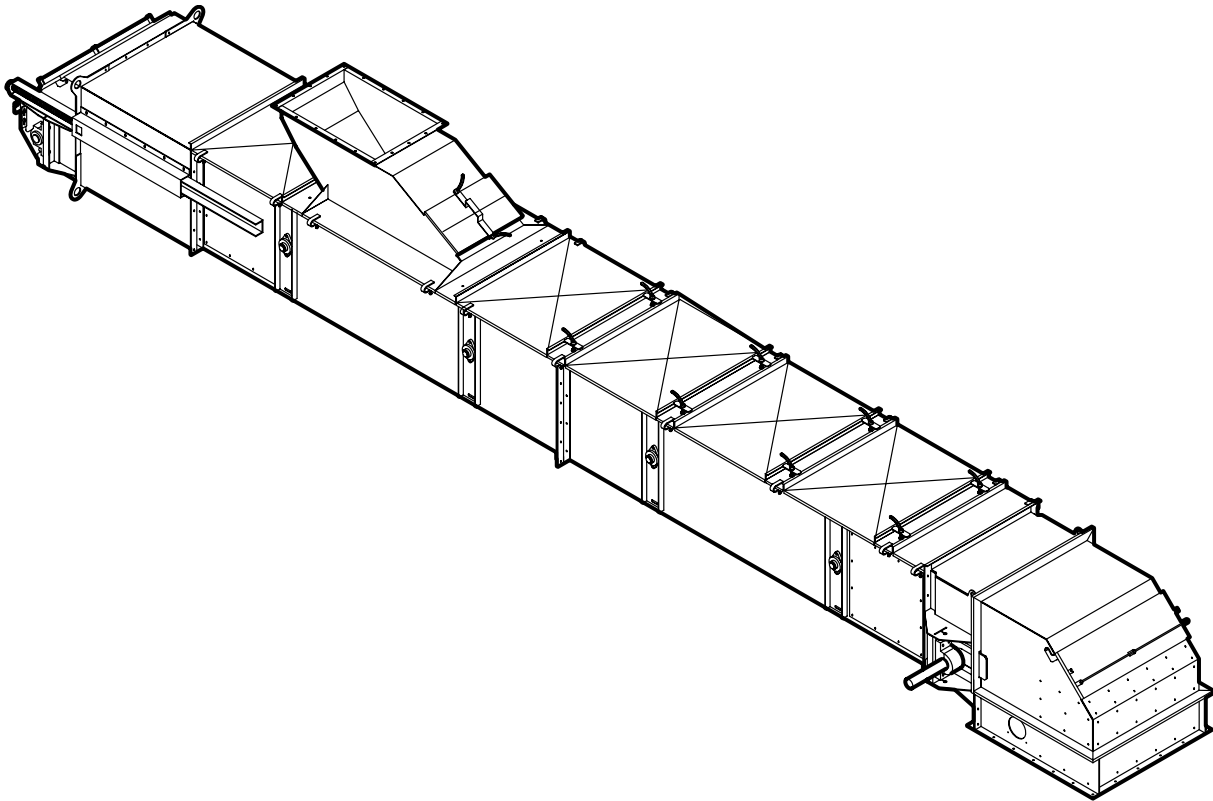


EZ-ROLL™ CONVEYOR

Installation and Operation Manual



Enclosed Belt Conveyor

Patent Pending

SCHLAGEL

Manufacturers of Innovative Materials Handling Equipment since 1957.

491 North Emerson Street * Cambridge MN 55008-1316 U.S.A.

Toll Free (800) 328-8002 FAX (763) 689-5310

Local / International (763) 689-5991 EMAIL sales@schlagel.com

TABLE OF CONTENTS

SECTION 1 - GENERAL

Pages	2	.....	Introduction
	2	.....	Use of Manual
	2	.....	Information Service
	2	.....	Safety Code
	2	.....	Uncrating and Inspection
	3-4	.....	Features and Benefits

SECTION 2 - ASSEMBLY AND INSTALLATION

Pages	5	.....	Conveyor Selection
	5	.....	Installation Preparation
	6	.....	Typical Parts List
	6	.....	Head Section
	6	.....	Tail Section
	7	.....	Trough Sections
	7	.....	Trough Cover Assembly
	8	.....	Inlets
	9	.....	Belt and Splicing
	10	.....	Skirting
	11	.....	Motor, Belt & Drive Tracking
	11	.....	Test and Finishing

SECTION 3 - OPERATION AND MAINTENANCE

Pages	12	.....	Operation
	12	.....	Safety Information
	12	.....	Trouble Shooting
	13-14	.....	Notes

INTRODUCTION

Schlagel, Inc. has had many years of experience in producing industrial quality material handling equipment.

This conveyor has been designed to give you many years of faithful service. To obtain all of the benefits built in to it, the following instructions should be read and adhered to as closely as possible during installation. These instructions are suggestions to help the controller determine the best way to install the unit.

All Equipment manufactured by Schlagel is guaranteed to be free from defects in materials and workmanship, providing no alteration or repair has been made by the user unless authorized in writing by Schlagel, Inc.

USE OF MANUAL

This manual provides installation, operation, service recommendations and replacement parts identification for Schlagel EZ-ROLL Conveyor.

Each section of the manual is fully illustrated for fast, accurate reference. It is highly recommended that this manual be read thoroughly by those who are responsible for the installation, operation and maintenance of this conveyor. Refer to the Table of Contents for the location of specific information.

As new information and equipment become available, service and parts bulletins will be issued by us. So that they will be readily available for reference, all bulletins should be inserted with this manual. This manual covers standard conveyor equipment only. For any items or special equipment not covered in this manual, please consult our service department for recommendations or instructions regarding this equipment.

INFORMATION SERVICE

Our service department will provide consultation on installation, operation and maintenance at no cost to you. Also, information from you, regarding operation or service problems that are not covered in this manual will be greatly appreciated.

Contact us for information on adding new equipment to your system or changing your installation such as: Lengthening or shortening troughs, adding or deleting inlets and discharges, horsepower and speed requirements, etc.

We keep a complete record of each customer's order. However, valuable time can be saved if the information below is provided with your inquiry. It is suggested that you obtain the model number and serial number from the Packing Slip, or on the discharge terminal end of the conveyor, and enter it below for **each** conveyor in your system.

Date of Purchase _____

Model No. _____ Serial No. _____

Write or Call: Schlagel, Inc.
491 North Emerson Street
Cambridge, MN 55008
(763) 689-5991 or 1-800-328-8002

SAFETY CODE



CAUTION



The icon shown below was proposed as a safety alert symbol by the Farm and Industrial Equipment Institute (FIEI) and approved by the American Society of Automotive Engineers (ASAE) and others for the purpose of calling attention to safety precautions which if not heeded might lead to bodily injury.

Please read instructions carefully and follow the instructions exactly wherever this symbol appears in the manual.



UNCRATING AND INSPECTION

Your conveyor has been carefully checked and packed for shipment from our factory. In the event that any parts are missing or damaged, please notify us immediately and also have the delivering carrier note this is on the Bill of Lading.

IMPORTANT

All claims for shipping damages must be noted by the consignee at the time of delivery and filed with the transportation company.

STANDARD FEATURES AND OPTIONS

HEAD SECTION

- The motor mount, drive mount, bearings, shaft and head pulley are mounted to a heavily reinforced, independent drive frame. The head pulley and shaft can be removed without structural disassembly. The discharge, hood and first trough section all bolt to this frame.
- Lagged head pulley.
- The hood has a full width inspection door and the entire hood is easily removed for access and troubleshooting.
- All discharges are urethane lined and have provision for plug switches on both sides.
- Fully adjustable and shimmed head shaft bearings.

TAIL SECTION

- 2 screw 24" long takeup tail. Screws are accessed from the back and allow for 360 degree wrench swing. No steel to steel contact in any of the takeup mechanism. Support arms slide in UHMW guides. Oversize acme takeup screws are plated for rust resistance and run in a relubricateable brass nut.
- An effective reload apparatus is incorporated to bring spilled material back to the loaded side of the belt.
- Self cleaning tail pulley.
- The tail pulley and shaft can be removed without structural disassembly.
- A chained drop down door exposes the lower tail pulley area for inspection.
- A full width inspection door allows viewing of belt tracking and the reload area.
- Fully adjustable and shimmed tail shaft bearings.

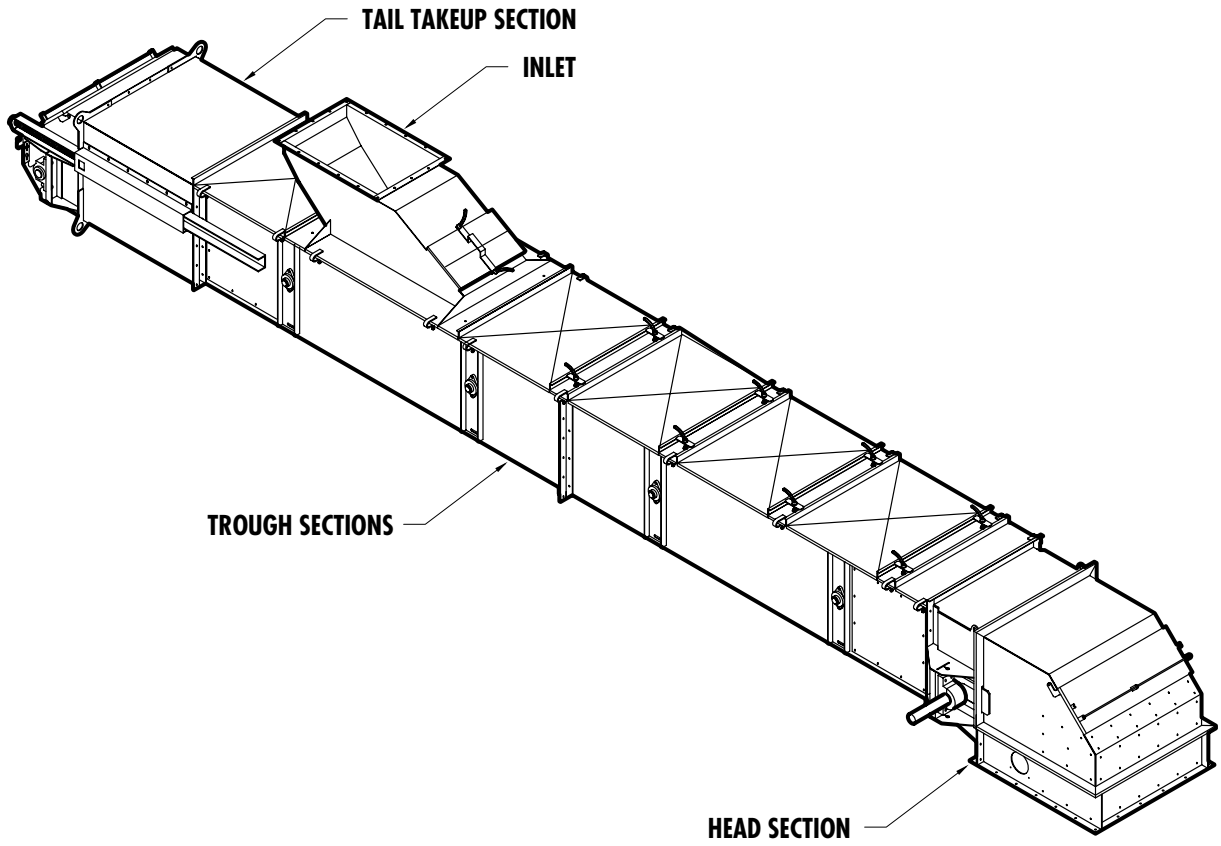
TROUGH SECTION

- Trough bottom is lined with segments of Anti-Static UHMW. This minimizes contact with the return belt to help prevent freeze down. It uses our EZ-Glide system for mounting the UHMW to allow for movement due to thermal expansion and contraction.
- 'Toolless' removal of the idler roller stub shafts.
- Large inspection doors located at each side of the troughs adjacent to the head and tail section.
- Continuous skirting is used when there are multiple inlets.
- Provision for adjusting tracking at the idler pulleys.

MISCELLANEOUS

- Painted or galvanized construction is available.
- Capacities beyond 60,000 BPH.

FEATURES AND BENEFITS



CONVEYOR SELECTION

The EZ-Roll Conveyor engineering and selection was completed prior to manufacturing and shipping, but it may be helpful to review the capacities and sizes of standard conveyors prior to installation.

Specific information must be obtained from the Schlagel Shipping Order, any drawings provided by us, drawings from other sources and manufacturers and information for drives and bearings.

Any questions you may have should be resolved prior to the start of the installation.

EZ-ROLL CONVEYOR - SIZE SELECTION*

MODEL BELT WIDTH	MAX BPH	TROUGH WIDTH	TROUGH HEIGHT	TAKEUP LENGTH	MAX RPM	MAX FPM	STD DISH OPG W x D
18	5000	18	27.13"	24"	112	500	8" x 30"
24	10800	24	27.13"	24"	135	600	14" x 30"
30	21700	30	27.13"	24"	157	700	20" x 30"
36	34000	36	27.13"	24"	180	800	26" x 30"
42	40000	42	27.13"	24"	180	800	32" x 30"
48	53600	48	27.13"	24"	180	800	38" x 30"
54	65600	54	27.13"	24"	180	800	44" x 30"

*Subject to change without notice.

INSTALLATION PREPARATION

Many issues need to be considered prior to installation. Each site will have unique requirements and many of the special requirements should have been worked out during the ordering process. Here are some of the more important points to think about before starting the installation.

DRIVE MOUNTING - Consider yourself sitting on top of the conveyor facing forward.

Should the drive be mounted on the right or left side?

Is the mounting structure adequate to support the entire weight of a fully loaded conveyor and the torque of the drive assembly?

CLEARANCES - You must be able to gain access to the top of the conveyor to remove covers, splice the belt, remove and install spool pulleys, clear plugs and general inspection of belt tracking and material loading.

Side clearance allowance must be considered for access to head and tail bearings and bearing adjustment screws as well as stub shafts and bearings for the spool pulleys.

Check for clearance below the tail to operate the drop door, the back of the tail to allow for wrench swing, full extension of the telescoping section when adjusting belt tension and, of course, enough room to open, and view through, the tail inspection door.

INCLINES - Do not exceed the design incline without first checking with us. If the conveyor was not designed for an incline, or the incline must be increased, several calculations must be made to check for design horsepower, material characteristics, and belt speed.

INLETS - Properly directing the material flow into the conveyor is necessary to obtain the design capacity of the conveyor. The belt must accelerate the material toward the discharge in a very short period of time so the spout and inlet design must assist this acceleration. A poor design here can doom the conveyor performance.

If multiple inlets are to be installed there must be an understanding as to how each will be used; stand-alone or as a controlled inlet to a partially loaded belt. Length and placement of the skirting is also important.

TYPICAL PARTS LIST

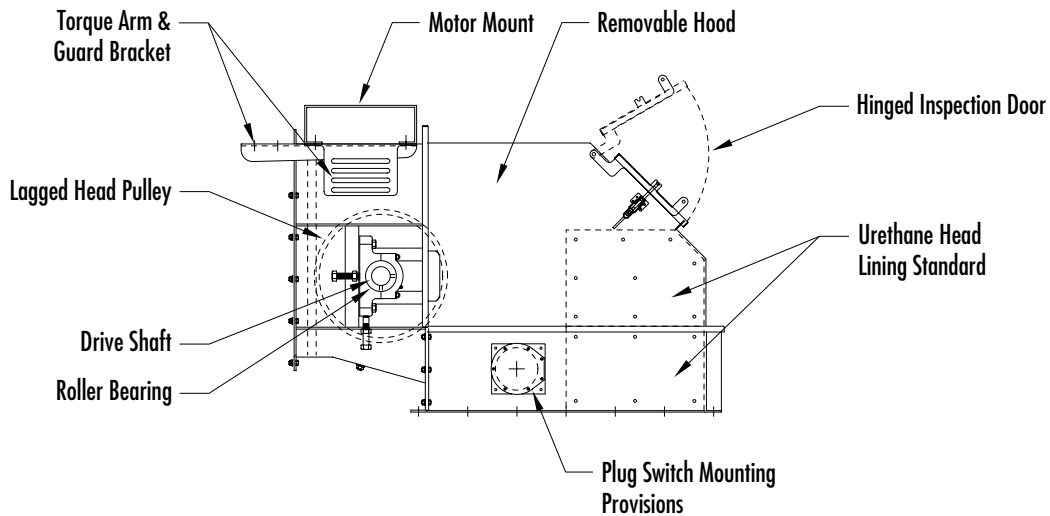
A typical shipment consists of the following parts:

- Drive section with discharge and hood
- Trough section marked for attachment to drive section
- Takeup tail section
- Trough section marked for attachment to takeup section
- Intermediate trough sections
- Cover assemblies
- Inlet assemblies when ordered
- Skirting when needed.
- Belt
- Assembly hardware including belt splice.
- Drive and motor when ordered from us.

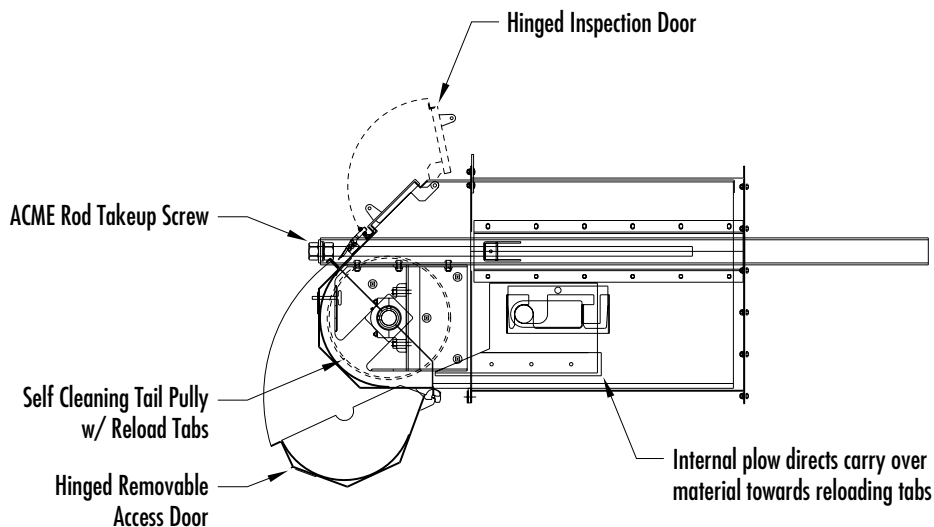
HEAD SECTION

The head section in particular must be securely mounted to transfer any torque from the drive to the mounting structure. Troughs and tail sections should be fastened to the structure at every flange joint.

If it becomes necessary to change the drive shaft from one side to the other, remove the hood and bearing bolts and the entire assembly with pulley can be removed and replaced in one piece.



TAIL SECTION



SECTION 2 - ASSEMBLY AND INSTALLATION

TROUGH SECTIONS

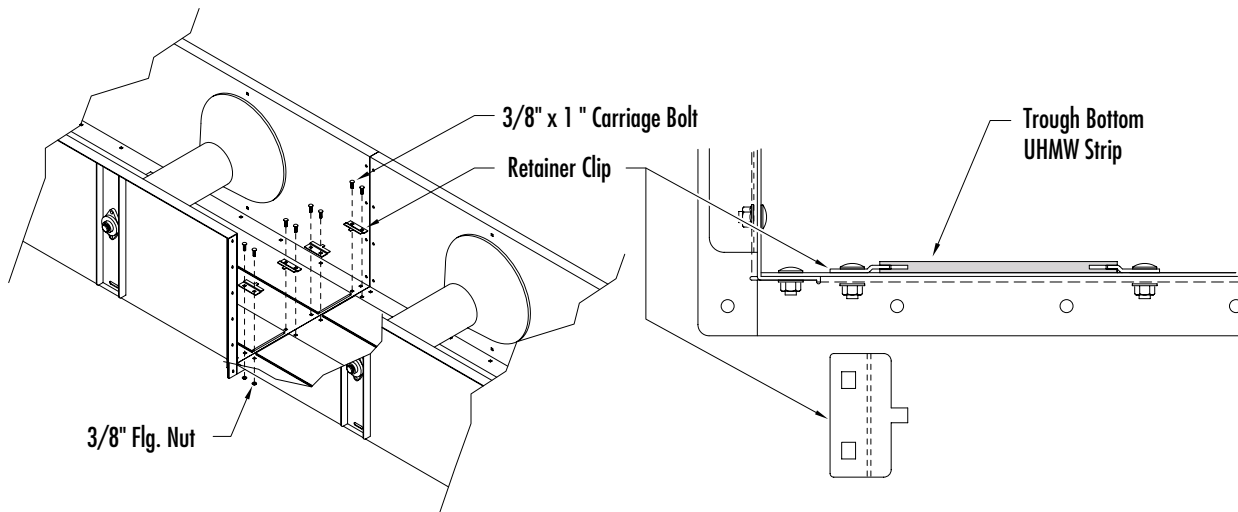
It is important that the head and tail sections have the correct intermediate sections attached to them and oriented in the proper direction. Check the plow in the tail section to make sure it is properly retained in its mounting.

Assemble the rest of the trough using the hardware provided. Notice the special clips used to capture the UHMW return strips and allow it to float during temperature changes. See Figure 1.

Figure 1

TROUGH BOTTOM UHMW RETAINER CLIP INSTALLATION

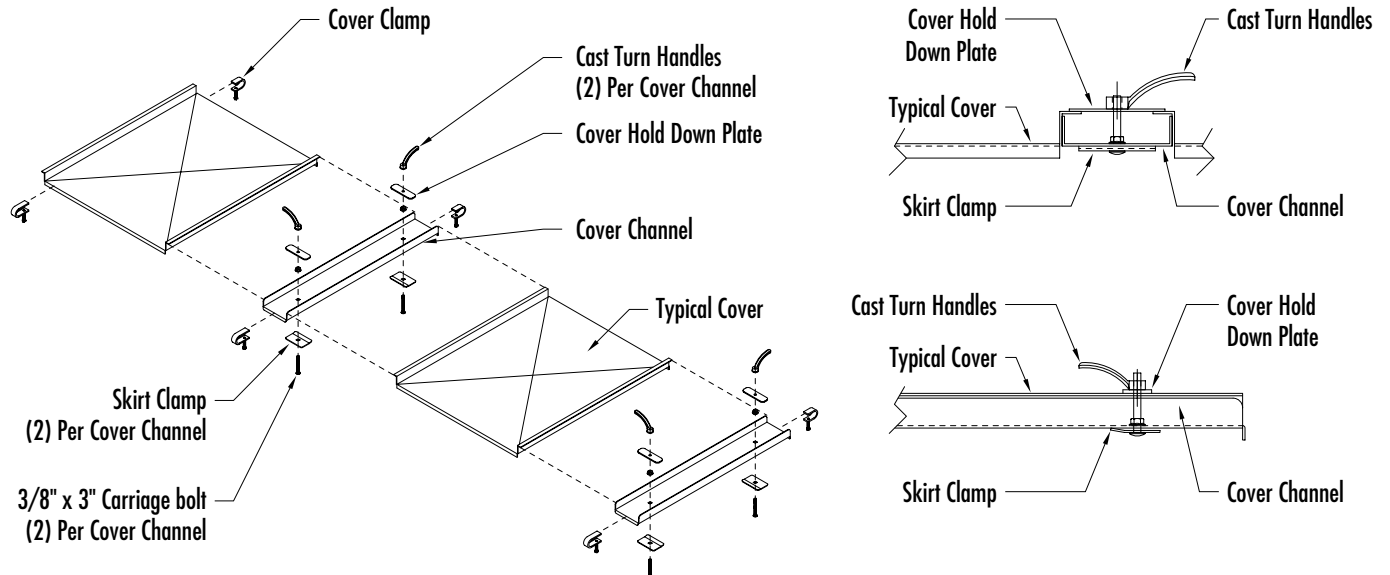
After trough are bolted together install retainer clips for trough bottom UHMW strips as shown. Retainer clips are centered over trough seam.



TROUGH COVER ASSEMBLY

NOTE:

All cover channels get skirt clamps whether the trough gets skirting or not.



INLETS

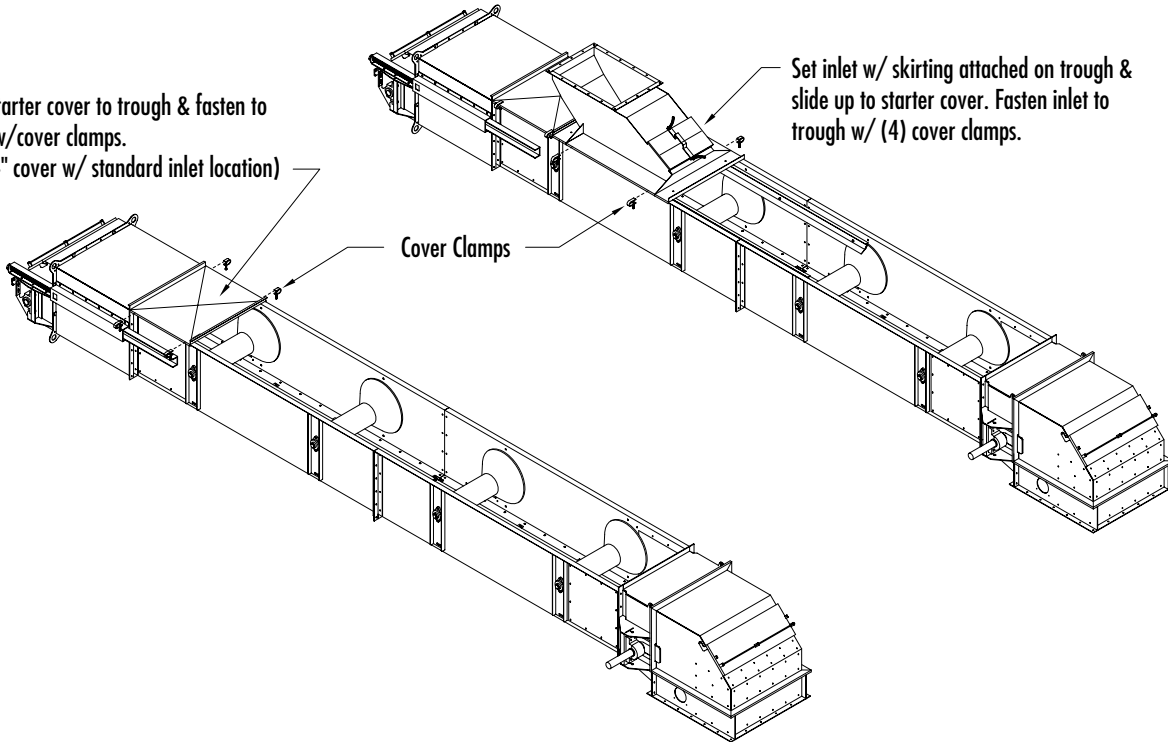
Mount the inlet(s) and inlet spouting. When spouting the inlets it is imperative that the material is directed so that it will slide along the back side of the inlet and be directed forward as it contacts the belt.

If a gate is used it must be arranged so that it opens from the back side of the inlet first. Also be sure the material impacts the center of the belt and does not try to push the belt to the side of the trough.

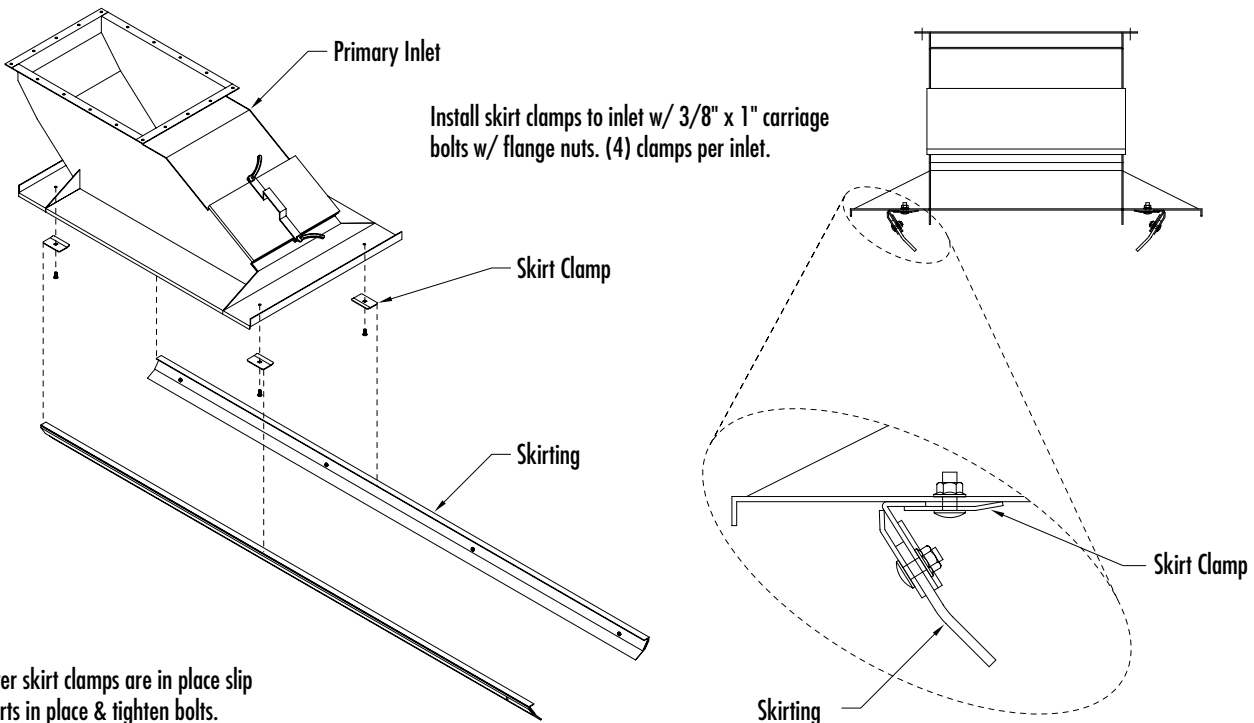
STARTER COVER & INLET INSTALLATION

Install starter cover to trough & fasten to trough w/cover clamps.
(29 1/4" cover w/ standard inlet location)

Set inlet w/ skirting attached on trough & slide up to starter cover. Fasten inlet to trough w/ (4) cover clamps.



INLET SKIRTING INSTALLATION



After skirt clamps are in place slip skirts in place & tighten bolts.

SECTION 2 - ASSEMBLY AND INSTALLATION

BELT AND SPLICING

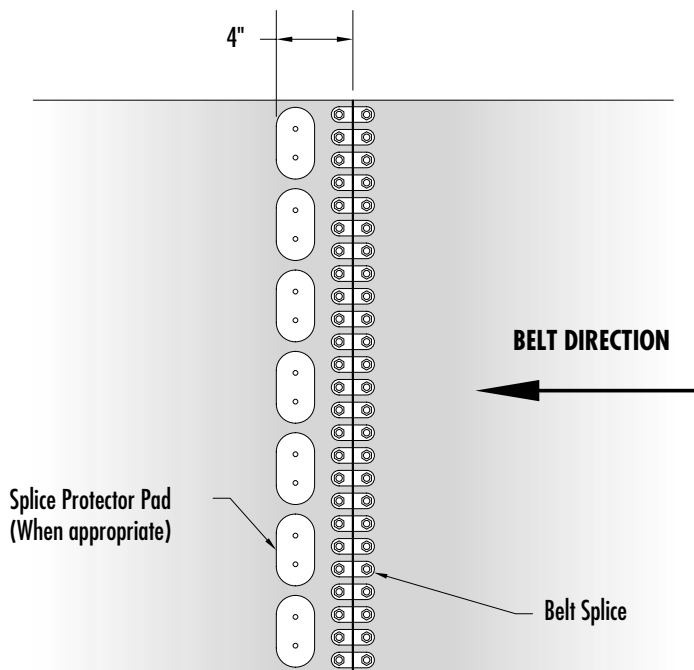
Install the belt making sure it is cut square. Splice it with the included fasteners, as shown in Figure 2, using the manufacturers directions. Then install the splice protection pieces on the leading side of the splice.

IMPORTANT

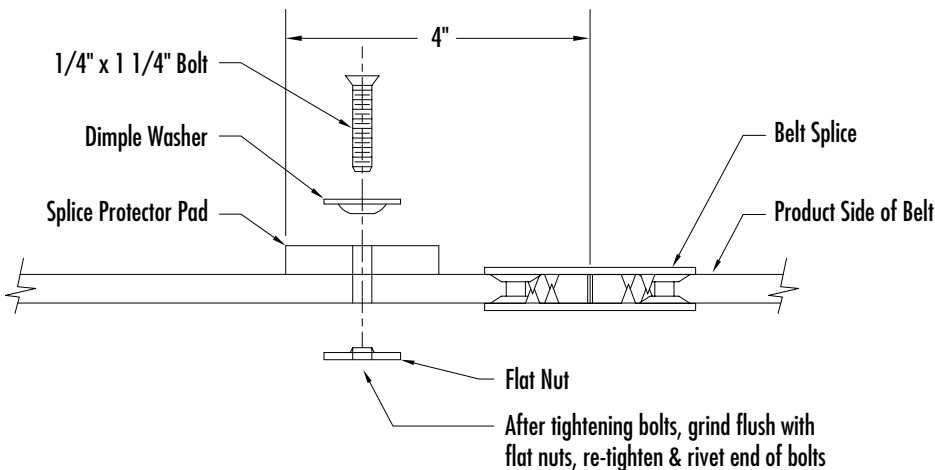
Tensioning requirements vary depending on the length of the conveyor and the belt may need to be re-spliced after it stretches.

Figure 2

PRODUCT SIDE OF BELT



DETAILED ASSEMBLY



SKIRTING

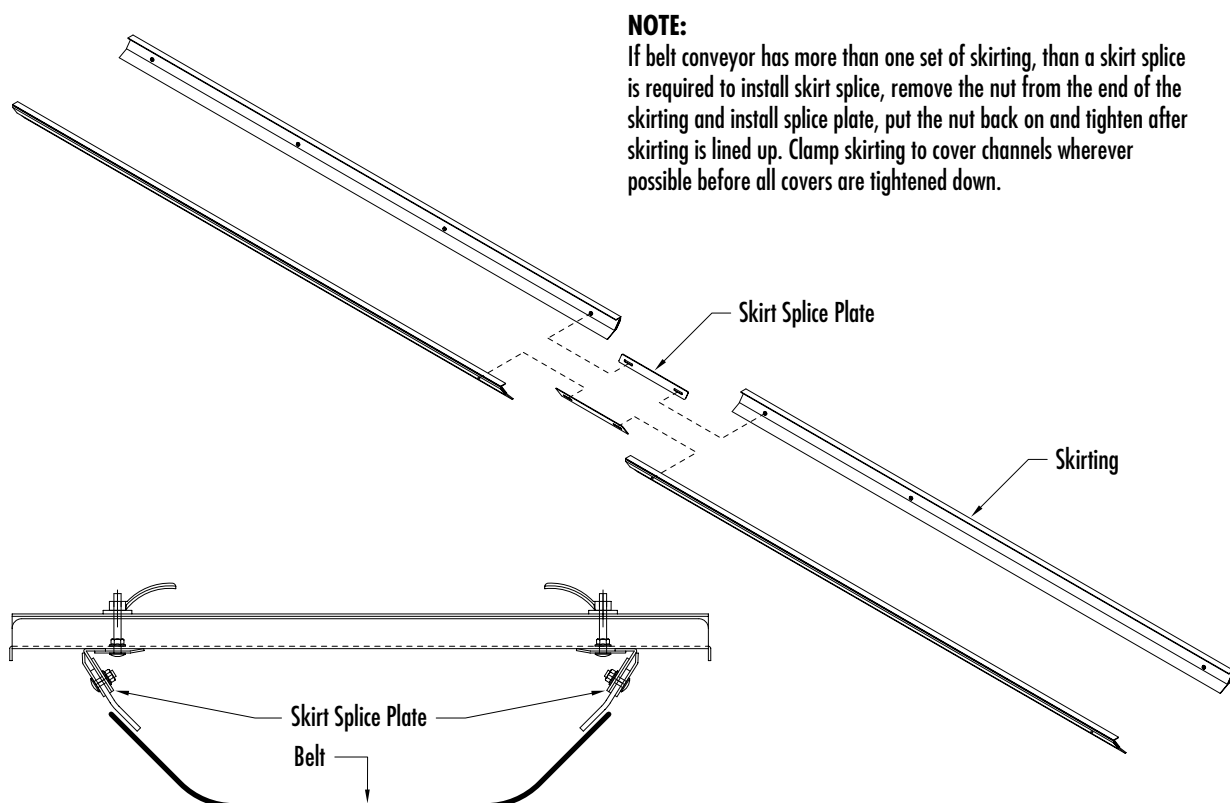
Skirting is usually needed to concentrate the material, at load time, to the center of the belt, not allowing it to spill over the sides.

When a single inlet is used it is necessary to start the skirt a couple of feet behind the inlet and the same amount forward. This is determined by the distance required for the material to accelerate to belt speed and settle to en-masse movement.

If multiple inlets are required the skirt must be installed as if they were one long inlet. It must start a couple of feet behind the first inlet and the same amount forward of the last inlet.

The skirting is clamped at each inlet and is adjusted to fit against the belt. When using multiple inlets the skirting runs continuously from the first inlet through the last one. In this case, use the cover support channels, spaced to fit the cover, when mounting the skirting. Use the skirt connectors when assembling multiple lengths of skirting as shown in Figure 3.

Figure 3





CAUTION



During these load tests be prepared to quickly shut off material feed and electrical power.

Note: The covers are removed during these tests so use extreme caution.

MOTOR, DRIVE & BELT TRACKING

Mount the motor and drive. Fill the drive with the proper oil. This is the best time to test the belt tracking while the troughs are fully open and the belt is completely visible. Tighten the tail section to put enough tension on the belt to allow the head pulley to start driving it. Listen for any catching of the splice protectors. Problem areas must be corrected at this time. The suspect areas will usually be improper UHMW connections. If the belt rides to the left, tighten the left takeup screw to move it towards the center. The head bearings can be shimmed if needed but is seldom necessary.

IMPORTANT

Measure the takeups to see that they are equally extended. The tail bearings may be shimmed so that the belt is centered when the takeups are equal. This is important so that the telescope does not bind when the belt is running on center.

Once the belt is running true at the head and tail, check along the full length of the conveyor to see that it remains centered. Each spool is adjustable but it is uncommon that they would ever need adjustment. The entire unloaded belt should now run true.

TEST AND FINISHING

While the conveyor is still open, test the conveyor for capacity using each inlet and observe that the belt stays centered. Start with a light load and gradually increase it to maximum capacity.

After the tests are completed attach the covers with the clamps provided.

The tail shaft is drilled and tapped for the attachment of a user supplied rotation detector.



CAUTION



Hot bearing detection, plug switches or other specified warning and safety equipment should also be installed if required.

OPERATION

The conveyor should operate with very little noise.

CAUTION

Checking for proper tension should be done every day the conveyor is used.

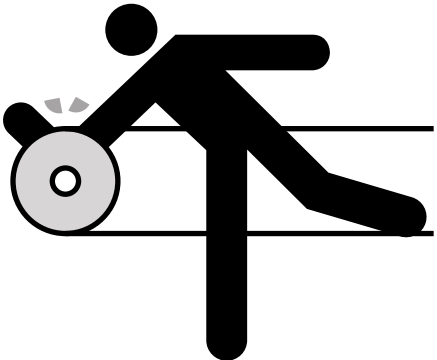
Follow the manufacturers directions for drive maintenance.

SAFETY INFORMATION

IMPORTANT

Always carefully follow all safety warnings.

WARNING



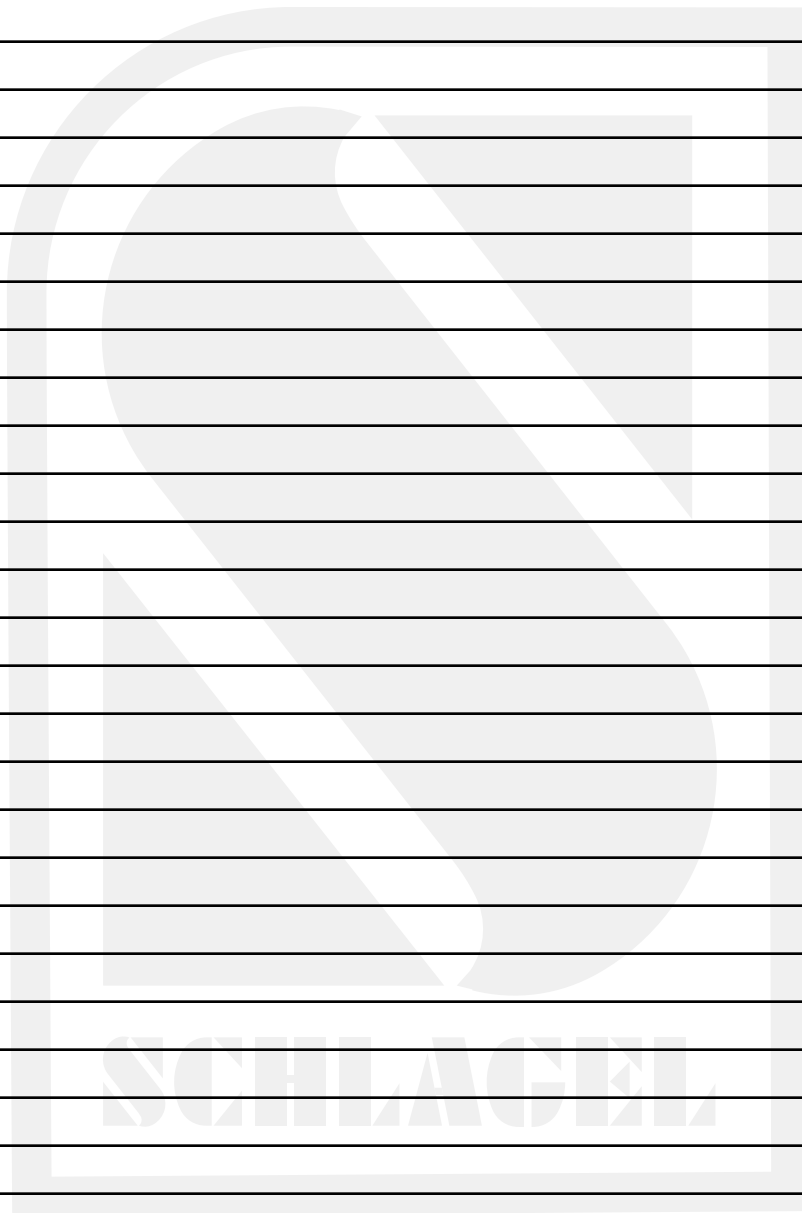
Moving belt and pulleys can cause severe injury

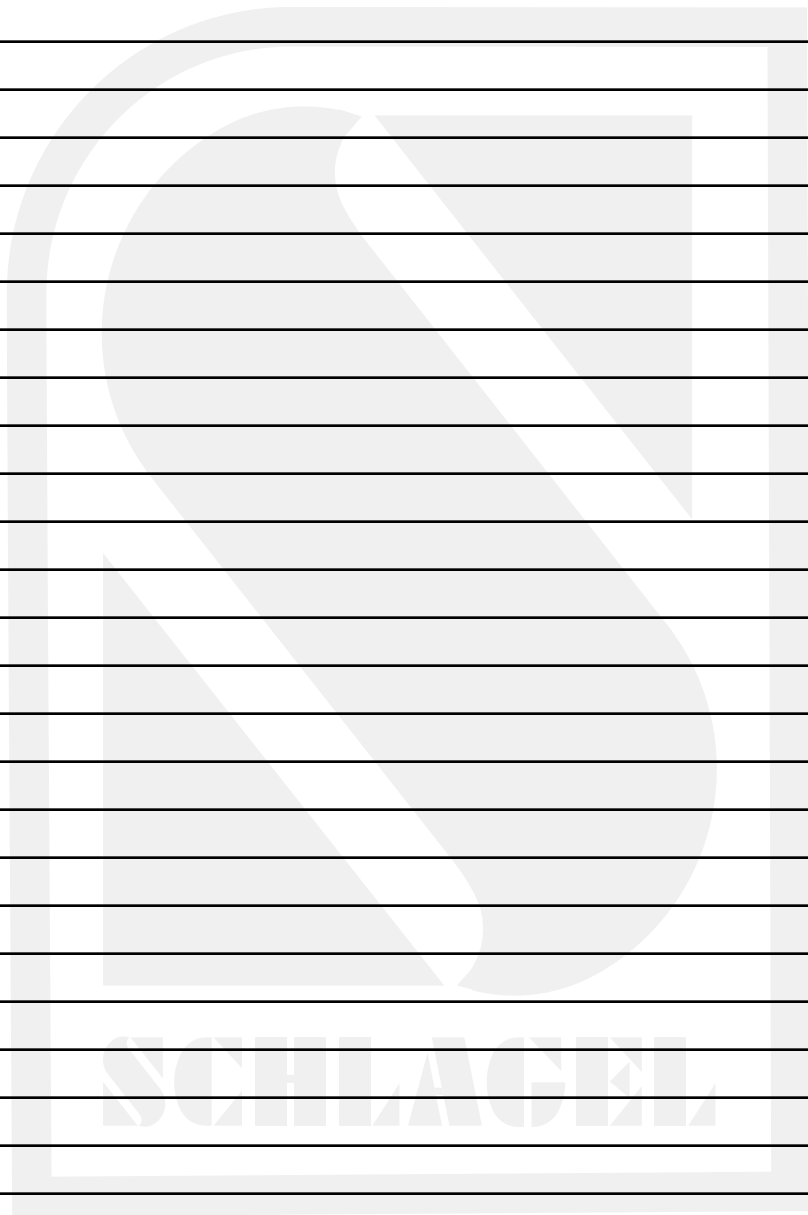
LOCK OUT POWER
Before removing covers or servicing

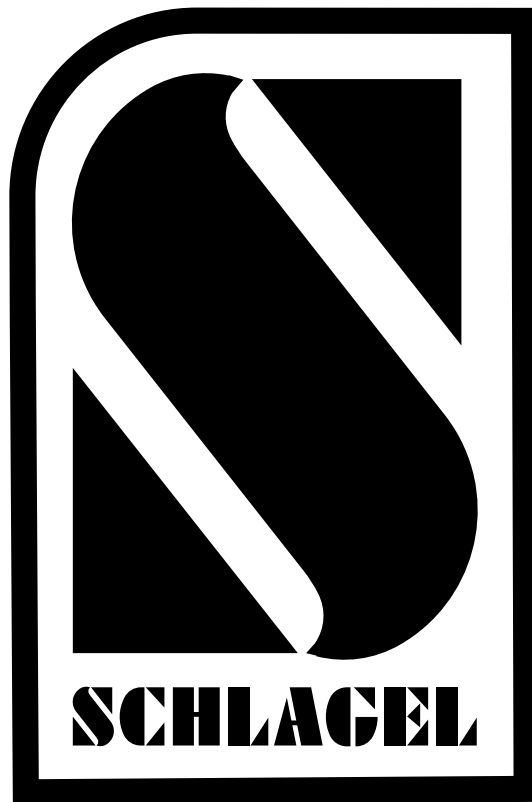
TROUBLE SHOOTING

If a spill or plug occur stop the belt as soon as it is recognized. If the conveyor is plugged at the discharge, clear the plug before attempting to restart the conveyor.

A plug in the tail area should clear itself if the conveyor can be run empty for some time, allowing the reloader to do its job. Opening the tail pulley door, while the conveyor is stopped, can be helpful to allow material to clear the area and relieve binding.







**Please contact our service department for help with any
concerns or questions about your EZ-Roll Conveyor.**

SCHLAGEL

491 North Emerson Street * Cambridge MN 55008-1316 U.S.A.
Toll Free (800) 328-8002 FAX (763) 689-5310
Local / International (763) 689-5991 EMAIL sales@schlagel.com

©2004 Schlagel Inc. 3/04 Printed in U.S.A.