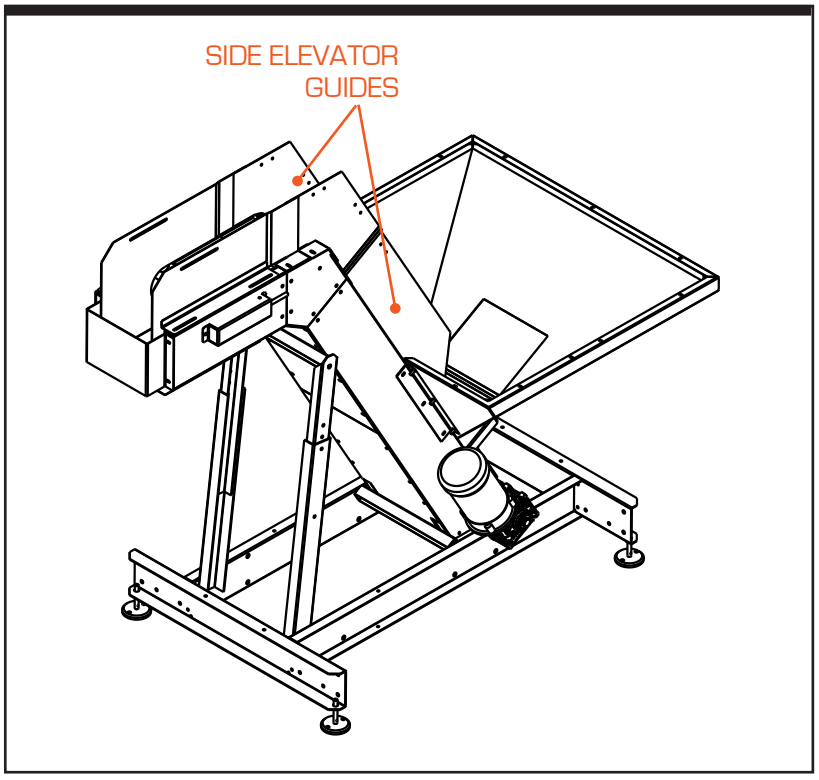


Figure 3-2. Side Guides on Elevator of Prefeeder

**Step 3.** **Remove Chain Lacing Pin.** To install an elevator extension to prefeeder, first remove the chain (belt) by accessing the chain in the elevator portion of the prefeeder (or neck area). On the side of the chain you will see pins that hold each section of the chain together. Using a "non-bouncing" mallet and a punch, remove the plastic pin from between one section of the chain teeth (see

Figure 3-3). Position the punch on the end of the plastic pin and tap the pin loose, removing it. The chain teeth will separate allowing the chain to be removed from the prefeeder head and neck channel. Once the pin has been removed, slide the upper portion of the belt up the elevator channel and out the dump chute of the prefeeder's head. You do not need to remove the belt completely, as it is easier to re-attach the belt once the extension has been added.

**Step 4.** **Remove Channel Cover.** Located on the underside of the prefeeder's elevator is a cover over the belt return (Figure 3-4). Undo the four hex bolts that hold the upper cover plate in place, and set the plate aside. Now pull the belt down from the prefeeder's head, and let the belt hang.

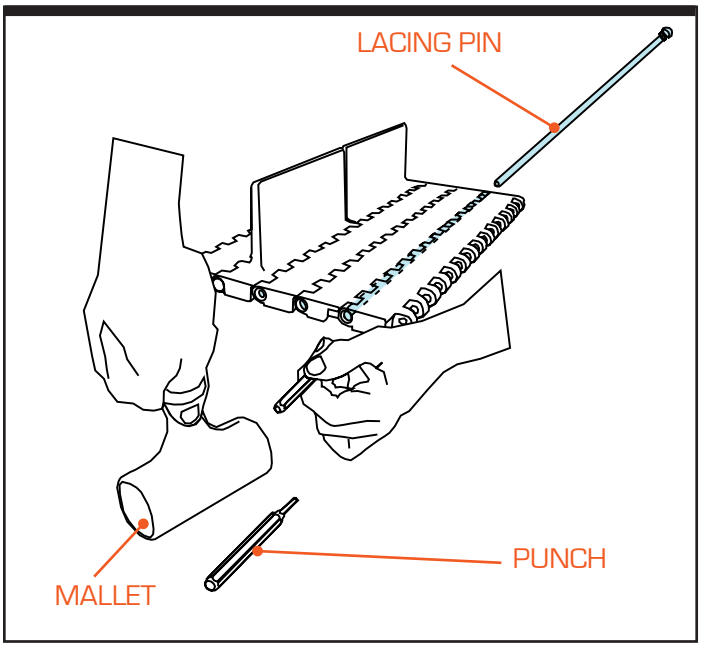


Figure 3-3. Removing Chain Linking Pin with Mallet

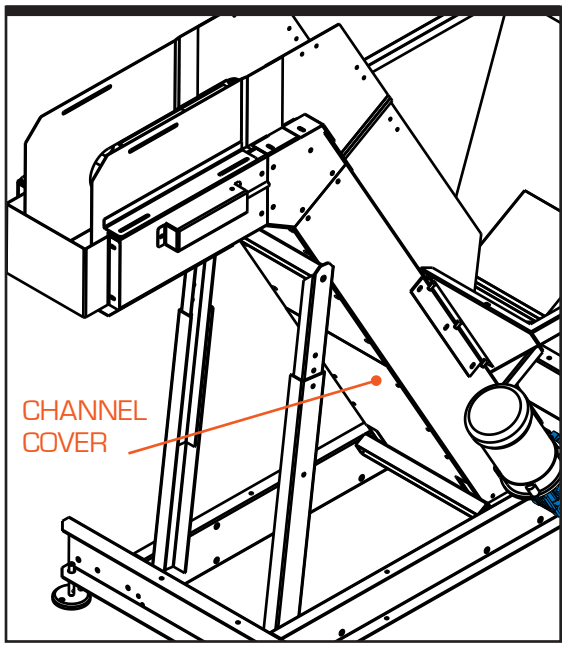


Figure 3-4. Channel Cover

**Step 5.** **Remove Prefeeder Head.** Remove the side guide bolts on the prefeeder head. This frees the two side head guides (left hand and right hand) which help guide the belt. Set these exit guides to the side. Remove any hardware on the side guides from the head portion of the prefeeder, and set aside. You will not be removing

the side guides on the channel, just disconnecting them. Then remove the two bolts on both sides of the prefeeder channel or neck and set aside.

The head of the prefeeder should be supported during this removal process. Guide the head up and off the neck of the prefeeder, allowing the belt to slide through the chute area, remaining "attached" to the prefeeder. Set the head to the side.

**Step 6.** **Install Extension.** Attach new splice plates to the extension channel (inside), hand-tightening the bolts prior to installing the extension on the prefeeder. Then lift the extension up slide it onto the prefeeder neck, securing it with hand-tightened hex head bolts (2). Before tightening the bolts, align the seams of the existing channel and the new extension as closely as possible. Tighten the extension channel bolts and splice plate bolts at this time.

**Step 7.** **Re-Install the Prefeeder Head.** Reinstall the head of the prefeeder over the new extension, aligning the head's splice plates with the holes on the extended neck. Hand tighten the bolts, then tighten them once the pieces are aligned.

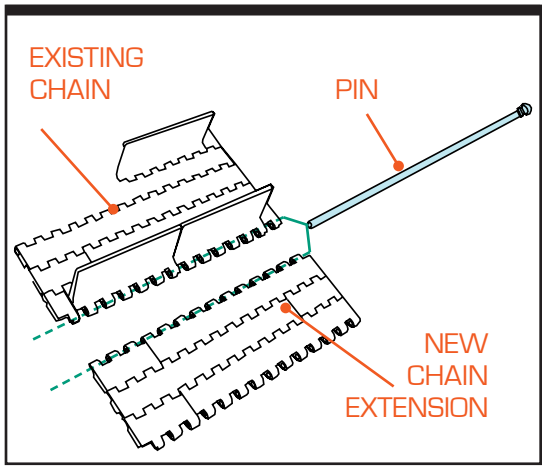

Figure 3-5. Reinstalling New Chain Extension

**Step 8. Re-Install LH/RH Exit Guides and New Side Guides.**
Replace the left hand and right hand exit guides (removed in Step 4) and align the new side guide extensions along the channel, using the holes provided in the channel. Once aligned, attach with the new hardware provided with your extension kit.

**Step 9. Attach New Belt Extension.**
Both ends of the new extension chain (belt) are should be attached to the existing chain. Attach one end of the chain extension to the part of the chain hanging out of the prefeeder's channel, using the pin to lock both ends together (Figure 3-5). Feed the belt back through the neck of the prefeeder

and through the head, letting it flow down the elevator of the prefeeder towards the hopper. Attach the other end of the belt extension to the end of the belt rising up from the base of the hopper. It is easier to attach the chain pins along the neck portion of the elevator. Retighten the take-up pulley to apply some tension to the chain (refer to Step 12 for more information on tracking/adjusting your chain).

**Step 10.** **Install the Elevator Covers.** Reinstall the elevator cover and the new elevator cover extension on the underside of the prefeeder.

**Step 11.** **Reconnect Power.** Restore power to the motor.

**Step 12.** **Adjust Tracking.** Turn the prefeeder on and set to a slow speed to observe tracking of the chain. Run a new chain at least several complete revolutions before adjusting the tracking. If the chain pulls to one side or if the chain moves from side to side, adjust the take up rod on the side to which the chain is pulling (see Figure 3-6). Tensioner brackets (take up pulleys) are located on either side of the prefeeder's base.

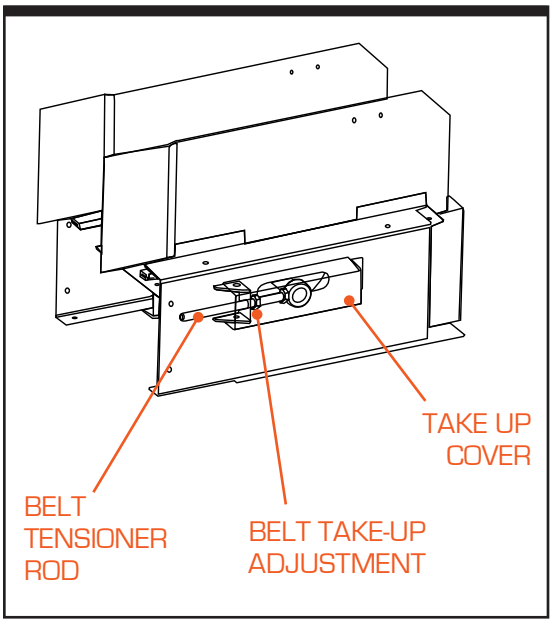


Figure 3-6. Tracking Adjustment of Chain

**Do not overtighten the chain.**

The elevator extensions added call for greater slack in the chain. This is normal, and should not be adjusted by overcompensating for the slack. You may apply too much tension and destroy the teeth and chain integrity. For more information on belt tracking, refer to "Installing Chains and Chain Extensions" further in this chapter.

A base extension support kit may be purchased from Shibuya Hoppmann Corporation, however, they may need to be customized for your prefeeder. Please contact Shibuya Hoppmann Corporation for additional information on this frame base kit.

## Replacing/Installing Chains & Chain Extensions

**Step 1.** **Disconnect Power and Lockout/Tag Out the Prefeeder.** Lockout and tag out any power supply to the prefeeder.

**Step 2.** **Remove Elevator Side Guides and Install Chain.** Remove any side guides (see Figure 3-3) on the elevator and install the chain by feeding it through the prefeeder's hopper (downward), up the underside of the elevator channel, through the head, and back down the elevator channel towards the hopper, cleats facing up. The chain teeth on both ends of the chain should meet in the neck or elevator area of the prefeeder). You may need to remove the elevator covers (underside of the prefeeder channel) to feed the chain. Once the chain is completely fed into the prefeeder, and the holding pin installed between the two ends (teeth) of the chain, replace the side guides and elevator covers.

**Step 3.** **Tension Chain.** Use the take up brackets on the base of the prefeeder (see Figure 3-6 to remove excessive slack in the chain before beginning tracking.)

**Do not overtighten the chain!** When tightening the take up bracket, apply minimum tension necessary to take up slack and properly track the chain. If you apply too much tension, you can easily destroy the belt lacing or decrease the life of the pulley bearings.

**Step 4.** **Turn on Power and Adjust Tracking.** Restore power to the prefeeder and turn it on, setting it to a slow speed to observe tracking of the chain. Run a new chain at least several complete revolutions before adjusting the tracking. If the chain pulls to one side or if the chain moves from side to side, adjust the take up bracket on the side to which the chain is pulling.

**Step 5.** **Adjust Tracking Again.** Run the prefeeder for at least five (5) minutes. Continue to adjust tracking until the prefeeder runs consistently without tracking problems.

**Step 6.** **Adjust Tensioning.** A properly tensioned belt will not slip with a hopper full of product. **To avoid injury, turn off the prefeeder before checking tension.** Tighten or loosen the tension equally to ensure proper tension. Tighten the locknuts of the tension rod.

**Do not set tools where they can fall into the hopper or any moving parts.**

**Do not overtighten the belt. The elevator extensions added call for greater slack in the belt. This is normal, and should not be adjusted by overcompensating for the slack. You may apply too much tension and destroy the belt lacing.**

## Level Sensor

The most common method of controlling the prefeeder is with a level sensing device. This device monitors the down stream equipment and tells the prefeeder when to supply product by activating the motor on the prefeeder for a duration of time. The sensor keeps the level of product, from the prefeeder to the equipment, relatively constant by controlling the amount of product metered into the receiving equipment. For further information contact Shibuya Hoppmann Corporation, or your direct supplier.

## Establishing the Correct Prefeeder Speed

The speed of the prefeeder should be set so that the minimum amount of product is in the feeder (or other equipment), and the required rate is still obtained. You may have to adjust the settings, and count product to find the optimum speed.

## Wiring Schematics

Figure 3-7 shows the wiring diagram for the EH Series Horizontal Discharge, Elevating prefeeders with AC Drives.

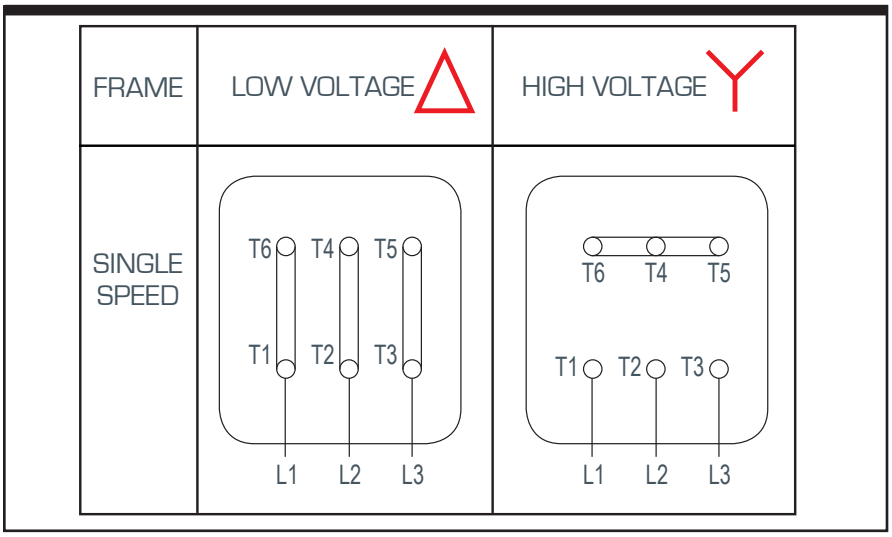


Figure 3-7. Wiring Diagram - AC Prefeeders

# Preventive Maintenance

# 4

## EH Head Assembly

The main components of the head assembly are the two take up brackets on either side of the head and an idler shaft that runs through two pulleys (the pulleys align with the chain.) Refer to Figure 4-1 for a part description of the assembly.

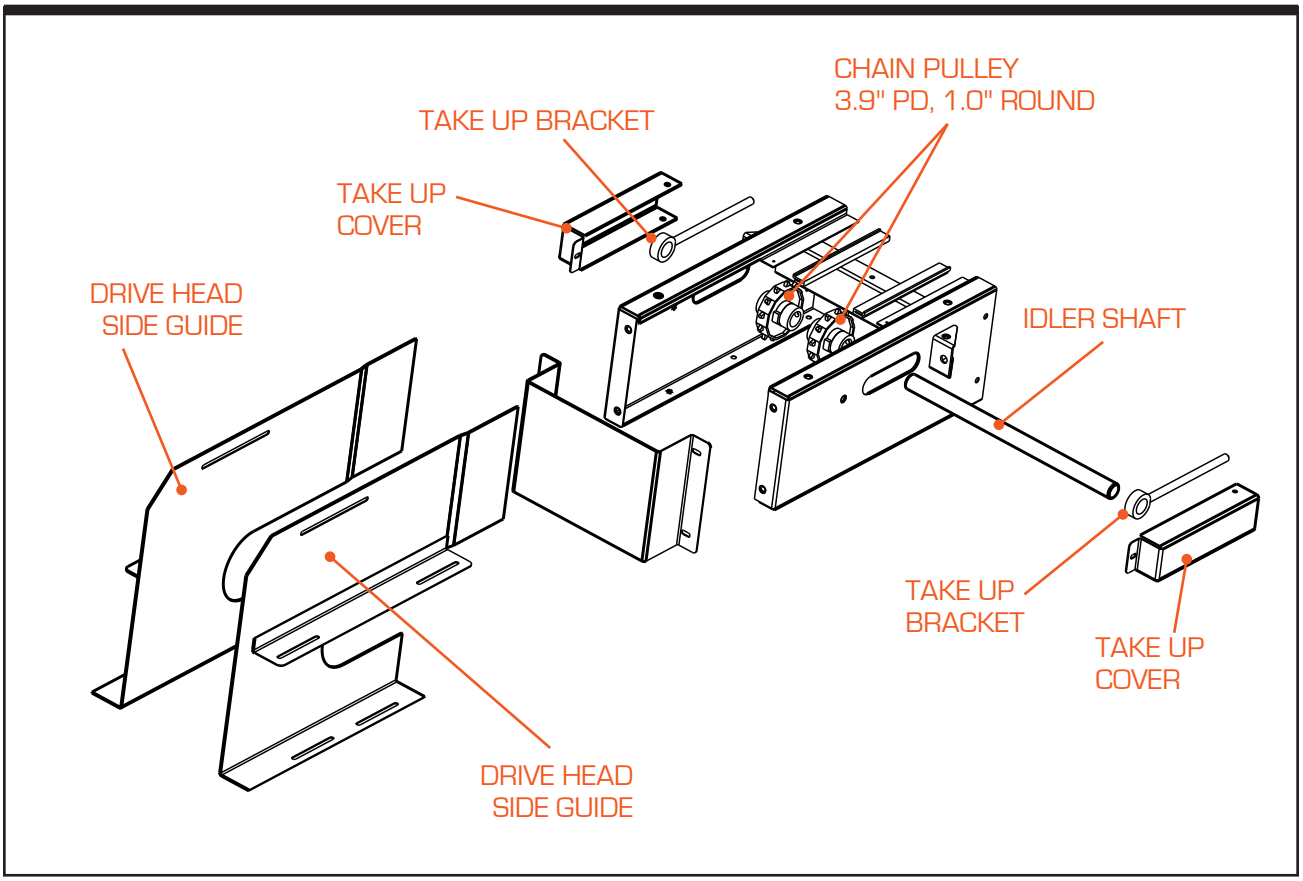


Figure 4-1. EH Series Head Assembly - Exploded View

## Elevator Base Drive Assembly

The main components of the elevator base drive assembly include the drive motor and gear reducer, a pair of flanged bearings, two drive pulleys, and the drive shaft. Each bearing assembly consists of a bearing insert (bearing plus a clamp collar) and a pair of bearing flanges. Refer to Figure 4-2 for part description. The bearing inserts are lubrication free. If a bearing requires replacement, the bearing flanges can be reused if they appear unworn and undamaged.

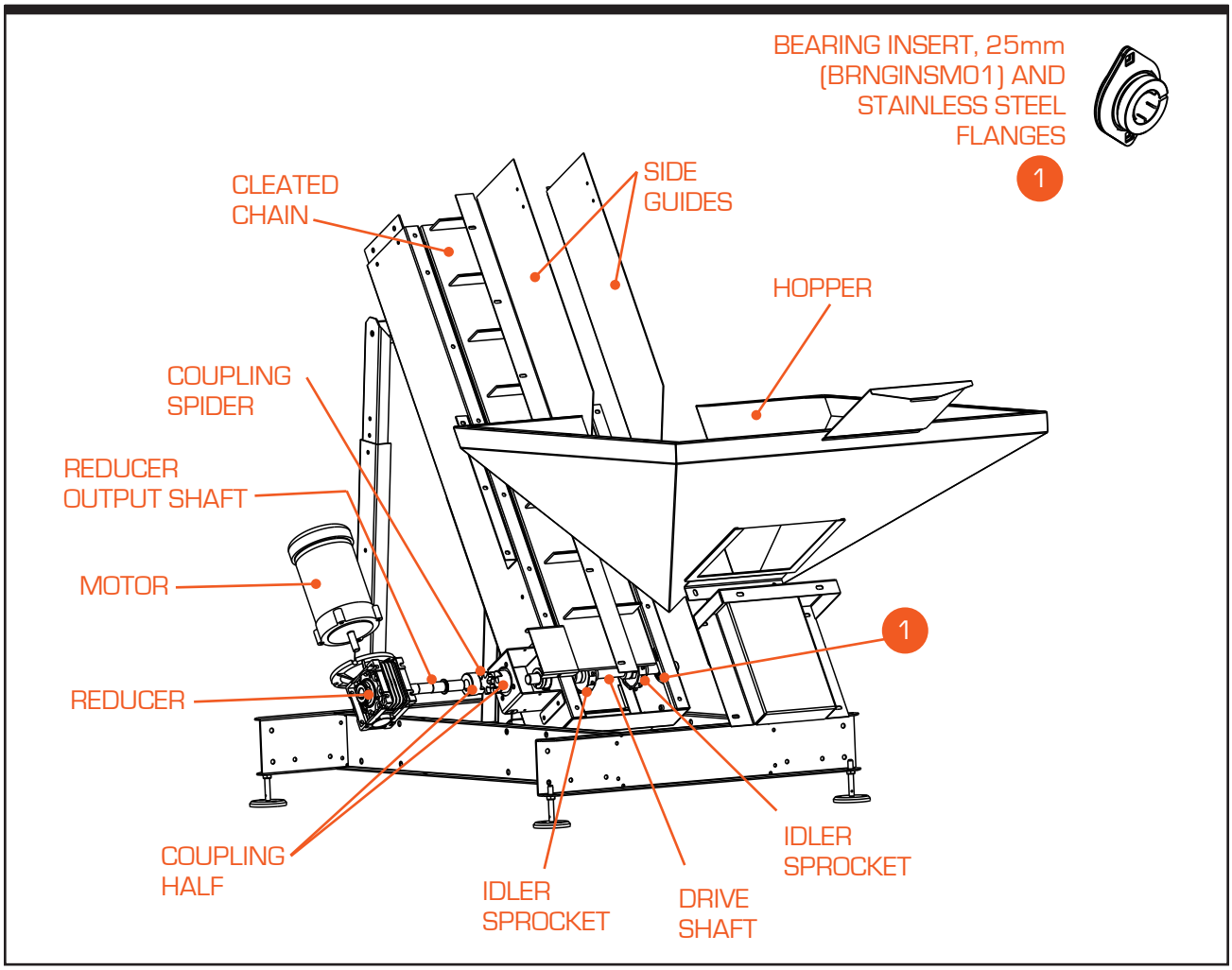


Figure 4-2. EH Elevator Base Assembly - Exploded View

## Adjusting the Torque Limiter

The torque limiter allows the drive sprocket to slip harmlessly in the event of a product jam. Reduction to the effectiveness of the torque limiter can be caused by severe humidity, severe dryness, lubricants or surface corrosion on bushings or corrosion of the drive sprocket. The torque limiter should be inspected and adjusted if the conveyor chain is slipping.

**Step 1.** **Disconnect Power.** Turn off power and air. Lockout and tag out the system.

**Step 2.** **Gain Access.** Access the torque limiter adjusting nut (see Figure 4-3). The nut is located on the outboard side of the speed reducer and is readily accessible.

**Step 3.** **Adjust the Torque Limiter.** Using the spanner wrench, loosen or tighten the adjusting nut of the Motovario reducer (see Figure 4-3). By turning the nut clockwise, you will tighten the torque limiter, decreasing slippage. By turning the nut counter-clockwise, you will loosen the torque limiter, increasing slippage. The adjustment of the torque limiter varies from application to application and should be determined by the equipment manufacturer or manufacturers representative. The general rule would be to adjust the torque limiter until the chain moves with minimum slippage when power is turned on.

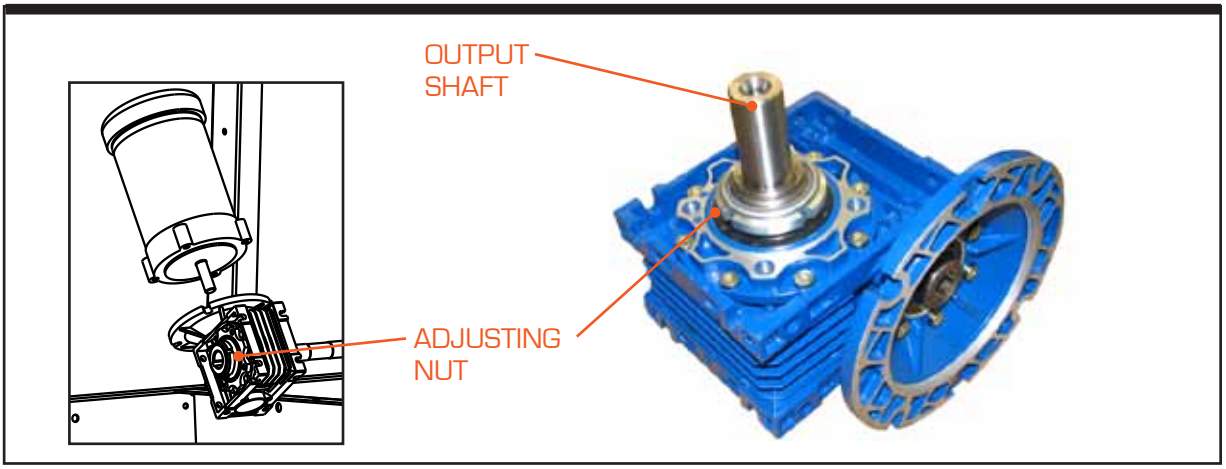


Figure 4-3. Motovario Reducer - Torque Limiter Adjustment

## Routine Cleaning

When necessary, clean the belt surface with a cloth dampened with water, or you can use a mild household cleaner. Wipe off damp surfaces with a dry, clean cloth.

The entire prefeeder can be wiped down with a clean cloth, and stainless steel cleaner may be used if needed. Do not use any type of abrasive cleanser on the equipment.

# Replacement Parts

# 5

## Replacement Parts

Replacement parts lists for the Hoppmann prefeeders are listed on the following pages. When ordering replacement parts, please reference the model name and number of your prefeeder located on the serial plate (see Figure 5-1). This helps in making sure you receive the correct replacement parts.

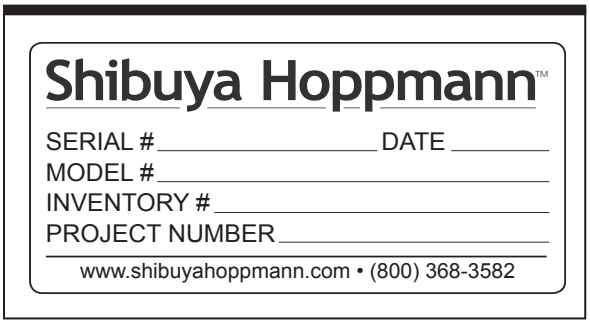


Figure 5-1. Sample Serial Plate

If you received a customized Shibuya Hoppmann system, please refer to your system's Operation Manual when ordering spares, as your prefeeder may have been altered.

Having the serial number in addition to the part number you wish to order will help us to accurately assist you in getting the correct parts. You may order your prefeeder's spare parts directly from Shibuya Hoppmann by email, phone or fax (see the contact information listed below).

Shibuya Hoppmann Spares and Service Department

- **Email**: Spares@Hoppmann.com
- **Phone**: 434.929.4746 (1.800.543.0915)
- **Fax**: 434.929.4959
- **Mail**: Shibuya Hoppmann Corporation
  Attn: Spares Department
  291 Dillard Road
  Madison Heights, VA 24572 USA
  www.ShibuyaHoppmann.com

**Notes:** Occasional product serial numbers will be preceded by a "V" or "C", which indicates the equipment has been customized for you specifically. When calling for parts, be sure to indicate if your equipment has this configuration (example: VEH0808XASA or CEH3518DSA).

## Critical EH-08/15/25 Replacement Parts

| Part Number | Description | Qty. |
|---|---|---|
| NMRL500050 | Speed Reducer, T/L, 50:1, 56C | 1 |
| MOTRP.33HP | Motor, 1/3hp, 90VDC | 1 |
| MOTRAC0033-M | Motor, 1/3hp AC, 230/460 (Motovario - Standard) | 1 |
| MOTRAC0033 | Motor, 1/3hp AC, 230/460 (Baldor - Alternate) | 1 |
| CHANEH0802 | Modular Belt, 2" Cleat | 15' |

## Recommended EH-08/15/25 Replacement Parts

| Part Number | Description | Qty. |
|---|---|---|
| M25S1202R6 | Sprocket - 12 Teeth, 3.9" PD, 1.0" RD | 4 |
| EH08000906 | Drive Shaft | 1 |
| FLNGSS1/25 | 25mm SS Flange | 4 |
| BRNGINSM01 | Bearing Assembly | 2 |
| EI08SM7002 | Take-Up Bracket | 2 |
| EI08SM7000 | Idler Shaft | 1 |
| COUPHALF07 | Coupling Half, 25mm L095 | 2 |
| COUPSPID03 | Coupling Spider, SOX | 1 |
| FOOTM16180 | Level Foot, M16 x 180mm Long, Stainless Steel | 4 |

| |
|---|
| BLUE = DC MOTOR DRIVE |
| RED = AC MOTOR DRIVE |

*Chain (belt) sizes are dependent upon each prefeeder's configuration. Extensions will alter your chain/belt requirements. Contact Shibuya Hoppmann if you have an extension on your prefeeder for the correct replacement.

## Critical EH-35/50 Replacement Parts

| Part Number | Description | Qty. |
|---|---|---|
| NMRL500100 | Speed Reducer, 100:1 | 1 |
| MOTRP.33HP | Motor, 1/3hp, 90VDC | 1 |
| MOTRAC0033-M | Motor, 1/3hp AC, 230/460 (Motovario - Standard) | 1 |
| MOTRAC0033 | Motor, 1/3hp AC, 230/460 (Baldor - Alternate) | 1 |
| CHANEH3503 | Modular Belt, 2" Cleat | 20' |

## Recommended EH-35/50 Replacement Parts

| Part Number | Description | Qty. |
|---|---|---|
| M25S1202R6 | Sprocket - 12 Teeth, 3.9" PD, 1.0" RD | 4 |
| EH35S00011 | Drive Shaft | 1 |
| FLNGSS1/25 | 25mm SS Flange | 4 |
| BRNGINSM01 | Bearing Assembly | 2 |
| EH35SM7002 | Take-Up Bracket | 2 |
| EH35S00013 | Idler Shaft (Nose Over) | 1 |
| EH35S00010 | Idler Shaft (Take Up) | 1 |
| COUPHALF01 | Coupling Half, 1" L095 | 1 |
| COUPHALF07 | Coupling Half, 25mm L095 | 1 |
| COUPSPID03 | Coupling Spider, SOX | 1 |
| FOOTM16180 | Level Foot, M16 x 180mm Long, Stainless Steel | 4 |

| |
|---|
| BLUE = DC MOTOR DRIVE |
| RED = AC MOTOR DRIVE |

*Chain (belt) sizes are dependent upon each prefeeder's configuration. Extensions will alter your chain/belt requirements. Contact Shibuya Hoppmann if you have an extension on your prefeeder for the correct replacement.

# Notes

# Warranty

# 6

## Warranty

Shibuya Hoppmann Corporation warrants that each item of its own manufacture delivered hereunder shall, at the time of delivery and for a period of twelve (12) months thereafter, be free from defects in materials or workmanship; and if any such item shall prove to be defective in material or workmanship under normal intended usage and maintenance during the warranty period, upon examination by Shibuya Hoppmann Corporation, then Shibuya Hoppmann Corporation shall repair or replace, at its sole option, such defective item at its own expense; provided, however, that the owner shall be required to ship such defective item, freight prepaid, to Shibuya Hoppmann Corporation's plant in Madison Heights, Virginia. The warranty on components not manufactured by Shibuya Hoppmann Corporation, but a part of the feeder, is limited to the warranty provided by the original manufacturer of said components to the extent, and only to the extent, that such original manufacturer actually honors such warranty.

ALL WARRANTIES HEREUNDER ARE EXPRESSLY LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE ITEMS AS SET FORTH HEREIN, AND IN NO EVENT SHALL SHIBUYA HOPPMANN CORPORATION BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES BY REASON OF ANY BREACH OF WARRANTY OR DEFECT IN MATERIAL OR WORKMANSHIP. SHIBUYA HOPPMANN CORPORATION SHALL NOT BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ITEMS WHICH HAVE BEEN SUBJECTED TO NEGLECT, ACCIDENT OR IMPROPER USE, OR WHICH HAVE BEEN ALTERED BY OTHER THAN AUTHORIZED SHIBUYA HOPPMANN CORPORATION PERSONNEL.

THIS WARRANTY IS IN LIEU OF OTHER WARRANTIES, EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXCLUDED.

# Notes

## Notes

# Shibuya Hoppmann™

## Shibuya Hoppmann offers a wide selection of products:

- Hoppmann Centrifugal Feeders™
- Prefeeders
- Continuous Motion Assembly Turrets
- Placement Systems
- Fillers and Cappers
- Conveyors
- Product Handling Equipment
- Aseptic Filling Systems
- Labelers
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- Intermittent Motion Assembly Systems
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