

# **Product Manual** **Powered Trash Belt Conveyor**

Application Guidelines, Specifications, Installation  
Procedures, Maintenance, Parts Identification,  
and Product Index



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Read these documents thoroughly before attempting to perform maintenance or repairs to the applicable Intelligrated conveyor system components or devices. Exercise extreme caution when working around moving and rotating conveyor equipment. Wear the proper clothing and safety equipment. **DO NOT** attempt to perform any maintenance until the equipment is de-energized, locked out and tagged out in accordance with established company procedures.

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# Package Conveyors



 <p><b>Do Not Climb, Sit, Stand, Walk, Ride, or Touch the Conveyor at Any Time</b></p>	 <p><b>Do Not Perform Maintenance on Conveyor Until Electrical, Air, Hydraulic and Gravity Energy Sources Have Been Locked Out or Blocked</b></p>	 <p><b>Operate Equipment Only With All Approved Covers and Guards in Place</b></p>
 <p><b>Do Not Load a Stopped Conveyor or Overload a Running Conveyor</b></p>	 <p><b>Ensure That All Personnel Are Clear of Equipment Before Starting</b></p>	 <p><b>Allow Only Authorized Personnel To Operate or Maintain Material Handling Equipment</b></p>
 <p><b>Do Not Modify or Misuse Conveyor Controls</b></p>	 <p><b>Keep Clothing, BodyParts, and Hair Away from Conveyors</b></p>	 <p><b>Remove Trash, Paperwork, and Other Debris Only When Power is Locked Out and Tagged Out</b></p>
 <p><b>Ensure That ALL Controls and Pull Cords are Visible and Accessible</b></p>	 <p><b>Know the Location and Function of All Stop and Start Controls</b></p>	 <p><b>Report All Unsafe Conditions Jams should be cleared ONLY BY Authorized, Trained, Personnel</b></p>

POST IN PROMINENT AREA



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## Product Manual Issue and Revision Date(s)

1st Issue	December 2003
1st Revision	August 2006

## Product Manual Revision Summary

<b>Revision Date</b>	<b>Manual Section(s)</b>	<b>Revision Summary</b>
August 2006	Section I	Update Part Numbers



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## SECTION A: PRODUCT SUMMARY

<b>CSPD Designation</b>	BCB - Belt Conveyor Box Slider
<b>Applications</b>	Transportation - Horizontal, Incline, and Decline Speed -: 30, 45, 60, 75, 90, 120, 150 and 180 fpm
<b>Widths</b>	Belt Widths - 12", 18", 24", 30", 36", 42", and 48" Between Frame (BF) Dimension "W" - 15", 21", 27", 33", 39", 45", and 51"
<b>Intermediate/Didler Sections</b>	BCB - Box Frame, Slider Belt Standard Lengths = 5', 7'-6", 10" and 12" Idler Pulley - 3-1/2" diameter with 1" movement for tracking Return Rollers - one per 5' and 7'-6" sections, two per 10' and 12' sections
<b>Belt Return Rollers</b>	G196GH - greased commercial bearings G196A1 - (ABEC) precision, greased, high speed
<b>Intermediate Drives</b>	SA2000 Intermediate Drive - 900 lbs. EBP (see Table C-1 on page C-9 for details); 8-1/4" diameter lagged pulley; manual take-up and adjustable snub roller. Under-hung power unit.  SA2001 Intermediate Drive - Low Profile Drive - 800 lbs. EBP (see Table C-1 on page C-9 for details); 5-7/8" diameter lagged pulley; manual take-up and adjustable snub roller. Side-mounted power unit. Field assembled to an Intermediate Section.
<b>End Drives</b>	Series 600 - 473 lbs. EBP, 6-1/2" diameter pulley, 3-1/2" diameter take-up pulley. Series 800 - 688 lbs. EBP, 8-1/2" diameter pulley, 2-1/2" diameter take-up pulley. All Series have manual take-up and adjustable snub roller.
<b>Power Units</b>	Motors - 1/2 through 7-1/2 HP C-Face (Baldor and Reliance). Standard and premium efficiency motors. Brake motors applied on incline and decline applications. Reducers - C-Face (Grove and Reliance). Belt Speeds - 30-500 fpm Drive to Pulley - Chain and/or timing belt drive (depending on speed).
<b>Upper Bends</b>	For transition between two sections at fixed angles of 10°, 12-1/12°, or 15°. Adjustable roller for belt tracking.
<b>Auxiliary Take-Ups</b>	Manual and automatic (air) types.
<b>Accessories</b>	Floor supports and ceiling hangers. Fixed and adjustable side guides
<b>Paint</b>	Powdered-coated - Satin Gray





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## ***SECTION B: APPLICATION GUIDELINES***

Powered Trash Belt Conveyors efficiently collect and convey empty cartons, packing, and wrapping materials from multiple areas of a facility to a compactor, incinerator, or directly into an awaiting truck or trailer.

### **Introduction**

#### **Product Line**

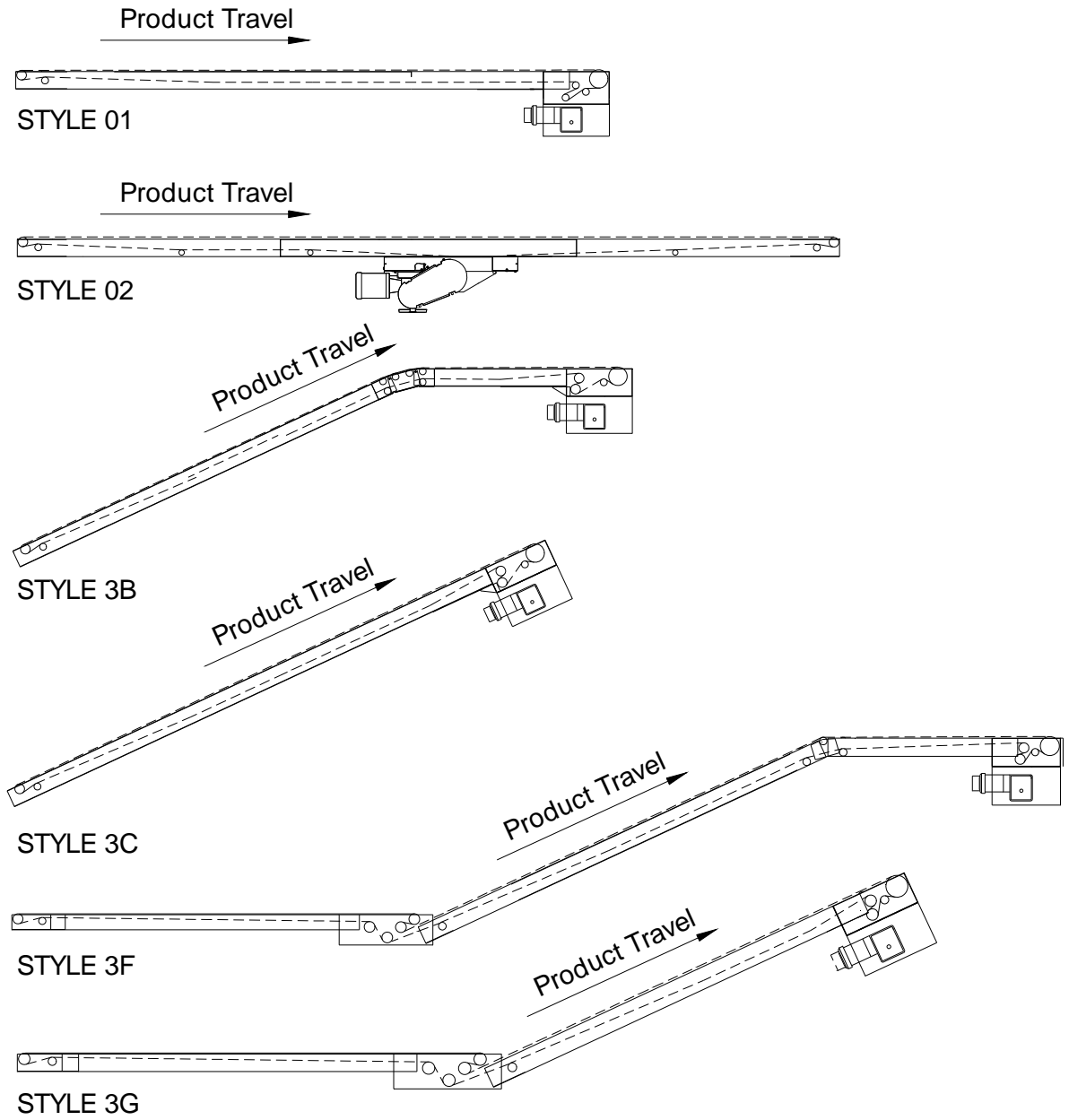
The design features and component specifications fulfill the application and layout requirements for empty-carton handling systems in a wide range of industries.

Powered Trash Belt Conveyor design features include:

- Slider Bed Sections with seamless side guides which eliminate crevices and sharp edges that can snag these materials
- Transition Components that allow both horizontal and inclined movement of trash
- Underside Dust Covers which provide for both clean operation as well as personnel safety
- Widths, drives, power units, speeds, take-ups, etc. that are sized to match specific requirements

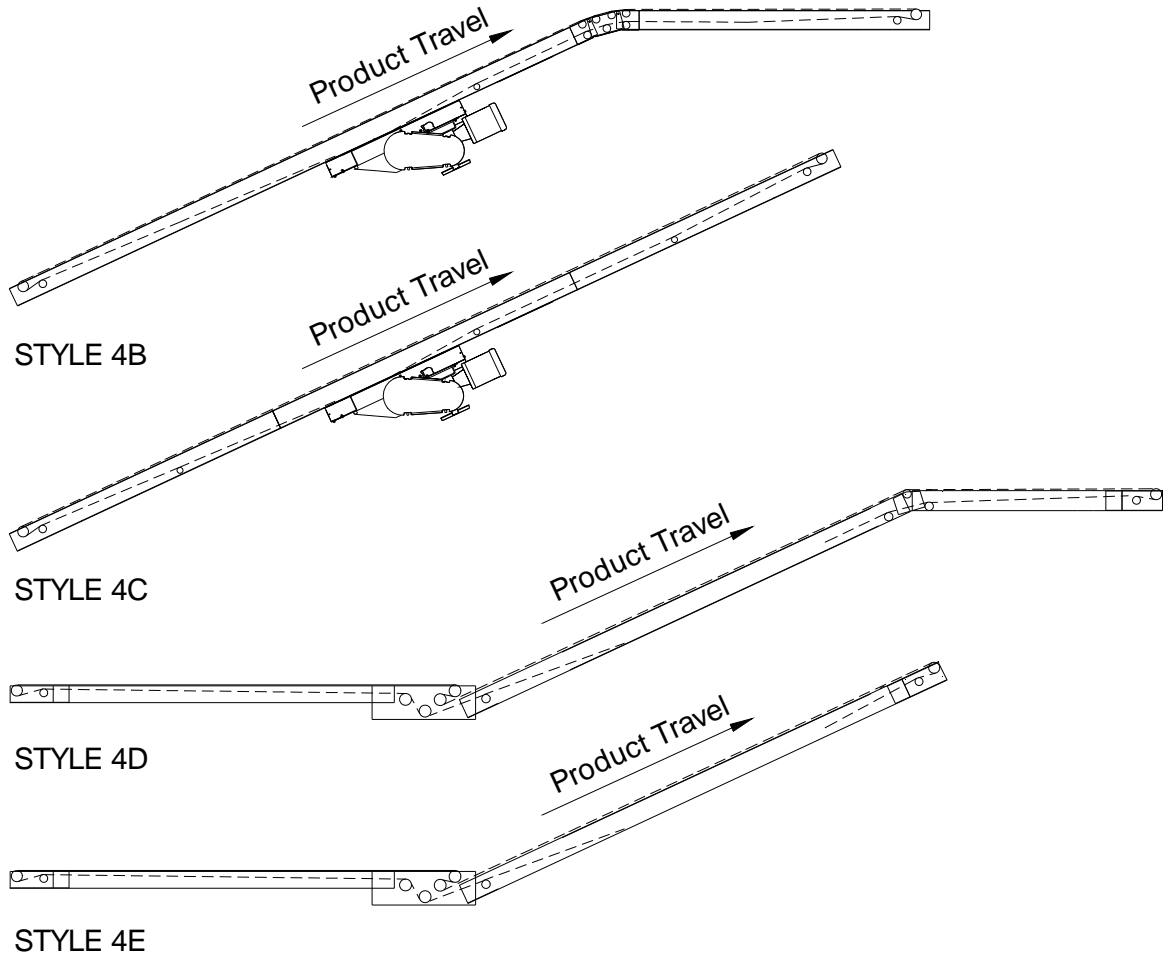
Pre-engineered components result in more flexible, cost-efficient system design and assembly, and easier modification of future conveyor systems.

Powered Trash Belt Conveyors are available in a variety of standard styles to suit a wide range of trash handling applications. See Figures B - 1 and B - 2.



BUSFKI021A

Figure B - 1 Standard Powered Trash Belt Conveyor Styles - Sheet 1 of 2



BUSFKI022A

Figure B - 2 Standard Powered Trash Belt Conveyor Styles - Sheet 2 of 2

## Product Description

Powered Trash Belt Conveyors are available with a wide range of components and features, which include:

- End or Intermediate Drives with integral take-up
- Power Units - up to 7-1/2 horsepower
- Speeds up to 180 fpm
- Auxiliary Take-Up Units - manual or automatic
- Transition Units
- Belt widths from 12" to 48" in 6" increments

These components and features allow the customer to size the conveyor to meet the appropriate application requirements.

## Equipment Components

### Intermediate Sections

Intermediate Sections make up the conveyor's straight portion (without end pulleys) between the terminal end sections. Intermediate Section(s) are available in:

- Box frame slider bed
- Standard belt widths of 12" to 48" in 6" increments
- Belt lengths of 5'-0", 7'-6", 10'-0", and 12'-0"

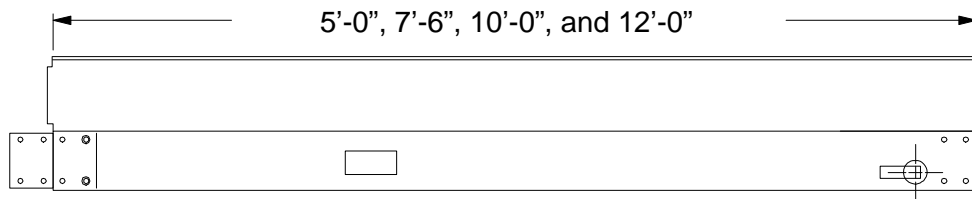


Figure B - 3 Intermediate Section

## Bed Type

The Box Frame Slider Bed design allows the carrying belt to ride on a smooth, continuous metal surface. The metal surface has no openings into which small pieces of scrap paper, cardboard, or strapping can lodge.

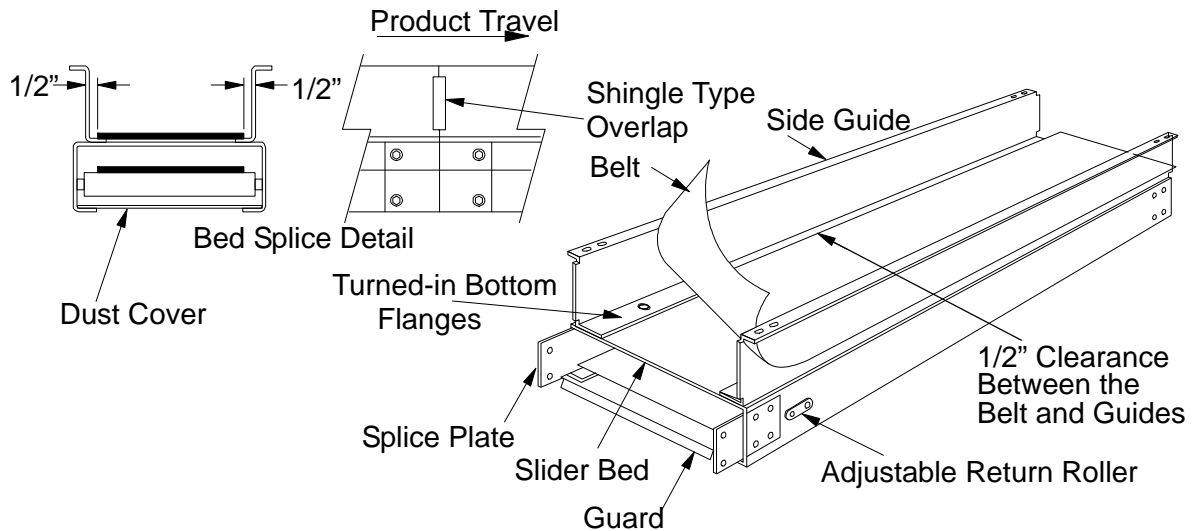


Figure B - 4 Slider Bed Section, Side Guides, and Underside Guard/Dust Cover

## Side Guides

Side Guides feature a seamless design that includes:

- Turned-in bottom flanges that extend beneath the belt
- Shingle-type overlap of the guides' vertical surfaces
- Minimal 1/2" clearance between the belt and guards

As a result, the Side Guides allow the conveyor to move scrap materials easily because gaps, crevices, and sharp edges usually found between side guides and bed sections do not exist.

## Underside Guards

Underside Guards prevent operating personnel from accessing the moving conveyor parts and also serve as dust pans. Underside Guards must be removed to perform maintenance and reinstalled after maintenance has been performed.

## Drive Units

Drive Units are designed to provide the specified maximum effective belt pull at the specified conveyor speed. They consist of:

- A drive pulley that transmits motion to the belt through frictional contact
- A snub roller that assures sufficient wrap of the belt around the pulley
- A take-up pulley that increases or decreases belt tension

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## End Drives

End Drives are excellent for economical one-way belt travel toward the drive end. The sections with internal take-up are available with either under-hung or side-mounted power units. An Intermediate Section and Drive Unit together provide a complete drive section. See Figure B - 5.

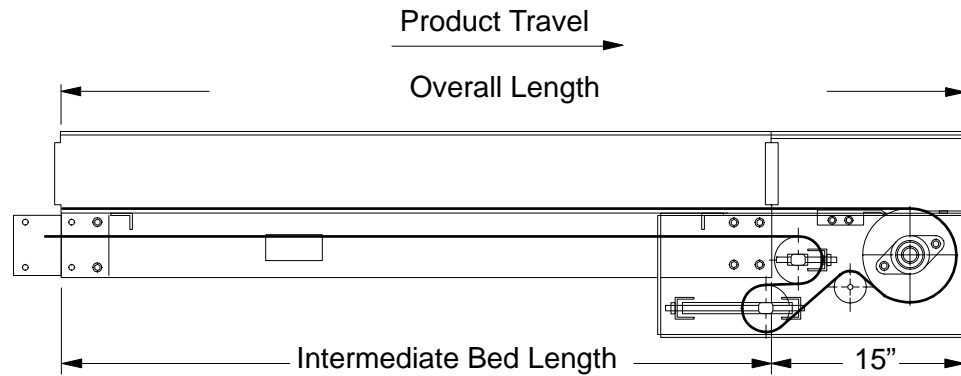


Figure B - 5 Intermediate Section with End Drive

## Intermediate Drives

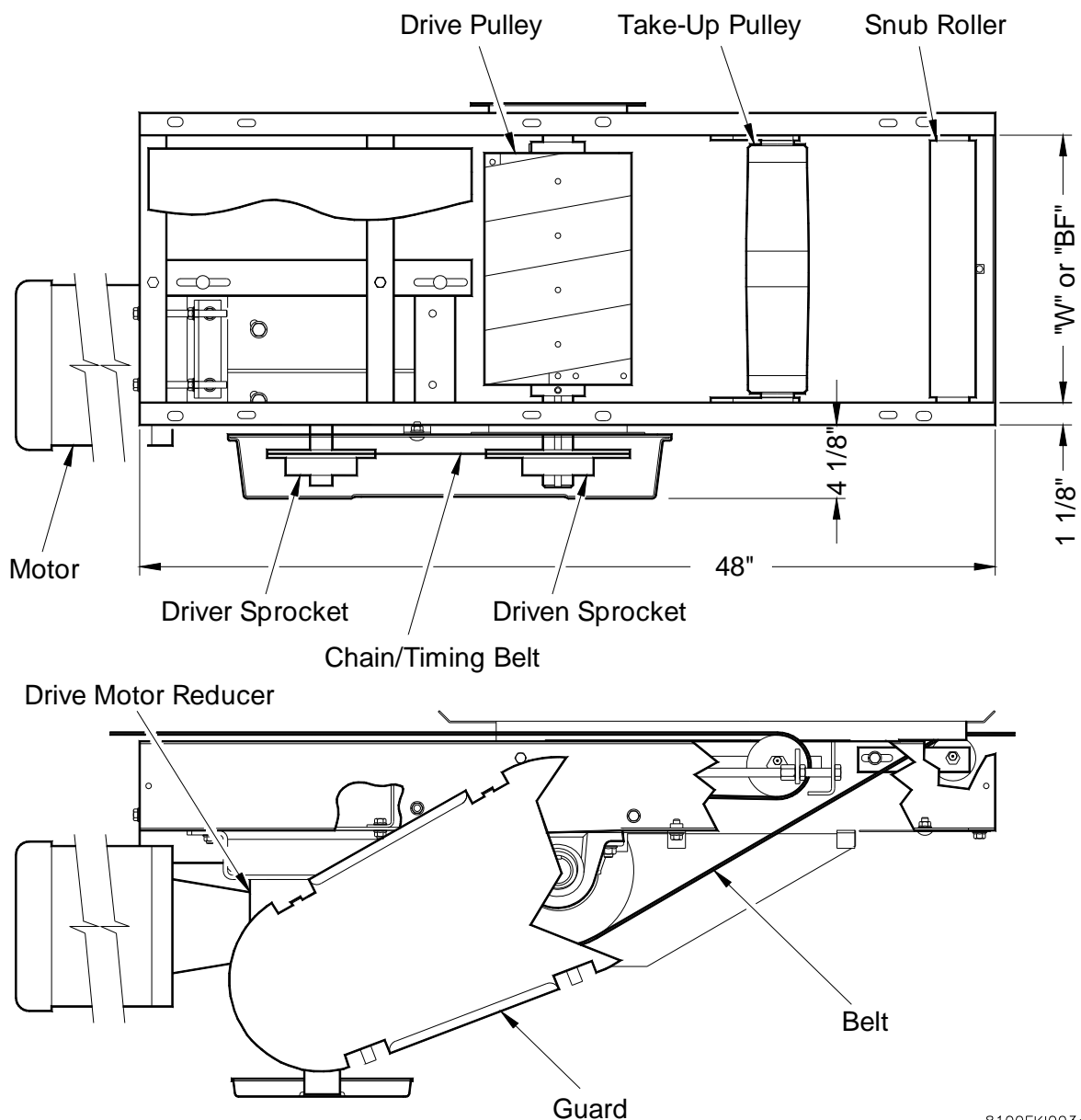
Intermediate Drives are attached to an Intermediate Section of horizontal and inclined applications.

For horizontal applications, the Intermediate Section with Intermediate Drive should be located as close as possible to the end of the conveyor that discharges the load.

For inclined applications, the Intermediate Section with Intermediate Drive should be located as close to the upper end of the conveyor as possible.

Two types of Intermediate Drives are available:

- SA2000 Intermediate Drive, see Figure B - 6
- SA2001 Intermediate Drive - Low Profile, see Figure B - 7



8100FKI003a

Figure B - 6 SA2000 Intermediate Drive

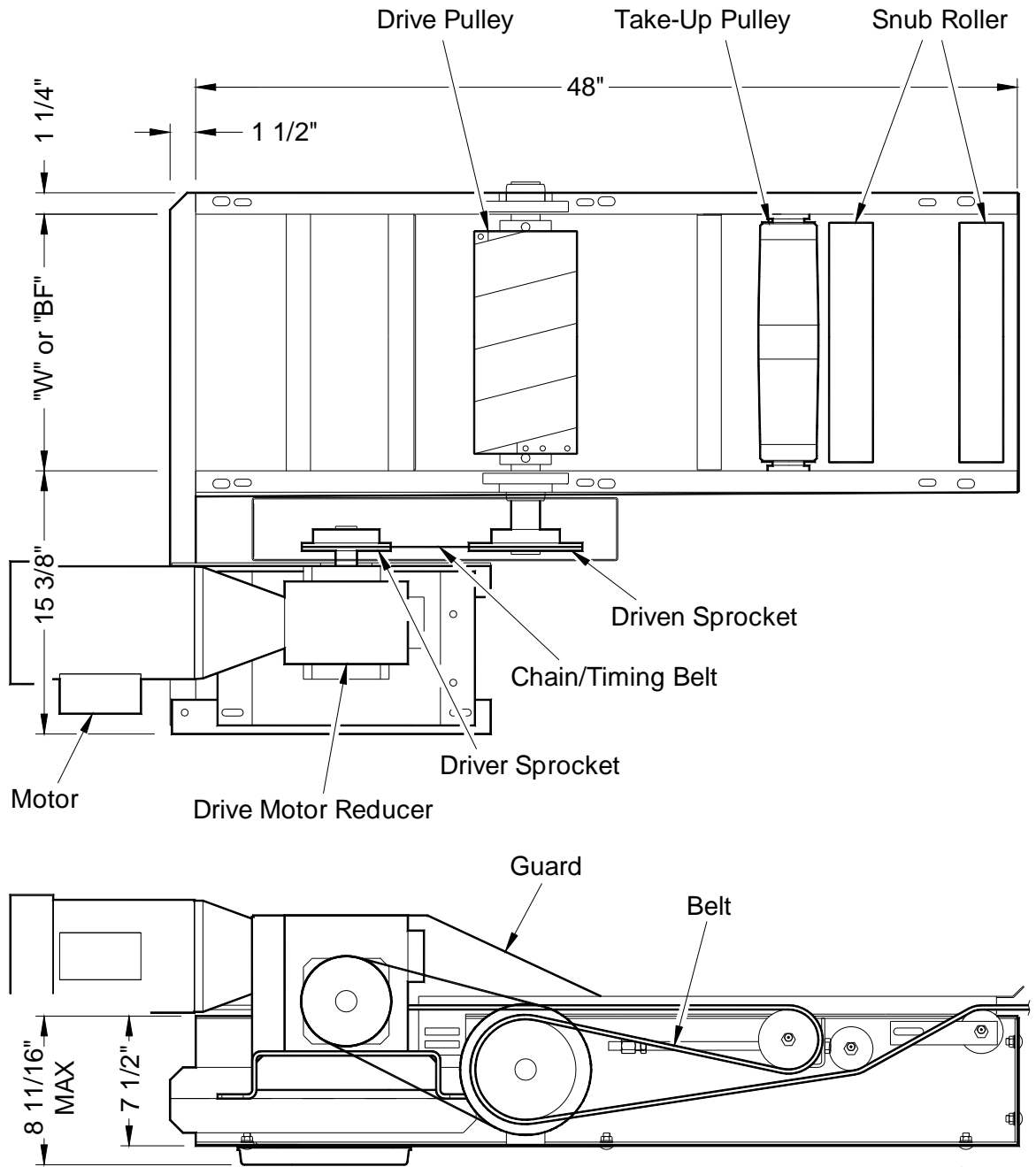


Figure B - 7 SA2001 Intermediate Drive - Low Profile



## End Idlers

An End Idler is a fixed pulley at the end of the conveyor system that allows the belt to make a return run.

## Auxiliary Take-Ups

Auxiliary Take-Ups are available as either: manually screw-operated or automatically air-operated. An Auxiliary Take-Up supplements the drive's built-in take-up when the conveyor is long and the belt stretch exceeds the capability of the standard take-up.

## Upper Bend Unit

Upper Bend Units provide the curved transition between two sections, one sloped and the other horizontal. See Figure B - 8. The angle of the Upper Bend Unit is fixed at 10°, 12-1/2°, or 15°. The belt rides on 2.5" diameter rollers.

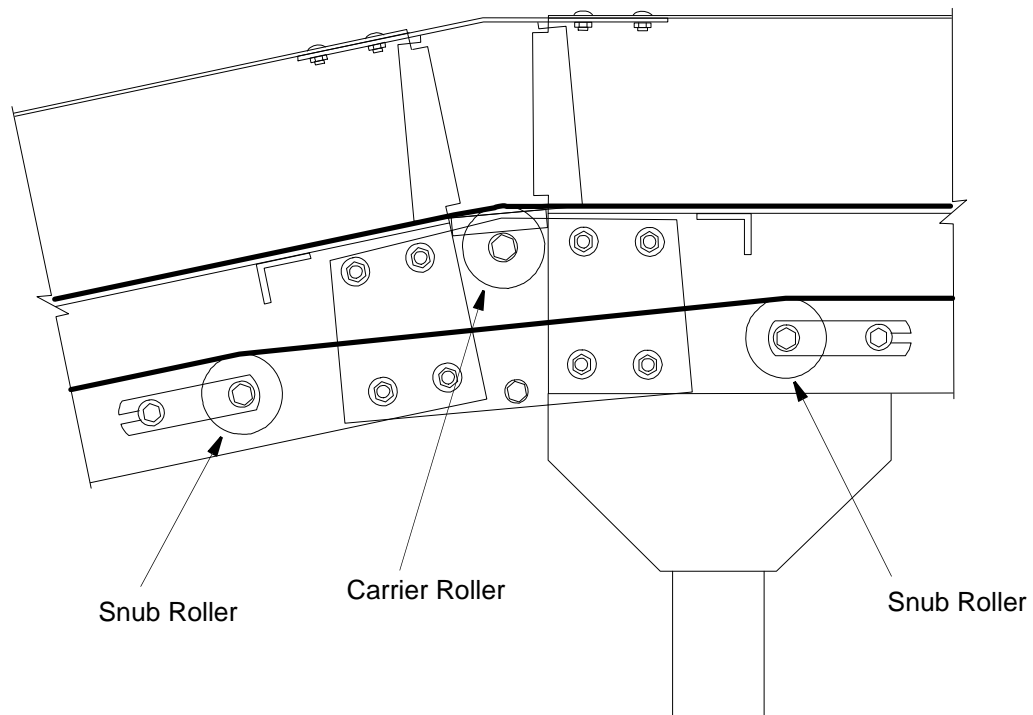


Figure B - 8 Upper Bend Unit

## Applications

Use the following information to assist in developing the Powered Trash Belt Conveyor application.

## Styles

Combinations of the equipment elements are varied. See Figure B - 1 for available conveyor styles.

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## Conveyable Materials

Scrap paper, corrugated cartons, packing, wrapping materials, etc. are materials that can be conveyed safely. Loose string, strapping, etc. cannot be safely conveyed. Materials considered non-conveyable must be placed in a scrap carton or other conveyable container before being placed on the conveyor.

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**CAUTION:** Never use the Powered Trash Belt Conveyor to move sharp-edged materials, such as metal scrap or glass. Doing so may cause damage to the belt.

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## Feeder/Collector Lines

A Powered Trash Belt Conveyor acts as either a feeder or a collector conveyor. Two or more feeder conveyors feed a collector conveyor.

## Conveyor Length

The maximum length of a Powered Trash Belt Conveyor is limited by these variable factors:

- Width
- Live load
- Angle of incline (if applicable)

The maximum length is also limited by these constant factors:

- The drive unit's pull capacity
- The power unit's horsepower and torque ratings

If a conveyor's effective belt pull requirement exceeds the capacity of the drive and power unit, select a larger series drive and divide the conveyor line into two or more shorter conveyors.

## Conveyor Width

The belt width must be greater than the dimension of the materials conveyed.

For the in-line transfer of materials between conveyors running in the same direction, the width of the two adjoining conveyors should be the same.

For right-angle transfers, the width of the downstream takeaway conveyor must be equal to the length of the largest item conveyed plus the horizontal distance that the discharge end of the feeding conveyor extends beyond the side guide of the takeaway conveyor (6" recommended). See Figure B - 9.

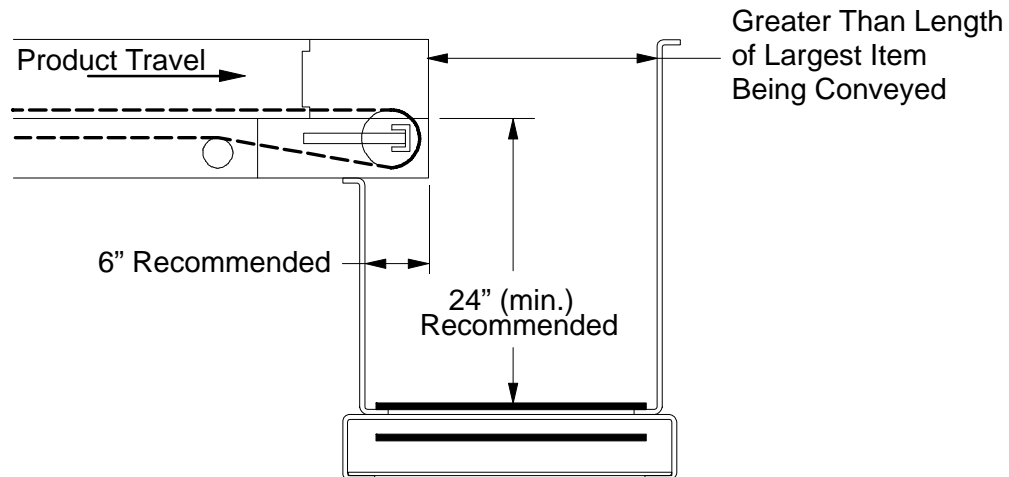


Figure B - 9 Right-Angle Transfers

### Vertical Side Guides

Vertical Side Guides are available (6" and 18" high) to suit the requirements of the application. See Figure B - 10. Vertical Side Guides may be intermixed within the length of the conveyor.

Both are universal and may be mounted to either the right or left hand side of the conveyor. Vertical Side Guides are bolted to the bed section at installation.



Figure B - 10 Vertical Side Guides

### Flared Side Guides

For loading areas, 6" high guides with a 30° flare from vertical are available. The slanted surfaces of these Flared Side Guides make it easier for operating personnel working below the conveyor to throw materials onto the conveyor.

---

## Direction of Travel

Powered Trash Belt Conveyors are designed for one-way travel only.

---

**CAUTION:** Always convey material in the direction that material travel was intended. The exposed edges of the overlapping side guides may snag or catch materials conveyed in the wrong direction.

---

## Inclined Operation

Standard friction-surface belting will convey trash materials up 15° inclines, maximum.

## Two-Pulley Hitch

Use this pre-engineered transition component when one conveyor has a horizontal portion that feeds material onto an inclined portion. The inclined portion may be set at 10°, 12-1/2°, or 15°. See Figure B - 11.

When determining the conveyor's effective pull, calculate the horizontal and inclined portions separately, and then add the two together to determine the total requirement.

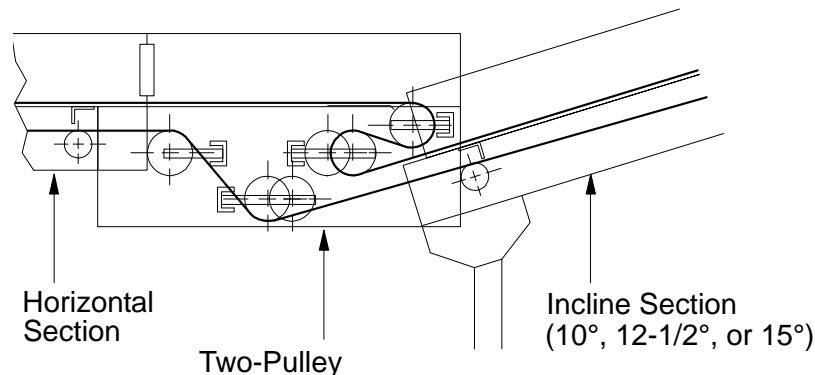


Figure B - 11 Two Pulley Hitch

## In-Line Transfer

Use the In-Line Transfer when a conveyor line requires two or more conveyors to meet length requirements. See Figure B - 12. The transition may either be from horizontal-to-horizontal, or from horizontal-to-incline (10°, 12-1/2°, or 15°).

Both the upstream and downstream conveyors must be a Style 02 or Style 04 with a Intermediate Drive.

The width of the two adjoining conveyors must be the same.

The speed of the downstream conveyor should be equal to or greater than that of the upstream conveyor.

Wire control for both conveyors so that they run at the same time, or that the upstream conveyor shuts off first and turns on after the downstream conveyor.

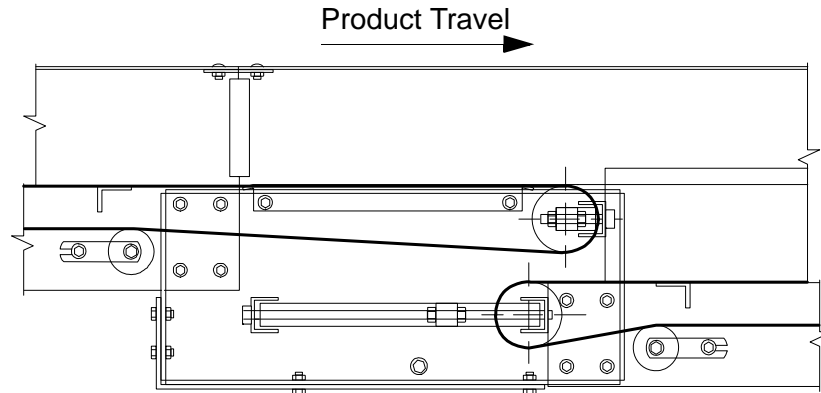


Figure B - 12 Horizontal In-Line Transfer

### Right Angle Transfer

Right Angle Transfer units are a made-to-order transfer conveyor that carries trash materials onto a second conveyor whose path of travel is 90° to that of the first. A feeder line feeding materials to a collector line is an example.

Right angle transfer units are made to suit the requirements of each application. There are no standard assemblies available.

When applying such a unit, it is necessary to assess the following factors:

- Speeds - The speed of the take-away conveyor should be one standard speed faster than the feeding line. See “Conveyor Speed” below when multiple feeder lines are discharging material onto a collector line.
- Widths - See “Conveyor Width” on page B - 10.
- Elevations - The height of the feeding line should be 24” (minimum) above that of the take-away conveyor to minimize the possibility of materials hanging up at the transfer.
- Guarding - Additional height guarding may be required at these points and will have to be designed and made-to-order.

### Conveyor Speed

Powered Trash Belt Conveyor are available with standard speeds of 30, 45, 60, 75, 90, 120, 150, and 180 fpm.

Speeds of collector lines are higher than those of feeder lines. The speed differential increases with the number of “feeder” lines. Table B 1 is a guideline for recommended speeds.

Table B 1: Speeds for Feeder Lines and Collector Lines

No. of Feeder Lines	No. of Collector Lines	Speed of Feeder Lines	Speed of Collector Lines
2	1	45 fpm	60 fpm
3	1	45 fpm	75 fpm
4	1	45 fpm	90 fpm

## Auxiliary Take-Ups

Auxiliary Take-Ups are available; one manually operated by screws, the other automatically operated by air. An Auxiliary Take-Up is used to supplement the built-in take-up in a drive unit when the conveyor is long and the belt stretch exceeds the capability of the standard take-up. Table B 2 shows the maximum conveyor length recommended when using standard take-up components.

Table B 2: Maximum Conveyor Length per Take-Up Component(s)

Take-Up Components				Drive Type			
With Drive		Auxiliary		End		Intermediate	
End	Intermediate	Manual	Auto	600	800	SA2000	SA2001
Style 1/3 Conveyors with End Drive							
X				80 ft.	80 ft.	-	-
X		X		160 ft.	160 ft.	-	-
X			X	*400 ft.	*400 ft.	-	-
Style 2/4 Conveyors with Intermediate Drive							
	X			-	-	120 ft.	160 ft.
	X	X		-	-	200 ft.	240 ft.
	X		X	-	-	*400 ft.	*400 ft.
*Maximum recommended conveyor lengths.							

**Note:** Powered Trash Belt Conveyor lengths shown in Table B 2 are based on a maximum live load of 10 lbs./ft. and an assumed belt stretch factor equivalent to 6" of take-up movement per 80'-0" of conveyor length.

## Underside Personnel Guards

Sheet metal pans, furnished as an integral part of the conveyor, are easily and quickly installed. They can also serve as dust pans. Intermediate section underside guards are easily removable for performing maintenance, and must be reinstalled after maintenance has been performed.

---

**SECTION C: STANDARD SPECIFICATIONS****Styles 01 and 03 with End Drive****Speed**

30, 45, 60, 75, 90, 120, 150, and 180 fpm constant. Optional non-standard speeds available within 30-180 fpm range.

**Capacity**

10 lbs./ft. live load.

**Belt Width**

12", 18", 24", 30", 36", 42", or 48".

**End Drive**

Model EDU/RH, Series 600 (473 lb. EBP) or Series 800 (688 lb. EBP); integral take-up; located at discharge end of conveyor.

**Power Unit**

1/2 - 5 HP, TEFC, C-Face motor/reducer, under-hung mounting.

Optional side-mounted unit.

**End Idler**

Model EIU with manual screw-adjusted pulley located at infeed end of conveyor.

**Intermediate Sections**

5-3/8" deep x 14 ga. formed steel box frame slider bed.

G196GH belt return rollers, one per 5' and 7'-6" sections, two per 10' and 12' sections.

Overall width is 3" greater than belt width.

**Side Guides**

6" high x 16 ga. formed steel "Z" (two sides, full length).

Width between guides is belt width plus 1".

Optional 6" high with 30° flare and 18" high vertical guards for mounting on one or both sides.

**Underside Guards/Dust Covers**

Formed 16 ga. steel pans; removable.

**Bed Lengths**

5'-0", 7'-6", 10'-0", and 12'-0".

**Belt/Belt Lacing**

Black PVC-100 with friction surface top side and brushed bottom side.

No. 7 Alligator® lacing. Optional: Clipper No. 1a.

---

## **Finish**

Powder-coated - Satin Gray.

## **Assembly**

Right-hand drive/power unit will be furnished unless requested otherwise.

## **Auxiliary Take-Up Unit**

Optional manual and automatic (air) types.

## **Upper Bend**

Optional single-roller transition from incline (10°, 12-1/12°, or 15°) to horizontal. Roller adjustable for belt tracking.

## **Two-Pulley Hitch Unit**

Optional for transfer of materials between Style 3 conveyor's inclined and horizontal sections.

## **In-Line Transfer Unit**

Optional for transfer of materials "from upstream" horizontal conveyor to Style 1 or 3C conveyor.

## **Floor Supports**

Optional for elevations of 6" to 113" to top of belt. Ceiling hangers available.



---

## Styles 02 and 04 with Intermediate Drive

### Speed

30, 45, 60, 75, 90, 120, 150, and 180 fpm constant. Optional non-standard speed available within 30 to 180 fpm range.

### Capacity

10 lbs./ft. live load.

### Belt Width

12", 18", 24", 30", 36", 42", or 48".

### Intermediate Drive

Series SA2000 (900 lb. EBP) or Series SA2001 - Low Profile (800 lb. EBP).

### Power Unit

1/2 - 7-1/2 HP, C-Face, TEFC motor (Baldor and Reliance)

C-Face reducer (Grove and Reliance)

SA2000 - Under-hung mounting

SA2001 - Side-mounting

### End Idler

Model EIU with manual screw-adjusted pulley located at infeed and discharge ends of conveyor.

### Intermediate Sections

5-3/8" deep x 14 ga. formed steel box frame slider bed.

G196GH belt return rollers. One per 5' and 7'-6" sections, two per 10' and 12' sections.

Overall width is 3" greater than belt width.

### Side Guides

6" high x 16 ga. formed steel "Z" (two sides, full length).

Width between guides is belt width plus 1".

Optional 6" high with 30° flare and 18" high vertical guards for mounting on one or both sides.

### Underside Guards/Dust Covers

Formed 16 ga. steel pans; removable.

### Bed Lengths

10'-0", and 12'-0".

### Belt/Belt Lacing

Black PVC-100 with friction surface top side and brushed bottom side.

No. 7 Alligator<sup>®</sup> lacing. Optional Clipper No. 1a.

---

## **Finish**

Powder-coated - Satin Grey

## **Assembly**

Right-hand drive/power unit will be furnished unless requested otherwise.

Right-hand chain drive and guard located on left side when drive is mounted on inclined bed section of inclined Style 4 conveyor.

## **Auxiliary Take-Up Unit**

Optional manual and automatic (air) types.

## **Upper Bend**

Optional single-roller transition from incline (10°, 12-1/12°, or 15°) to horizontal. Roller adjustable for belt tracking.

## **Two-Pulley Hitch Unit**

Optional for transfer of materials between Style 4 conveyor's horizontal and inclined sections.

## **In-Line Transfer Unit**

Optional for transfer of materials "from upstream" Style 2 conveyor "to downstream" conveyor.

## **Floor Supports**

Optional for elevations of 6" to 113" to top of belt. Ceiling hangers available.

## End Drives

### Frame

10" deep x 24" long x 10 ga. formed steel side plates with bolted fill plate and cross members.

### Drive Pulley and Shaft

Series 600 - 6-5/16" diameter, lagged and edge crowned; keyed to 1-7/16" diameter CRS drive shaft.

Series 800 - 8-5/16" diameter, lagged and edge crowned; keyed to 1-11/16" diameter CRS drive shaft.

### Bearings

Grease packed precision bearing cartridge with two bolt flange-type housing.

### Snub Roller

G251AB roller. Adjustable for belt tracking.

### Take-Up Roller and Shaft

3-1/2" diameter, edge-crowned, with grease-packed precision bearings and 1-1/8" square axle. Manual screw adjustment provides 10" movement.

### Side Guides

6" or 18" high (two sides).

### Capacity

Series 600 - 473 lbs. effective belt pull.

Series 800 - 688 lbs. effective belt pull.

### Power Unit Mounting

Under-hung standard; optional side-mounted.

### Chain Guard

Fully enclosed and removable for maintenance.

### Width

15", 21", 27", 33", 39", 45", and 51".

### Belt Length

See "Belt Length", on page C - 20, for details.

### Underside Guard

See "Underside Guard (Dust Covers)", on page C - 16, and "Flare Transition Side Guides", on page C - 16, for details.

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## General Information

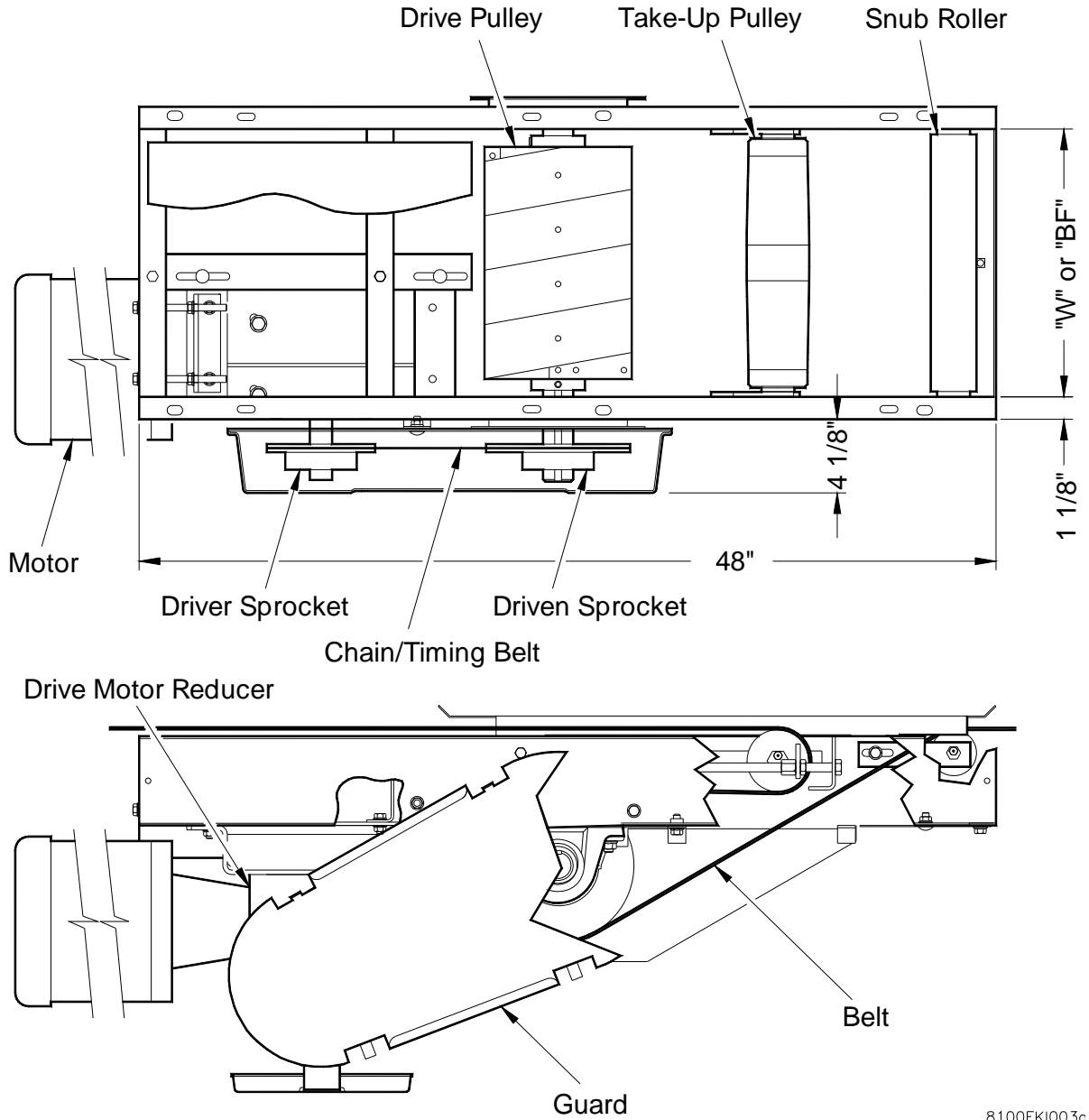
For one-way travel, an End Drive is located at the discharge end of all Style 1 (horizontal) and Style 3 (inclined) conveyors, and their modified variations.

All Style 1 and 3 conveyors are furnished with an "RH" End Drives unless requested otherwise.

An End Drive hand designation (RH or LH) refers to the side of the conveyor on which the power unit and chain drive is located as seen when looking in the direction of travel.

## Intermediate Drives

Intermediate Drives are available in two types; SA2000, and SA2001 Low Profile.



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Figure C - 1 SA2000 Intermediate Drive

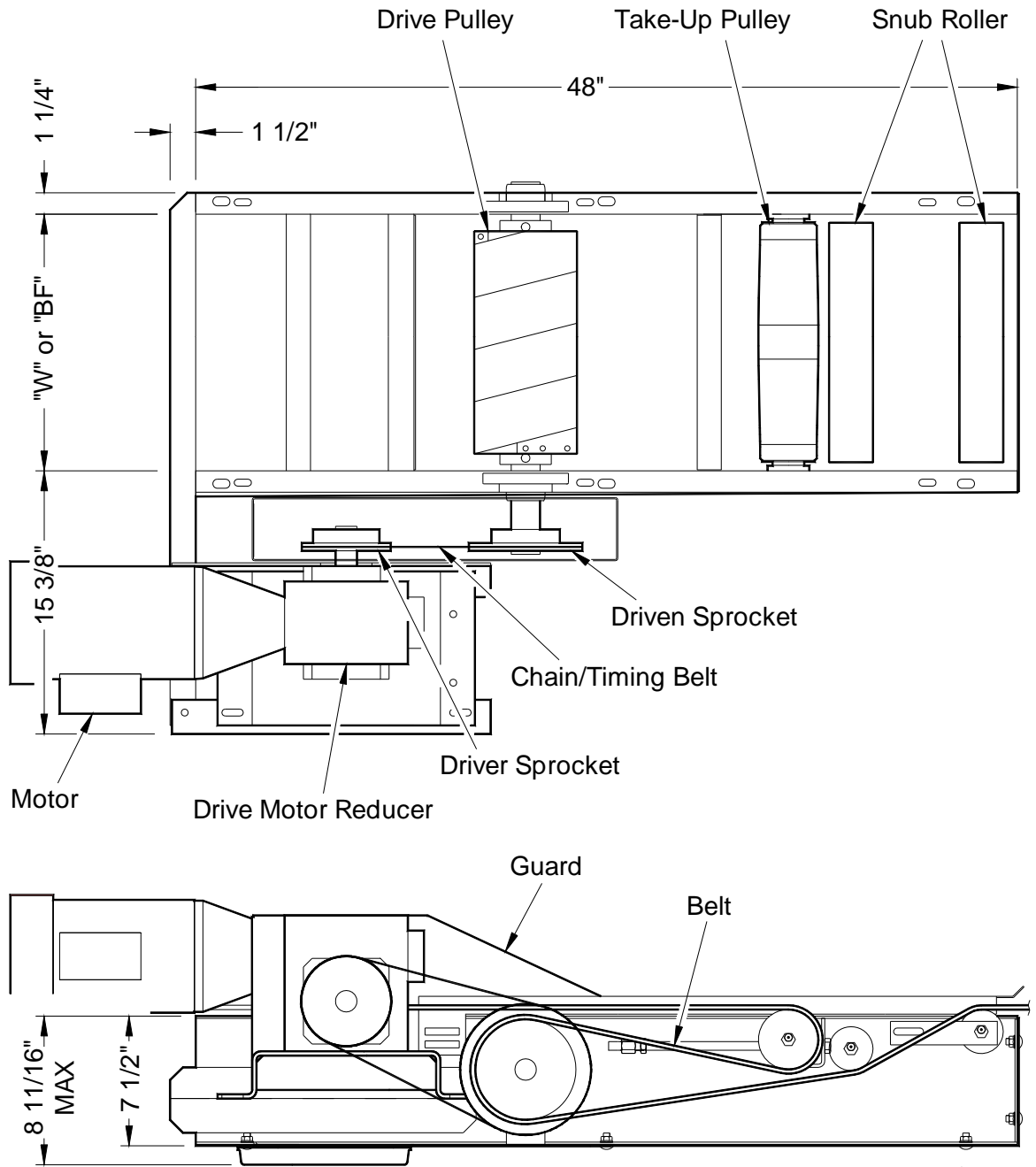


Figure C - 2 SA2001 Intermediate Drive - Low Profile

**Frame**

SA2000 - 5" deep x 48" long x 10 ga. Formed steel side rails with welded cross members and integral motor mounting.

SA2001 - 7-1/2" deep x 48" long x 10 ga. Formed steel side rails with welded cross members and integral motor mounting.

**Drive Pulley and Shaft**

SA2000 - 8-1/4" diameter straight faced lagged pulley with 1-11/16" diameter shaft and pre-lubricated pillow block bearings.

SA2001 - 5-7/8" diameter straight faced lagged pulley with 1-11/16" diameter shaft and flange bearings.

**Bearings**

All bearings are grease packed.

**Snub Roller**

2-9/16" diameter rollers with 11/16" diameter hex axle and B1150 bearings.

**Take-Up Roller and Shaft**

3-1/2 diameter crowned roller with 10" adjustment (20" belt), 1-1/16 hex axle and B11160 bearings.

**Capacity**

Table C 1 lists the EBP (effective belt pull) capacities for standard widths below, and above, 40" W.

Table C 1: SA2000 and SA2001 - EBP Capacities

Intermediate Drive	Between Frame (BF) Width "W"	EBP
SA2000	15", 21", 27", 33", 39"	900 lbs.
	45"	837 lbs.
	51"	762 lbs.
SA2001	15", 21", 27", 33", 39"	800 lbs.
	45"	737 lbs.
	51"	662 lbs.

**Mounting**

Intermediate Drives must be bolted to the bottom flanges of an Intermediate Section.

For horizontal conveyors they should be mounted so that the return run of the belt is "pulled" around the drive pulley first.

For incline/decline conveyors they should be mounted so that motor is located on the "uphill" side of the reducer. This is opposite the preferred "level" position but is necessary to ensure proper reducer lubrication.

---

## Safety Guarding

Sprockets, chain (or timing belt), and return belt are totally enclosed for safety. Drive and Take-Up pulleys are guarded below.

## Width “W” (BF)

15”, 21”, 27”, 33”, 39”, 45”, and 51”.

## Belt Width

12”, 18”, 24”, 30”, 36”, 42”, and 48”.

## General Information

For one-way travel, an Intermediate Drive should be located near the discharge end of all Style 2 (horizontal) and Style 4 (inclined) conveyors and their modified variations.

An Intermediate Drive designation (RH or LH) refers to the side of the conveyor (horizontal or decline) on which the power unit and chain drive are located as seen when looking in the direction of travel.

For ascending incline conveyors, the RH or LH assembly designation of the Power Unit and Intermediate Drive is opposite that of the observed location when looking in the direction of travel. For example, a chain drive located on the right hand side of the conveyor (looking in the direction of travel) is called out as a LH assembly.



## **Power Units**

### **Motor**

1/2 through 7-1/2 HP - C-Face TEFC (Baldor or Reliance).

SA2000 and SA2001 Chain Drive - 1/2, 3/4, 1, 1-1/2, 2, and 3 HP (Baldor or Reliance).

SA2000 and SA2001 Timing Belt Drive - 1/2, 3/4, 1, 1-1/2, 2, 3, 5, and 7-1/2 HP (Baldor or Reliance).

Solenoid actuated brake motor supplied on all incline/decline conveyors.

Standard - 230/460VAC - 3PH - 60HZ.

Optional - 575VAC - 3PH - 60HZ and 115VAC - 1PH - 60HZ.

### **Reducer**

C-Face, Right Angle Worm Gear (Grove or Reliance).

5:1 to 60:1 ratios.

### **Speeds**

Series 600 and 800 End Drives - 30, 45, 60, 75, 90, 120, 150, 180, 200, 250, 300, 350 and 400 fpm.

SA2000 and SA2001 Chain Drive -30, 45, 60, 75, 90, 105, 120, 135, 150, 165, and 180 fpm.

SA2000 and SA2001 Timing Belt Drive - 30, 45, 60, 75, 90, 105, 120, 135, 150, 165, 180, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450, 475 and 500 fpm

### **Chain Drive**

Series 600 and 800 - RC50, RC60, RC80 and RC100 (all speeds).

SA2000 and SA2001 - RC60 (up to 180 fpm).

### **Chain Sprockets**

Series 600 and 800 - RC60, RC80, and RC100, keyed Taper-Lock hubs, hardened teeth or bored and keyed Type B hubs depending on speed/horsepower requirements.

SA2000 and SA2001 - RC60, keyed Taper-Lock hubs, hardened teeth.

### **Timing Belt Drive**

SA2000 and SA2001 - 8mm/14mm (all speeds).

### **Timing Belt Sprockets**

SA2000 and SA2001 - 8mm / 14mm keyed Taper-Lock hubs.

### **Power Unit Mounting**

Series 600 and 800 End Drives - Optional under-hung or side-mount.

SA2000 - Under-hung mount (only).

SA2001 - Side-mount (only).

---

## **End Idlers**

### **Frame**

5" deep x 10" long x 10 ga. formed steel side plates with bolted fill plate and cross members.

### **Idler Roller/Shaft**

3-1/2" diameter, edge crowned, with grease packed precision bearings and 1-1/8" square axle. Manual screw type take-up provides 1" movement for belt tracking.

### **Snub Roller**

G251GT roller. Adjustable for belt tracking.

### **Side Guides**

6" or 18" high (two sides).

### **Width**

15", 21", 27", 33", 39", 45", and 51".

### **Belt Length**

See "Belt Length", on page C - 20, for details.

### **General Information**

For one-way travel, an End Idler is located at the infeed and discharge ends of all Style 2 (horizontal) and Style 4 (inclined) conveyors, and their modified variations.

---

## **Auxiliary Center Take-Ups**

### **Manual Take-Up**

#### **Frame**

7" deep x 30" long x 10 ga. formed steel side plates with bolted cross members.

#### **Take-Up/Idler Roller/Shaft**

3-1/2" diameter, edge crowned, with grease packed precision bearings and 1-1/8" square axle. Manual screw adjustment; idler adjustable for belt tracking.

#### **Take-Up Movement**

6" pulley movement.

#### **Snub Roller**

G251GT roller. Adjustable for belt tracking.

#### **Belt Length**

See "Belt Length", on page C - 20, for details.

#### **Underside Guard**

See "Underside Guard (Dust Covers)", on page C - 16, and "Flare Transition Side Guides", on page C - 16, for details.

#### **General Information**

For one-way travel, an auxiliary Center Take-Up unit (CTU) is located behind the drive unit on the "low-tension" side of the drive unit.

### **Air Take-Up**

#### **Frame**

14" deep x 62" long x 10 ga. formed steel side plates with bolted fill plate and cross members.

#### **Take-Up Pulley and Shaft**

6" diameter, edge crowned, keyed to 1-15/16" diameter shaft mounted in grease packed precision bearings.

#### **Idler Pulley and Shaft**

6" diameter, edge crowned, keyed to 1-15/16" diameter shaft mounted in grease packed precision bearings. Adjustable for belt tracking.

#### **Air Cylinder**

4" diameter x 30" stroke, single-acting.

#### **Air Pressure Regulator**

60 psi.

#### **Take-Up Movement**

30" movement.

---

## Snub Roller

G251 roller. Adjustable for belt tracking.

## Width

15", 21", 27", 33", 39", 45", and 51".

## Belt Length

See "Belt Length", on page C - 20, for details.

## General Information

For one-way travel, an automatic Auxiliary Center Take-Up unit is located on the "low-tension" side of the drive unit.

---

## Intermediate Section

### Frame

5-3/8" deep x 14 ga. formed steel bed with bolted cross members. All necessary mounting holes for attaching side guides and optional Underside Dust Covers.

### Return Rollers

G196GH belt return rollers. One per 5' and 7'-6" sections, two per 10' and 12' sections. Adjustable for belt tracking.

### Widths

15", 21", 27", 33", 39", 45", and 51".

### Lengths

5'-0", 7'-6", 10'-0", and 12'-0".

### Couplers

4-bolt splice flats bolted at joint of two adjoining sections.

### Underside Guard

See "Underside Guard (Dust Covers)", on page C - 16, for details.

### Side Guides

#### 6" Side Guides

6" high x 1-1/4" wide (top flange) with 2" wide (bottom flange) x 16 ga. formed "Z" guard bolted to top of slider bed. Bottom flange extends inwardly beneath the belt. Overall length of each guard is 1" longer than the bed or end component providing an overlapping tab at each end.

#### 6" Flared Side Guides

Same as 6" side guides except formed with 30° flare from vertical.

#### 18" Side Guides

Same as 6" side guides except formed vertical stiffener members. Bolted to top and sides of slider bed.

### Length

For 5'-0", 7'-6", 10'-0", and 12'-0" long bed sections and terminal end components.

### Couplers

2-bolt splice flats are bolted to top flanges of two adjoining guards.

---

## **Guards and Side Guides**

### **Underside Guard (Dust Covers)**

#### Guard

16 ga. steel with formed 5/8" stiffener flange.

#### Width

15", 21", 27", 33", 39", 45", and 51".

#### Lengths

5'-0", 6'-0", and 7'-6".

### **Flare Transition Side Guides**

#### 6" Side Guides

6" high x 24" long formed "Z" with transition from 30° to vertical bolted to top of slider bed. Bottom flange extends inwardly beneath the belt. Formed with 30° flare from vertical.

#### Length

Overall length of side guides is 1" longer than bed providing overlapping at each end.

#### Couplers

2-bolt splice flats are bolted to top flanges of two adjoining guards.

#### Assembly

RH or LH units available.

---

## Upper Bend Unit

### Frame

6" deep x 10" long x 10 ga. formed steel side plates with bolted cross members.

### Upper Bend Roller/Shaft

No. G251HS roller, adjustable for belt tracking.

### Snub Roller

No. G251GT roller, adjustable for belt tracking.

### Side Guides

6" or 18" high (TWO sides).

### Transition Angle

10°, 12-1/2°, and 15° (fixed).

### Width

15", 21", 27", 33", 39", 45", and 51".

### Belt Length

See "Belt Length", on page C - 20, for details.

### Underside Guard

See "Underside Guard (Dust Covers)", on page C - 16, and "Flare Transition Side Guides", on page C - 16, for details.

---

## Two-Pulley Hitch

### Frame

10" deep x 30" long x 10 ga. formed steel side plates with bolted cross members.

### End Idler Roller and Shaft

3-1/2" diameter, edge crowned, with grease packed precision bearings and 1-1/8" square axle. 1" movement for belt tracking.

### Snub Roller

G251GT roller. Adjustable for belt tracking.

### Side Guides

6" or 18" high (two sides).

### Transition Angle

Horizontal and inclined (10°, 12-1/2°, and 15° fixed).

### Width

15", 21", 27", 33", 39", 45", and 51".

### Belt Length

See "Belt Length", on page C - 20, for details.

### Underside Guard

See "Underside Guard (Dust Covers)", on page C - 16, and "Flare Transition Side Guides", on page C - 16, for details.

### General Information

For one-way travel, a Two-Pulley Hitch unit is used to provide a transition between horizontal and inclined sections of the same conveyor.



---

## **Inline Transition Unit**

### **Frame**

10" deep x 24" long for horizontal (14" long for inclined) x 10 ga. formed steel side plates with bolted cross members.

### **End Idler Roller and Shaft**

3-1/2" diameter, edge crowned, with grease packed precision bearings and 1-1/8" square axle. 1" movement for belt tracking.

### **Snub Roller**

G251GT roller. Adjustable for belt tracking.

### **Side Guides**

6" or 18" high (two sides).

### **Transition Angle**

Fixed, horizontal, and inclined (10°, 12-1/2°, and 15°).

### **Width**

15", 21", 27", 33", 39", 45", and 51".

### **Belt Length**

See "Belt Length", on page C - 20, for details.

### **Underside Guard**

See "Underside Guard (Dust Covers)", on page C - 16, and "Flare Transition Side Guides", on page C - 16, for details.

### **General Information**

For one-way travel, an In-Line Transition unit provides a connection between two separate conveyors.

## Belting

### Type

#### PVC-100 Friction Surface

For horizontal and inclined applications up through 15°, Black Polyvinyl Chloride impregnated single ply woven polyester, friction surface on carrying side and brush surface on pulley side.

#### Thickness

3/32" (nominal).

#### Temperature Range

0° to plus 200° Fahrenheit.

### Lacing

Alligator® #7, or Clipper® #1a.

### Belt Length

Use the following procedure to determine the "total length" of belting required:

1. Double the figure for the required "bed length". For example, if the required bed length is 5', then double the figure to 10'.
2. Add the belt length in Table C 2, for the conveyor style and drive series, to the figure determined in step 1.

The sum of these two figures is the "total length" of belting required.

Table C 2: Belt Lengths

Style	End Drive		Intermediate Drive	
	600	800	SA2000	SA2001
1	5'-0"	6'-0"	-	-
2	-	-	8'-0"	8'-0"
3B	9'-0"	10'-0"	-	-
3C	5'-0"	6'-0"	-	-
3F	15'-0"	16'-0"	-	-
3G	14'-0"	15'-0"	-	-
4B	-	-	10'-0"	11'-0"
4C	-	-	8'-0"	8'-0"
4D	-	-	15'-0"	16'-0"
4E	-	-	14'-0"	15'-0"

**SECTION D:ENGINEERING DATA**

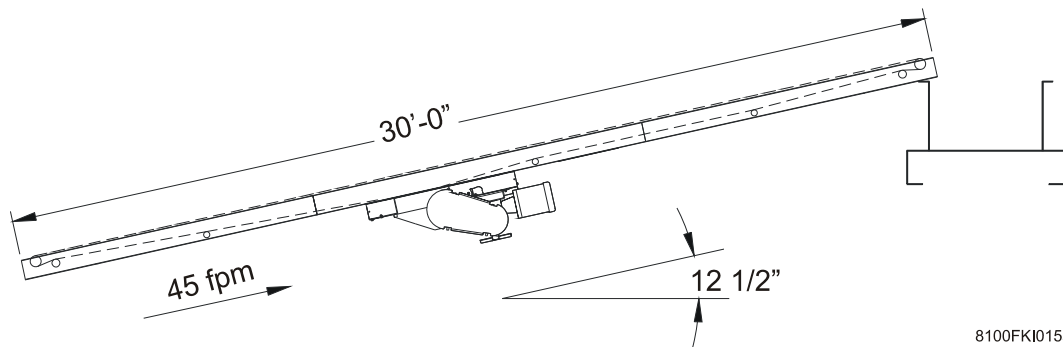
Prepare a layout drawing for all horizontal or inclined applications. The drawing should identify all required equipment elements and clearance requirements for building structures, aisles, tie-ins with adjoining conveyors, equipment, etc. The drawing should be drawn to scale and must be accurate.

**Determining the Maximum Angle of Incline**

The layout drawing should show the required path and angle of incline of the conveyor.

Trash Belt Conveyors may be inclined up to 15° (using the standard friction surface belting); the angle of incline should be kept as shallow as possible.

Optional Transition Components are available for fixed incline angles of 10°, 12-1/2°, and 15°. Figure D - 1 illustrates a Style 4C Inclined “Feeder” Conveyor; 30’-0” long, 21” width, 12-1/2° incline, and 45 fpm.



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Figure D - 1 Style 4C, Inclined “Feeder” Conveyor

## Determining the Conveyor Length

An accurate conveyor layout drawing may be scaled to determine the lengths of the horizontal and inclined portions of the overall system.

For horizontal conveyors, the length is the overall measurement of the unit on the drawing.

For inclined conveyors, the overall conveyor length is the sum of the lengths of the parts, measured along the carrying surface of the unit. At points where the unit changes from inclined to horizontal, or vice versa, a single point should be established that is the end point of two measurements, one in each plane of travel. At the lower level, for instance, that point would be the intersection of the two planes of the carrying beds. At an upper bend, that point would be where extensions of the carrying beds meet. It is important that the overall length of the unit be the sum of the measurements taken along the conveyor bed(s), with no gaps and no overlaps.

If an accurate conveyor layout drawing is not available, then dimensioned sketches such as that shown in Figure D - 2 can assist in the use of one of the indicated methods of calculation. Figure D - 2 illustrates a Style 4D Horizontal/Inclined "Collector" Conveyor; 130'-0" long, 39" wide, 15° incline, 60 fpm.

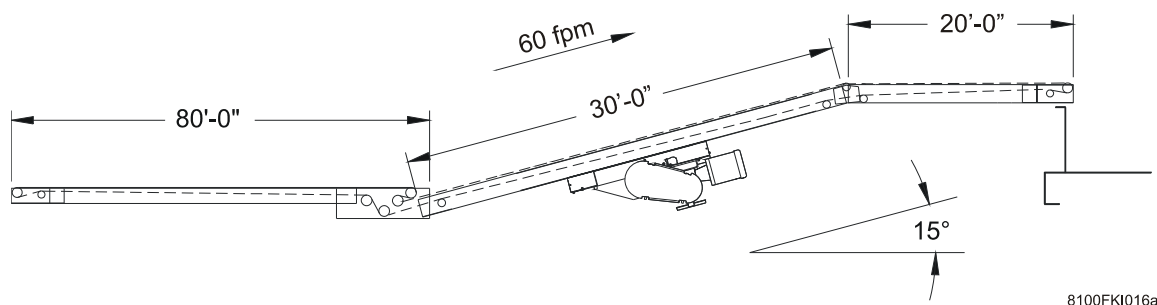


Figure D - 2 Style 4D, Horizontal/Inclined Collector Conveyor

## Calculating Live Load

Use the following formula to calculate the live load requirement for either a horizontal or inclined belt conveyor.

When weight and number of loads on a conveyor are known:

$$\text{Live Load (lbs./ft.)} = \frac{\text{Total Weight on Conveyor (lbs.)}}{\text{Conveyor Length (ft.)}}$$

Example a: "Feeder" line live load = 5 lbs./ft.

It is difficult to determine just what the loading of a Trash Belt Conveyor will be. The following live load rates are offered as guidelines for Trash Belt Conveyor applications.

For feeder conveyor, live load = 5 lbs./ft.

For collector conveyors, live load = 10 lbs./ft.

Example b: "Collector" line live load = 10 lbs./ft.

## Determining the Effective Belt Pull (EBP)

From Table D 1, find the conveyor's pull requirement based on its width, live load, and angle of incline. Multiply the pull by the conveyor's length. Interpolate live loads or angles of incline not shown.

$$\text{Effective Belt Pull} = \text{Pull (lbs./ft.)} \times \text{Conveyor Length (ft.)}$$

Table D 1: Belt Pull Values (lbs./ft.)

Width (Inches)	Live Load (lbs./ft.)	Angle of Incline			
		0°	10°	12-1/2°	15°
15	0	0.31	0.31	0.31	0.31
	5	2.07	3.09	3.35	3.59
	10	3.84	5.88	6.38	6.88
21	0	0.47	0.47	0.47	0.47
	5	2.23	3.25	3.50	3.75
	10	3.99	6.04	6.54	7.04
27	0	0.62	0.62	0.62	0.62
	5	2.39	3.41	3.66	3.91
	10	4.15	6.20	6.70	7.20
33	0	0.78	0.78	0.78	0.78
	5	2.55	3.57	3.82	4.07
	10	4.31	6.36	6.86	7.36
39	0	0.94	0.94	0.94	0.94
	5	2.71	3.73	3.98	4.23
	10	4.47	6.51	7.02	7.52
45	0	1.10	1.10	1.10	1.10
	5	2.86	3.89	4.14	4.39
	10	4.63	6.67	7.18	7.67
51	0	1.25	1.26	1.26	1.26
	5	3.02	4.04	4.30	4.55
	10	4.79	6.83	7.33	7.83

The effective pull requirements for the horizontal and inclined sections should be calculated separately and then combined for conveyors with two-pulley hitch (Styles 3F or 3G; 4D or 4E), conveyors with upper bend units.

Example a: A Style 4C Inclined “Feeder” Conveyor (5lbs./ft. live load), 21” width, 12-1/2° incline, 30’-0” long. See Figure D - 3.

Based on Table D 1 for 21”, 5 lbs./ft, and 12-1/2° incline.

Pull = 3.5 lbs./ft.

Effective Pull = 3.5 lbs./ft. × 30’ = 105 lbs.

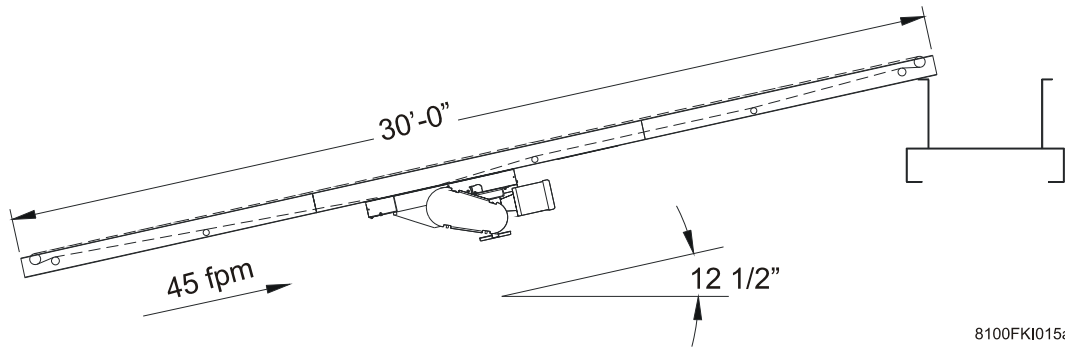


Figure D - 3 Style 4C, Inclined Feeder Conveyor

Example b: A Style 4D Horizontal Inclined “Collector” Conveyor (10 lbs./ft. live load), 39” width, 15° incline, 130’-0” long. See Figure D - 4.

Based on Table D 1 for 39” width, 10 lbs./ft.

Live load and horizontal travel:

Pull = 4.31 lbs./ft.

Effective Pull (A) = 4.31 lbs./ft. x 100’ -0” = 431 lbs.

Based on Table D 1 for 33” width, 10 lbs./ft.

Live load and 15° incline travel:

Pull = 7.36 lbs./ft

Effective Pull (B) = 7.36 lbs./ft. x 30’-0” = 221 lbs.

Total Effective Pull calculation:

Effective Pull (A) = 431 lbs.

Effective Pull (B) = 221 lbs.

Total Effective Pull = 652 lbs.

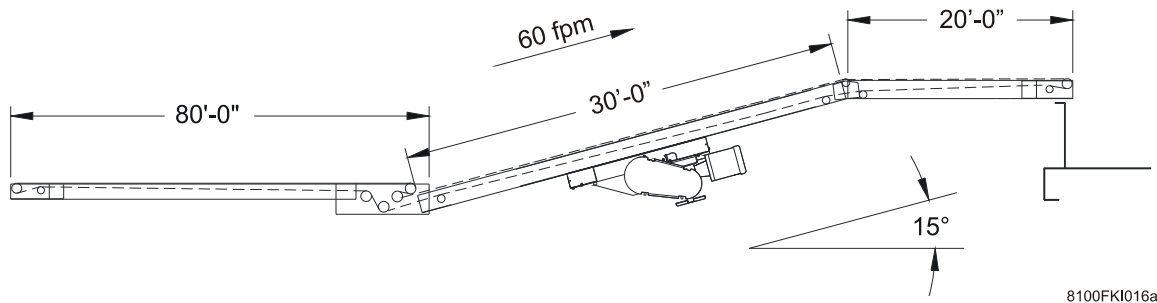


Figure D - 4 Style 4D, Horizontal Inclined Collector Conveyor

### Selecting the Drive Series

Based on the conveyor's Style and Effective Pull requirements, use Table D 2 to select the Drive Unit (series). A larger series unit may be used if desired.

Table D 2: Drive Unit Capacity - (EPT)

Conveyor	End Drives		Intermediate Drives	
	600	800	SA2000	SA2001
Styles 1 and 3	473 lbs.	688 lbs.	-	-
Styles 2 and 4	-	-	900 lbs.	800 lbs.

Example a: Based on 105 lbs. effective pull and the requirement for an End Drive, a Series 600 End Drive unit is required.

Example b: Based on 652 lbs. effective pull and the requirement for a Intermediate Drive, an SA2000 Intermediate Drive unit is required.



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## Determining the Horsepower

Based on the conveyor's drive series and type, speed, and effective pull requirements, use Table D 3, Table D 4, or Table D 5 to determine the power unit horsepower requirement. Select the "lowest" horsepower with effective pull capacity that exceeds the conveyor's calculated requirement.

### Special Start-Up Condition

If the conveyor must:

- a) "start" when loaded with more than 70% of its calculated live load; and
- b) the effective pull capacity of the selected horsepower in Table D 3 is highlighted, it is recommended that either an electrical "soft-start" unit be used with the power unit (preferred) or the selected "drive unit" be upgraded to the next higher series.

The actual capacities of these highlighted power units exceed the drive unit capacity by such a margin that a properly tensioned belt will probably slip on the drive pulley under this "loaded start-up" condition or cause other component damage.

Table D 3: Series 600 and 800 End Drive Power Unit Capacity - (EP)

Speed fpm	Horsepower							
	1/2	3/4	1	1-1/2	2	3	5	7-1/2
<b>Series 600 Power Unit</b>								
30	297	446	<b>473</b>					
45	216	348	464	<b>473</b>				
60	193	284	378	<b>473</b>				
75	156	249	332	473				
90	123	192	279	317	473			
120	101	151	207	317	428	<b>473</b>		
150	90	135	179	261	352	<b>473</b>		
180	70	106	141	214	292	449	<b>473</b>	
200	66	99	132	200	272	423	<b>473</b>	
250	52	78	104	158	215	334	<b>473</b>	
300	47	70	94	191	186	288	461	<b>473</b>
350	40	60	79	119	163	244	390	<b>473</b>
400	34	52	69	103	141	211	339	<b>473</b>
<b>Series 800 Power Unit</b>								
30	282	381	508	<b>688</b>				
45	226	359	451	652	<b>688</b>			
60	187	297	396	506	672	<b>688</b>		
75	152	242	322	472	627	<b>688</b>		
90	128	219	292	375	509	<b>688</b>		
120	105	158	216	332	416	593	<b>688</b>	
150	87	131	174	254	342	512	688	
180	74	111	148	224	305	437	688	
200	64	96	128	194	265	411	623	<b>688</b>
250	53	80	107	162	221	342	534	688
300	46	68	91	137	181	280	448	609
350	39	58	77	118	158	246	394	542
400	33	50	67	100	137	212	341	478

Table D 4: SA2000 Intermediate Drive Power Unit Capacity - (EP - lbs.)

Speed (fpm)	Reducer Mfg.	Drive Type	Horsepower							
			1/2	3/4	1	1-1/2	2	3	5	7-1/2
30	Grove	RC	361	553	728	900				
		TB	371	574	776	900				
	Reliance	RC	303	490	677	900				
		TB	324	514	678	900				
45	Grove	RC	241	369	485	749				
		TB	261	391	536	837				
	Reliance	RC	202	327	451	677				
		TB	229	362	483	748				
60	Grove	RC	193	293	391	603	816	900		
		TB	208	312	428	655	900			
	Reliance	RC	172	272	362	563	750			
		TB	182	273	399	612	816			
75	Grove	RC	154	235	313	482	653	900		
		TB	173	259	346	534	725	900		
	Reliance	RC	137	217	290	450	600			
		TB	161	242	336	503	671	900		
90	Grove	RC	144	215	287	432	587	900		
		TB	147	221	297	445	617	900		
	Reliance	RC	131	197	281	422	562	843		
		TB	137	205	273	437	577	900		
105	Grove	RC	123	185	246	370	503	763		
		TB	131	197	263	394	532	793	900	
	Reliance	RC	113	169	241	362	482	723		
		TB	124	185	247	382	517	742		
120	Grove	RC	110	166	221	334	452	674		
		TB	114	171	229	351	468	711	900	
	Reliance	RC	103	154	206	329	434	651		
		TB	108	162	216	334	446	679		
135	Grove	RC	98	147	196	297	402	599		
		TB	102	152	204	307	409	624	900	
	Reliance	RC	91	137	183	293	386	579		
		TB	96	144	192	297	396	604		
150	Grove	RC	91	137	183	274	368	599		
		TB	95	142	189	286	381	561	900	
	Reliance	RC	87	130	173	267	357	544		
		TB	91	136	182	273	371	543		

Table D 4: SA2000 Intermediate Drive Power Unit Capacity - (EP - lbs.) (Continued)

Speed (fpm)	Reducer Mfg.	Drive Type	Horsepower							
			1/2	3/4	1	1-1/2	2	3	5	7-1/2
165	Grove	RC	83	125	166	249	335	508		
		TB	86	129	172	260	346	510	900	
	Reliance	RC	79	118	157	243	324	494		
		TB	83	124	165	248	331	494		
180	Grove	RC	76	114	152	229	307	466		
		TB	79	118	158	239	319	480	789	900
	Reliance	RC	72	108	144	223	297	453		
		TB	76	114	152	227	303	470	783	
200	Grove	TB	72	108	144	217	289	433	731	900
	Reliance		70	104	139	209	278	423	705	
225	Grove	TB	64	96	128	193	257	385	644	900
	Reliance		62	93	124	186	248	378	626	
250	Grove	TB	58	86	115	173	231	347	585	900
	Reliance		56	84	111	167	223	341	564	
275	Grove	TB	53	79	106	158	211	317	530	805
	Reliance		52	78	104	157	203	310	513	
300	Grove	TB	48	73	97	145	195	292	469	738
	Reliance		48	72	96	144	191	287	470	
325	Grove	TB	45	67	89	134	179	270	433	681
	Reliance		44	66	88	132	177	265	449	
350	Grove	TB	41	62	83	124	166	251	402	627
	Reliance		41	62	82	123	164	246	417	
375	Grove	TB	39	58	77	116	155	234	375	583
	Reliance		38	57	77	115	153	230	398	
400	Grove	TB	36	54	73	109	145	219	352	554
	Reliance		36	54	72	108	144	215	365	
425	Grove	TB	34	51	68	102	138	206	331	522
	Reliance		34	51	68	101	135	203	342	
450	Grove	TB	32	48	64	97	129	195	313	493
	Reliance		32	48	64	96	128	191	323	
475	Grove	TB	31	46	61	92	122	185	296	467
	Reliance		30	45	60	91	121	181	306	
500	Grove	TB	29	44	58	87	116	176	293	422
	Reliance		29	43	57	86	115	172	291	

Note: RC = Roller Chain; TB = Timing Belt

Table D 5: SA2001 Intermediate Drive Power Unit Capacity - (EP - lbs.)

Speed (rpm)	Reducer Mfg.	Drive Type	Horsepower							
			1/2	3/4	1	1-1/2	2	3	5	7-1/2
30	Grove	RC	370	557	769					
		TB	371	574	728					
	Reliance	RC	324	513	715					
		TB	324	513	677					
45	Grove	RC	257	391	521	800				
		TB	261	391	536	800				
	Reliance	RC	229	362	483	750				
		TB	229	362	483	715				
60	Grove	RC	206	309	416	645	800			
		TB	216	324	432	668	800			
	Reliance	RC	183	274	398	616	800			
		TB	197	296	422	633	800			
75	Grove	RC	172	259	345	519	704	800		
		TB	177	267	356	539	730	800		
	Reliance	RC	158	237	338	507	675	800		
		TB	164	247	329	527	695	800		
90	Grove	RC	147	221	294	445	603	800		
		TB	152	230	307	460	609	800		
	Reliance	RC	137	206	274	439	579	800		
		TB	144	216	288	446	579	800		
105	Grove	RC	131	196	261	392	526	799		
		TB	131	196	263	394	532	800		
	Reliance	RC	124	185	247	382	509	777		
		TB	124	185	247	382	509	744		
120	Grove	RC	114	171	229	343	460	699		
		TB	144	171	230	345	460	702	800	
	Reliance	RC	108	162	216	334	446	680		
		TB	108	162	216	334	446	680		
135	Grove	RC	102	152	203	305	409	621		
		TB	105	158	212	317	423	624	800	
	Reliance	RC	96	144	192	297	396	604		
		TB	101	152	202	303	414	604		
150	Grove	RC	91	137	183	274	368	559		
		TB	95	142	189	286	381	576	800	
	Reliance	RC	87	130	173	267	357	544		
		TB	91	136	182	273	372	566	800	

Table D 5: SA2001 Intermediate Drive Power Unit Capacity - (EP - lbs.) (Continued)

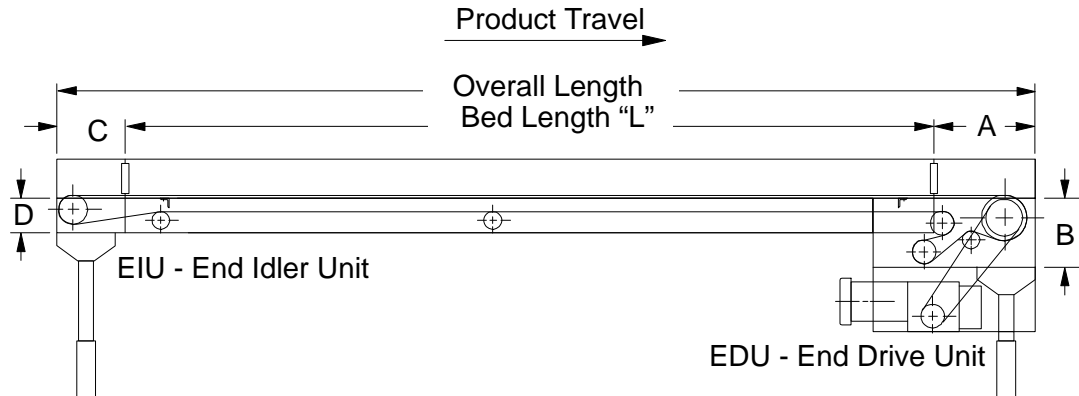
Speed (fpm)	Reducer Mfg.	Drive Type	Horsepower							
			1/2	3/4	1	1-1/2	2	3	5	7-1/2
165	Grove	RC	83	125	166	249	335	508		
		TB	86	129	172	260	346	523	800	
	Reliance	RC	79	118	157	243	324	494		
		TB	83	124	165	248	331	508	800	
180	Grove	RC	79	118	158	237	316	476		
		TB	80	120	160	241	321	482	800	
	Reliance	RC	76	114	152	227	303	466		
		TB	77	116	155	232	309	473	800	
200	Grove	TB	72	108	144	217	289	436	731	800
	Reliance		70	104	139	209	278	426	620	
225	Grove	TB	64	96	128	192	257	385	650	800
	Reliance		62	93	124	186	247	379	592	
250	Grove	TB	58	86	115	173	231	347	585	800
	Reliance		56	84	111	167	223	341	568	
275	Grove	TB	53	79	106	158	211	319	512	800
	Reliance		52	78	104	157	209	315	513	
300	Grove	TB	48	73	97	145	193	292	469	739
	Reliance		48	72	96	144	191	289	482	
325	Grove	TB	45	67	89	134	179	270	433	682
	Reliance		44	66	88	133	177	265	405	
350	Grove	TB	41	62	83	124	166	251	402	633
	Reliance		41	62	82	123	164	246	413	
375	Grove	TB	39	58	77	116	155	234	375	591
	Reliance		38	57	77	115	153	230	385	
400	Grove	TB	36	54	73	109	145	219	352	554
	Reliance		36	54	72	108	144	215	361	
425	Grove	TB	34	51	68	102	137	206	331	522
	Reliance		34	51	68	101	135	203	340	
450	Grove	TB	32	48	64	97	129	195	313	493
	Reliance		32	48	64	96	128	191	321	
475	Grove	TB	31	46	61	92	122	185	296	467
	Reliance		30	45	60	91	121	181	304	
500	Grove	TB	29	44	58	87	116	175	281	443
	Reliance		29	43	57	86	115	172	262	

Note: RC = Roller Chain; TB = Timing Belt

**SECTION E: LAYOUT DIMENSIONS**

This section contains dimensional drawings of Powered Trash Belt Conveyor equipment.

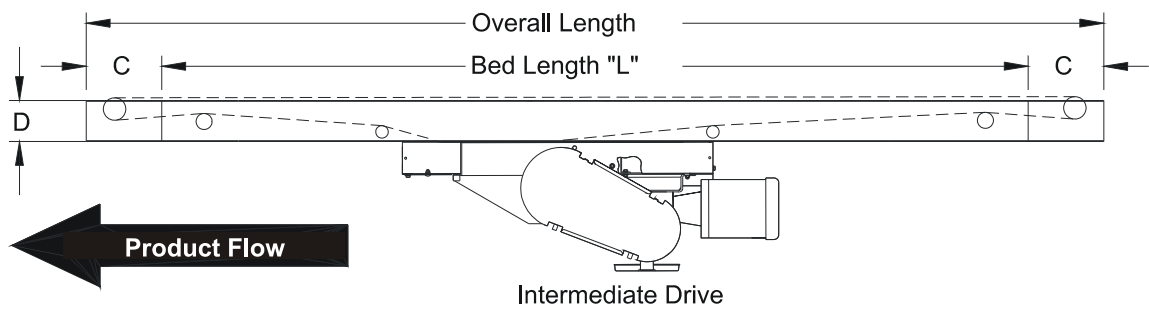
**Styles 1 and 3E with End Drive**



Series	A	B	C	D
600	15"	10"	10"	5"
800	15"	10"	10"	5"
1000	NA	NA	10"	10"

Figure E - 1 Styles 1 and 3E with End Drive

**Styles 2 and 4C with Intermediate Drive**



8100FK1019a

End Idler		
Series	C	D
600	10"	5"
800	10"	5"

Figure E - 2 Styles 2 and 4C with Intermediate Drive

### Intermediate Sections - Side Guides

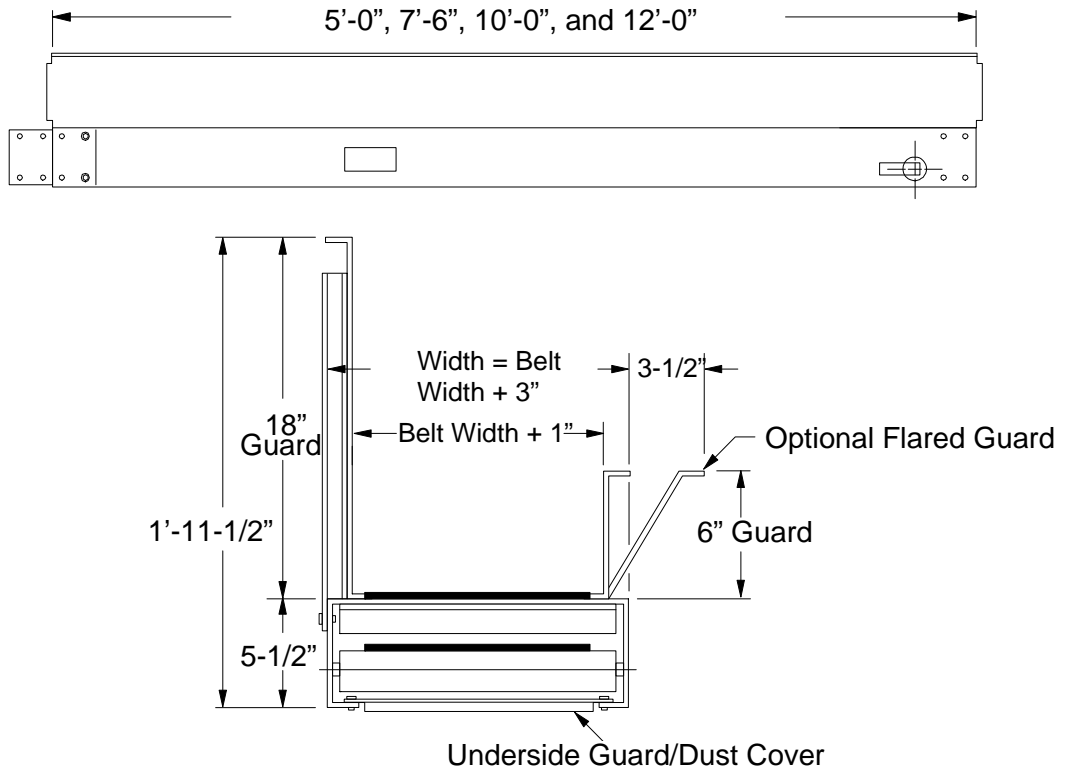


Figure E - 3 Intermediate Section



**End Drive Unit**

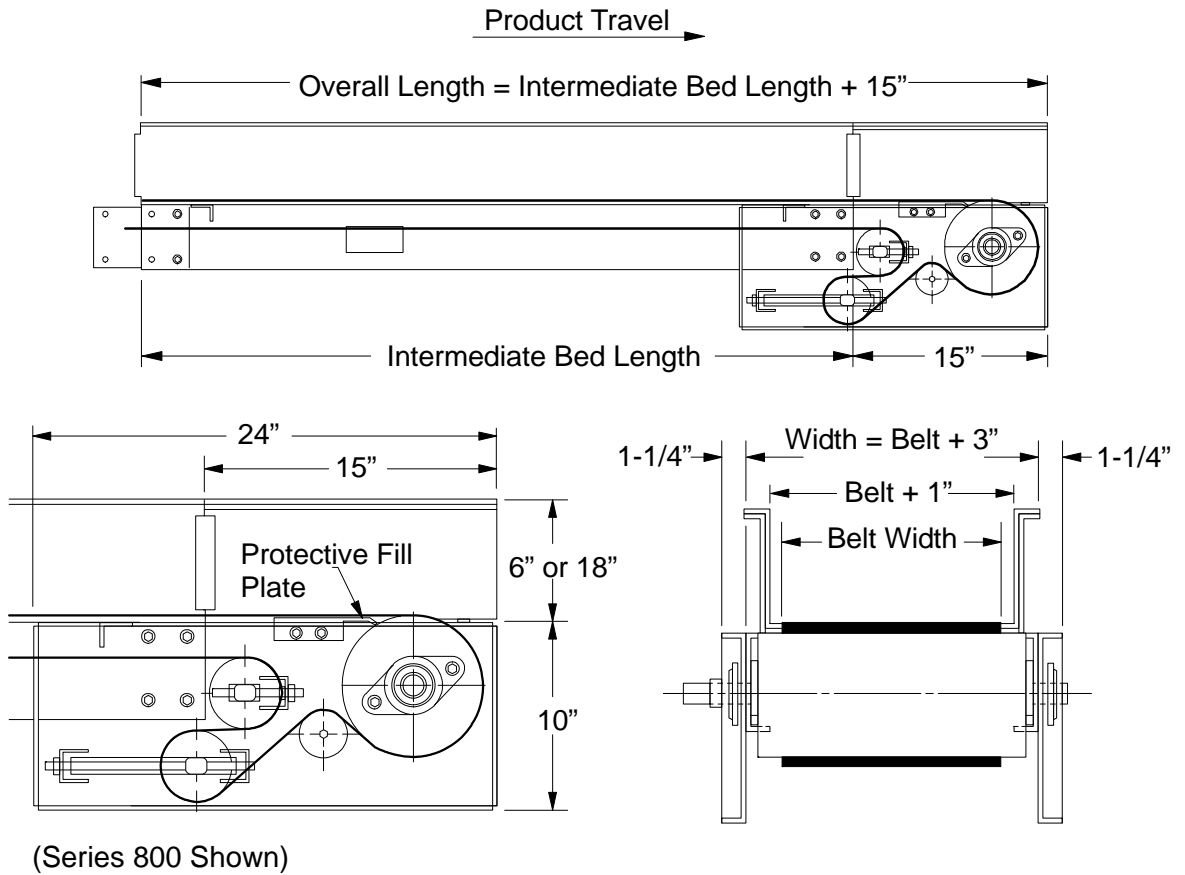
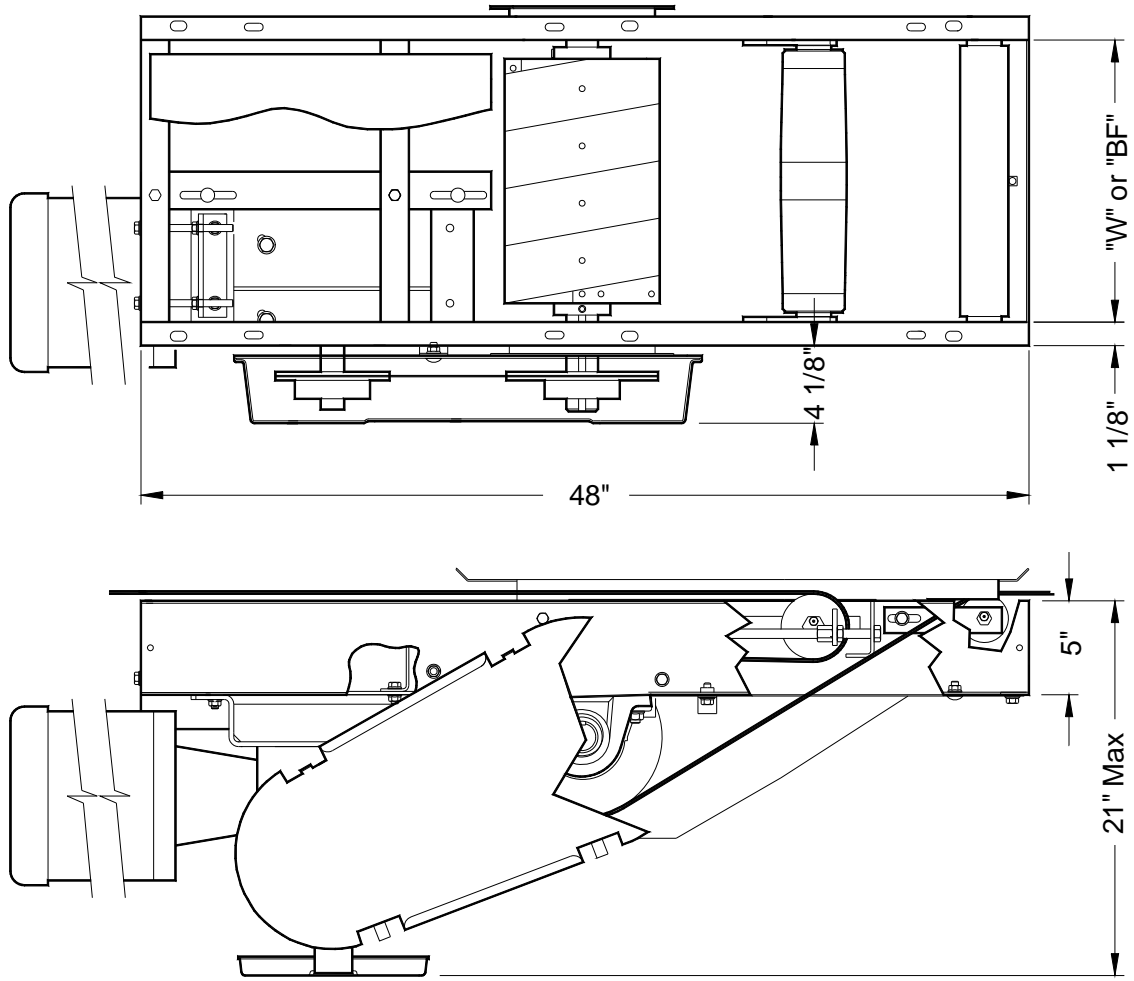


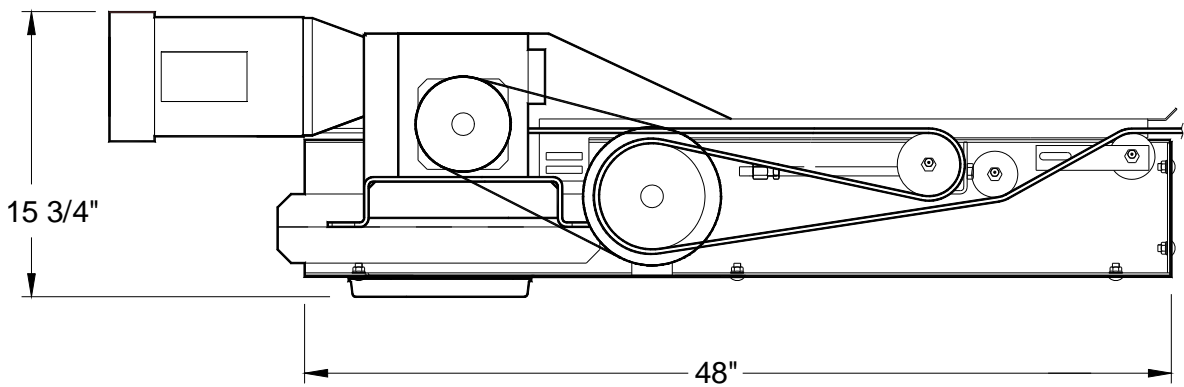
Figure E - 4 End Drive Unit - Series 600 and 800

### Intermediate Drives



8100FKI007a

Figure E - 5 SA2000 - Intermediate Drive



8100FKI010a

Figure E - 6 SA2001 - Intermediate Drive - Low Profile

## Auxiliary Take-Up Unit - Manual and Automatic (Air)

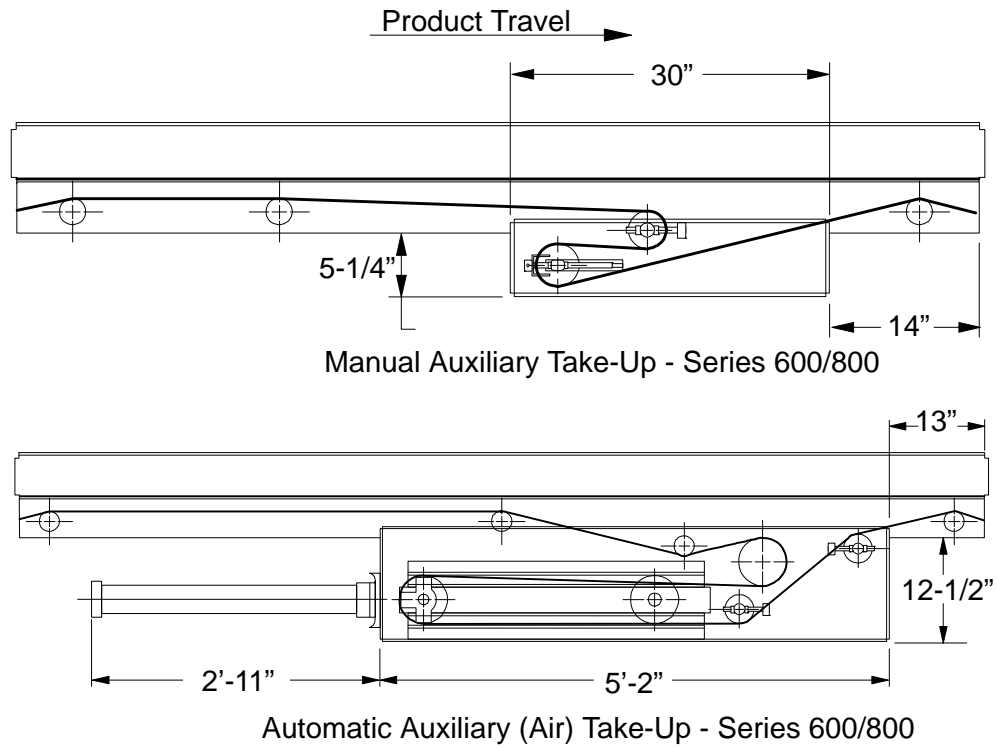


Figure E - 7 Auxiliary Take-Up - Manual and Automatic (Air)

## Upper Bend Section

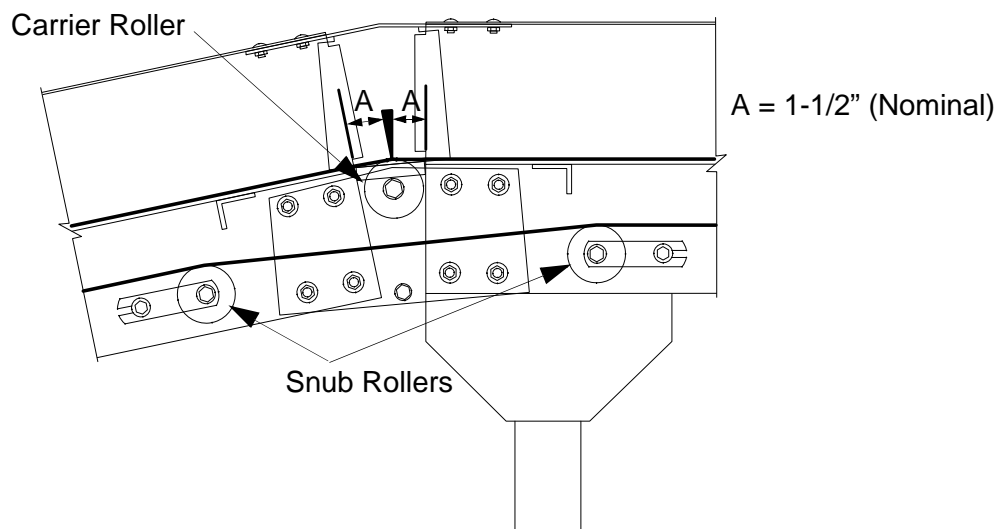


Figure E - 8 Upper Bend Unit

## Two-Pulley Hitch

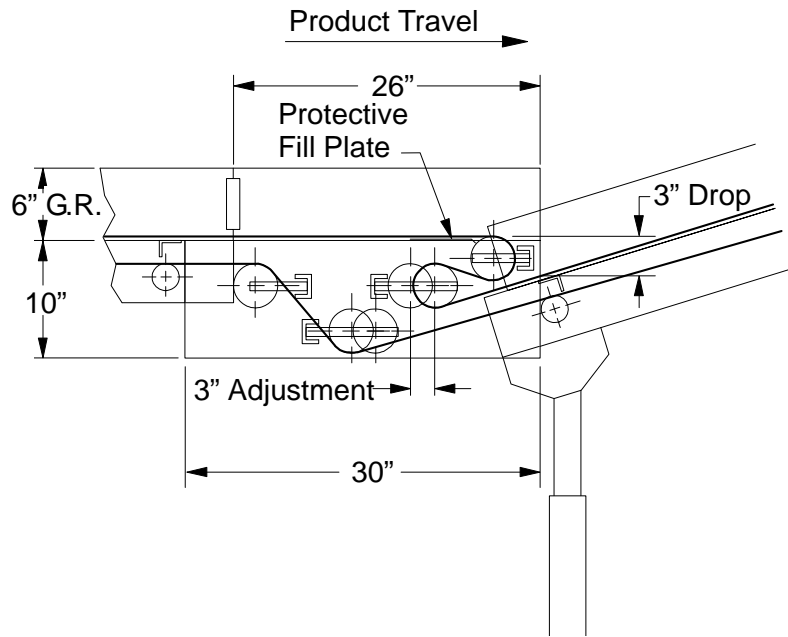


Figure E - 9 Two-Pulley Hitch

## In-Line Transition Unit

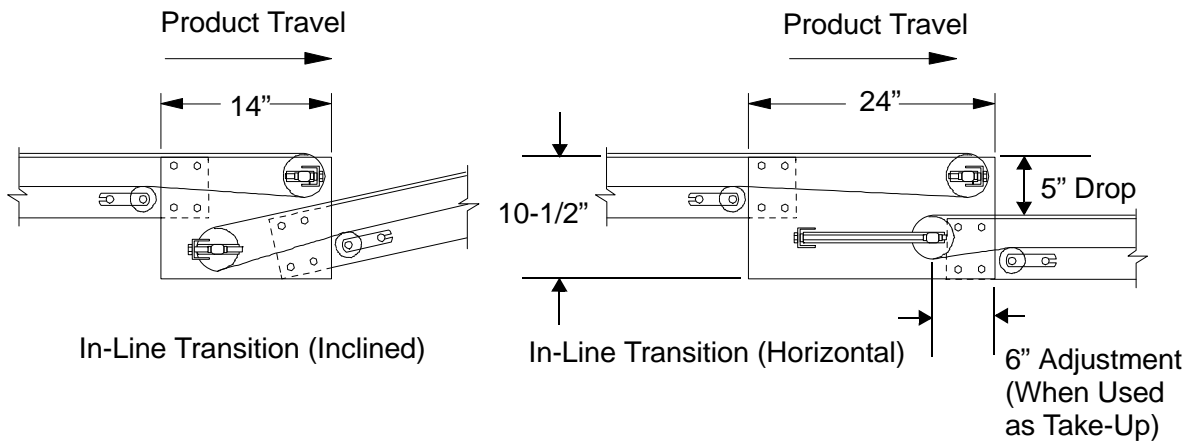


Figure E - 10 In-Line Transition Unit

## Underside Guard (Dust Covers) and Flare Transition Guards

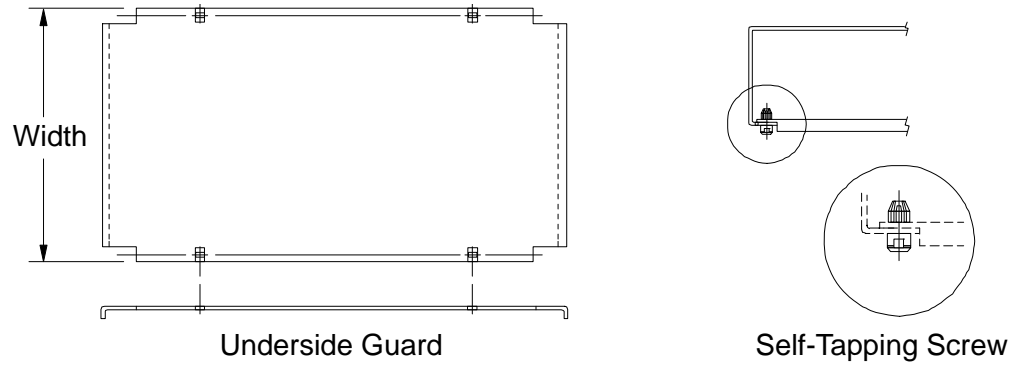


Figure E - 11 Underside Guard (Dust Covers)

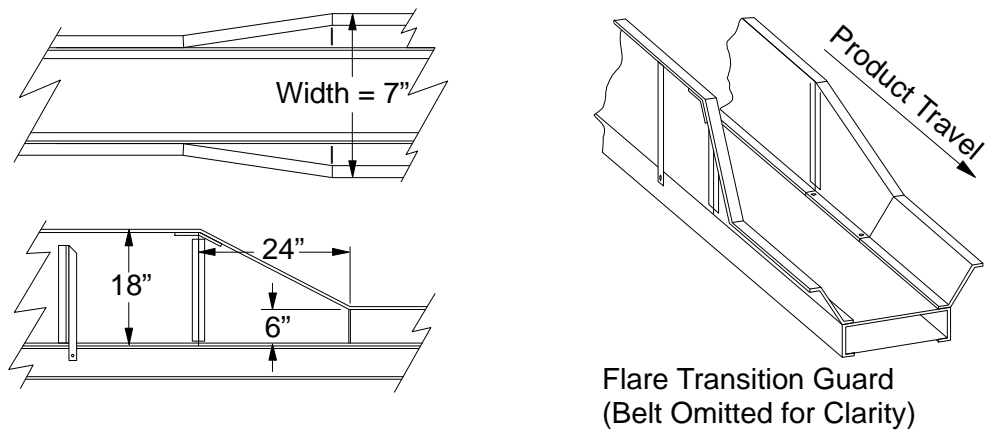
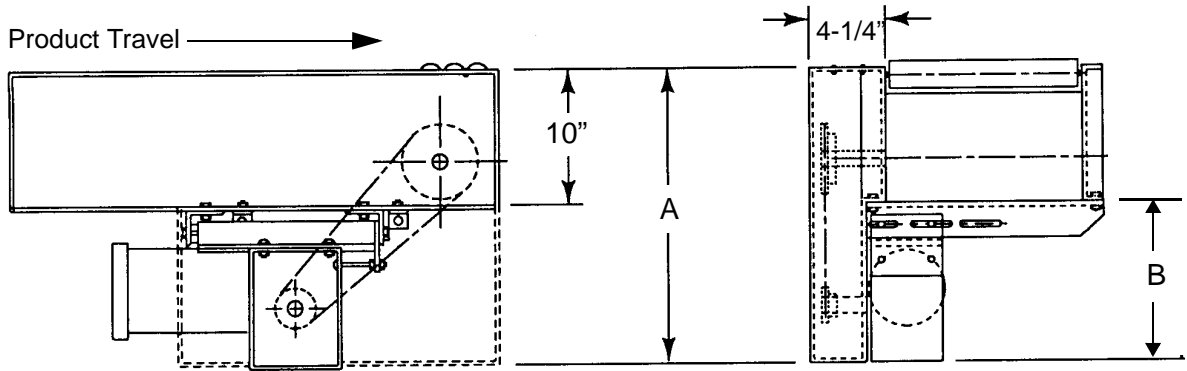


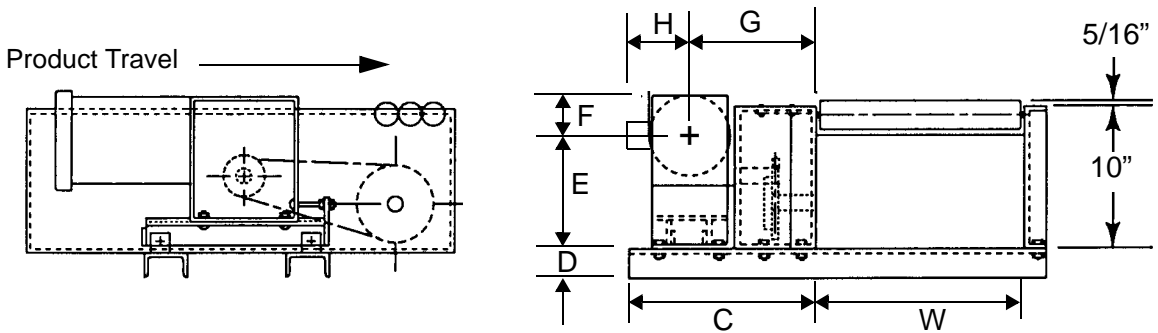
Figure E - 12 Flare Transition Guards

## Power Units



(RH Assembly Shown) See Table E 1 for dimension.

Figure E - 13 End Drive Power Unit - Under-hung Mount



(RH Assembly Shown) See Table E 1 for dimension.

Figure E - 14 End Drive Power Unit - Side-Mounted

Table E 1: End Drive Power Unit Dimensions

Reducer No.									
Grove	Reliance	A	B	C	D	E	F	G	H
218	175	24.50"	10.88"	11.25"	1.44"	7.13"	3.69"	7.59"	6.00"
220	200	24.50"	11.38"	11.25"	1.44"	7.63"	3.69"	7.78"	6.00"
226	262	24.50"	12.06"	11.25"	1.44"	9.00"	4.81"	7.81"	7.06"
232	350	26.50"	15.80"	14.75"	1.44"	10.50"	4.81"	9.19"	7.06"

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*SECTION F: ACCESSORIES***Powered Trash Belt Conveyor Accessories**

Powered Trash Belt Conveyor accessories include Floor Supports, Ceiling Hangers, and Side Guides. Refer to the following manuals for details:

- Floor Supports and Ceiling Hangers - Manual No. 5310
- Side Guides - Manual No. 5320





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## **SECTION G: INSTALLATION PROCEDURES**

### **Accepting Shipment**

Immediately upon delivery, verify that you have received all equipment listed on the bill of lading or carrier's freight bill. Any shipping discrepancy or equipment damage should be clearly noted on the freight bill before signing.

### **Shortages or Errors**

Report any shortages or errors to the Manufacturer's Customer Service in writing within ten days after receipt of shipment.

### **Lost or Damaged Shipment**

Report lost shipments to the Manufacturer's Shipping Department.

If shipping damage is evident upon receipt of the conveyor equipment, note the extent of the damage on the freight bill and immediately contact the transportation carrier to request an inspection. Do not destroy the equipment crating and packing materials until the carrier's agent has examined them. Unless otherwise agreed to by the manufacturer, the Purchaser (User) shall be responsible for filing claims with the transportation carrier. A copy of the inspection report along with a copy of the freight bill should be sent to the Manufacturer's traffic department.

### **Claims and Returns**

All equipment furnished in accordance with the Manufacturer's Agreement is not returnable for any reason except when authorized in writing by the Manufacturer. Notification of return must be made to the Manufacturer's Customer Service Department, and if approved, a "Return Authorization Tag" will be sent to the Purchaser (Users). The return tag sealed in the "Return Authorization Envelope" should be securely affixed to the exterior surface on any shipping carton side (not top or bottom), or affixed to any smooth flat surface on the equipment, if not boxed.

Send authorized return shipment(s) transportation charges prepaid to the address indicated on the Return Authorization Tag. If the Purchaser refuses initial shipment, the Purchaser (User) shall be liable for all freight charges, extra cost of handling, and other incidental expenses.

### **Codes and Standards**

The conveyor equipment is designed and manufactured to comply with the American National Standard Institute's "Safety Standards for Conveyors and Related Equipment" (ANSI B20.1) and with the National Electrical Code (ANSI/NFPA70).

The Purchaser/Operator shall be familiar with, and responsible for, compliance with all codes and regulations having jurisdiction regarding the installation, use, and maintenance of this equipment. Appropriate lockout/tagout policy and procedures shall comply with the minimum safety requirements outlined in the American National Standard Institute's current publication (ANSI Z244.1).

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## Warning Signs

Warning signs and labels posted on or near the conveyor equipment shall not be removed, painted over, or altered at any time. All safety devices, warning lights, and alarms associated with the conveyor system should be regularly tested for proper operation and serviced as needed. If the original safety item(s) become defective or damaged, refer to the conveyor parts list(s) or bill(s)-of-materials for replacement part numbers.

## Safety Precautions

- Do not turn off conveyor power source(s) and affix appropriate lockout/tagout device(s) to operating controls before servicing the equipment. ONLY trained and qualified personnel who are aware of the safety hazards should perform equipment adjustments or required maintenance while the conveyor is in operation.
- Do observe all warning signs, lights, and alarms associated with the conveyor operation and maintenance, and be alert at all times to automatic operation(s) of adjacent equipment.
- Do use extreme caution near moving conveyor parts to avoid the hazard of hands, hair, and clothing being caught.
- Do not sit on, stand on, walk, ride, or cross (over or under) the conveyor at any time except where suitable catwalks, gates, or bridges are provided for personnel travel.
- Do not attempt to repair any equipment while the conveyor is running, replace any conveyor component without appropriate replacement parts, or modify the conveyor system without prior approval by the manufacturer.
- Do not operate the conveyor until all safety guards are securely in place, all tools and non-product materials are removed from or near the conveying surfaces, and all personnel are in safe positions.
- Do not remove or modify any safety devices provided on or with the conveyor.
- Do not clear jams or reach into any unit before first turning off the equipment power source(s) and affixing appropriate lockout/tagout device(s).

## Parts Replacement

To minimize production downtime, selected conveyor spare parts should be stocked for replacement of defective components when required. Refer to the equipment bill(s)-of-materials where quantity requirements or code numbers are not indicated on the conveyor parts list. For added convenience, a list of selected spare parts for standard products is included in Section I of this manual.

## Factory Assistance

Contact Field Service for installation, operation, or maintenance assistance, or Customer One Protection (COP) for replacement parts.

## Pre-Installation Setup

Powered Trash Belt Conveyors are furnished with either an End or Intermediate type drive unit as standard.

The Intermediate Drive is normally furnished to provide End Idlers at the discharge to the next conveyor, either inline or 90° transfer.

For horizontal applications, the Intermediate Drive unit should be located as close as possible to the end of the conveyor that discharges the load.

For inclined applications, it is preferred that the Intermediate Drive be located close to the upper end of the conveyor.

Throughout this section, references are made to the “series” designation of a conveyor and its various component. The series is determined by the conveyor’s pull requirement and the components are sized accordingly.

Table G 1: Diameter Dimensions By Drive Type

Type of Drive	End Drive		Intermediate Drive	
	Series 600	Series 800	SA2000	SA2001
Drive Pulley Diameter	6-5/16”	8-5/16”	8-3/8”	5-7/8”
Drive Shaft Diameter	1-7/16”	1-11/16”	1-11/16”	1-11/16”

## Pre-Assembled Components

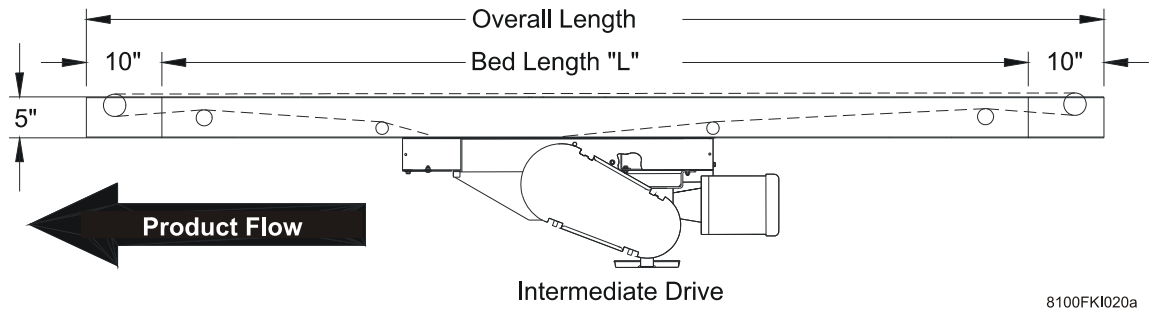
All drive/power units, idler/take-up units, and intermediate bed sections are shipped from the factory fully assembled. During installation, additional field assembly is required for the following:

- Mounting floor or ceiling type supports
- Splicing adjoining intermediate bed sections
- Attaching powered feeder and upper bend units
- Attaching two-pulley hitch and/or In-line transition
- Installing and tracking the belt
- Mounting side guides
- Installing bed stiffener angles
- Installing intermediate underside guards

Before installing the conveyor, review the layout drawings to determine the proper location, orientation, and elevation of the conveyor sections. Read all instructions provided in this manual before installing the conveyor.

Review the plan drawings to identify the individual components that make up the conveyor unit. Note the orientation, right-hand or left-hand, of the appropriate components and drives. A box depicting a chain guard on one side of the conveyor shows the orientation of motor driven components on the plan of the conveyor. See Figure G - 1.

Snap a chalk line on the floor or other support base to establish the centerline of the conveyor. Arrange the conveyor items and mounting supports along this base line according to the layout drawing. This ensures that all components are present and are compatible for proper assembly. Leave field-installed rollers and other accessory items in the shipping containers until all conveyor items are completely assembled, mounted on supports, and adjusted for proper elevation.

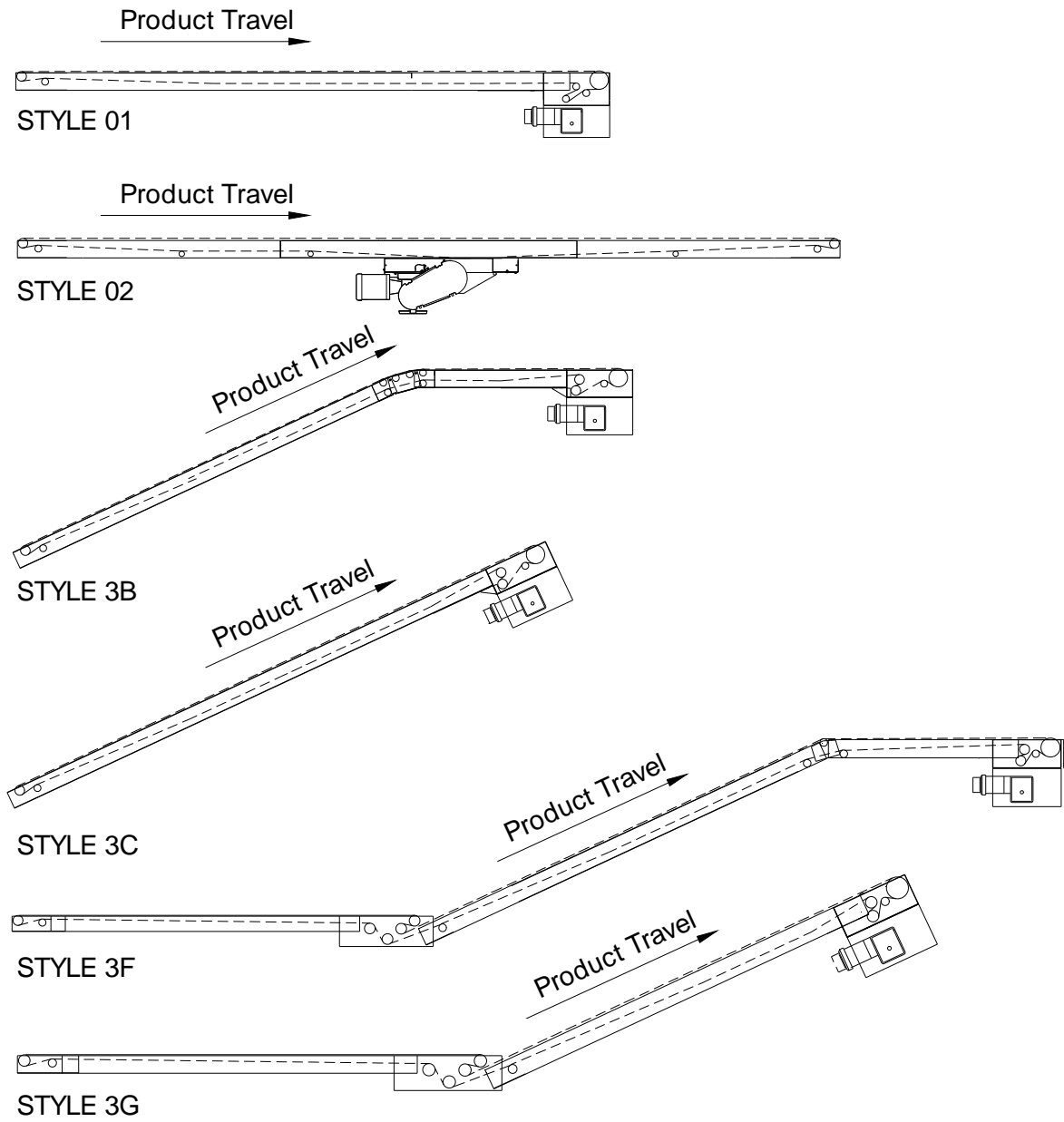


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Figure G - 1 Typical Powered Trash Belt Conveyor (Style 02 Shown)

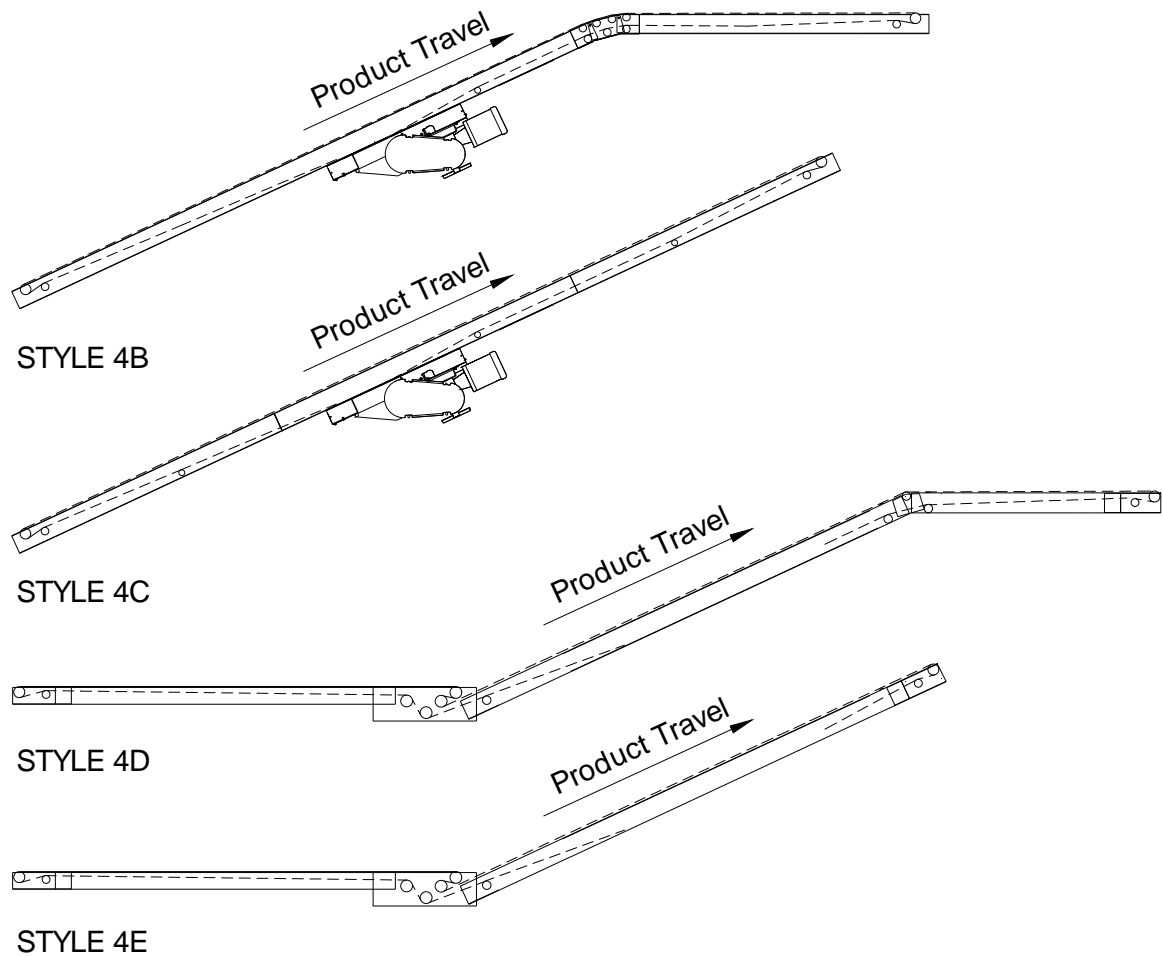
### Style Identification

Equipment element combinations vary. Figures G - 2 and G - 3 illustrate available conveyor styles.



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Figure G - 2 Powered Trash Belt Conveyor Style Identification - Sheet 1 of 2



BUSFKI022A

Figure G - 3 Powered Trash Belt Conveyor Style Identification - Sheet 2 of 2

## Assembling the Bed Section

The bed section is normally installed with a support (floor or ceiling type) mounted to the frame's bottom flanges at the junction of two sections using  $3/8" \times 1"$  hex head bolts. See Figure G - 4 and Figure G - 5.

When it is not possible to locate a support at the junction of two sections, it may be necessary to field drill the bottom flanges of the slider bed and relocate the support.

Mount a pair of four-bolt splice plates to the inside of the frames at each splice connection using  $3/8" \times 1"$  hex head bolts. See Figure G - 4. Before tightening the bolts, check that the adjoining surfaces are flush and aligned.

When installing, position the bed section so that the belt return rollers are in the same relative position in all sections. This will assure the proper spacing of the return rollers.

Return rollers are furnished as follows:

- Two for each 10'-0" and 12'-0" section.
- One for each 5'-0" and 7'-6" section.

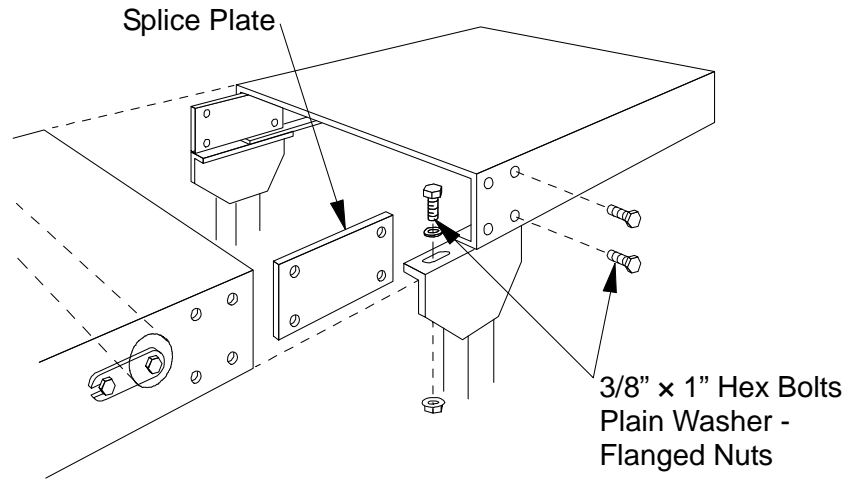
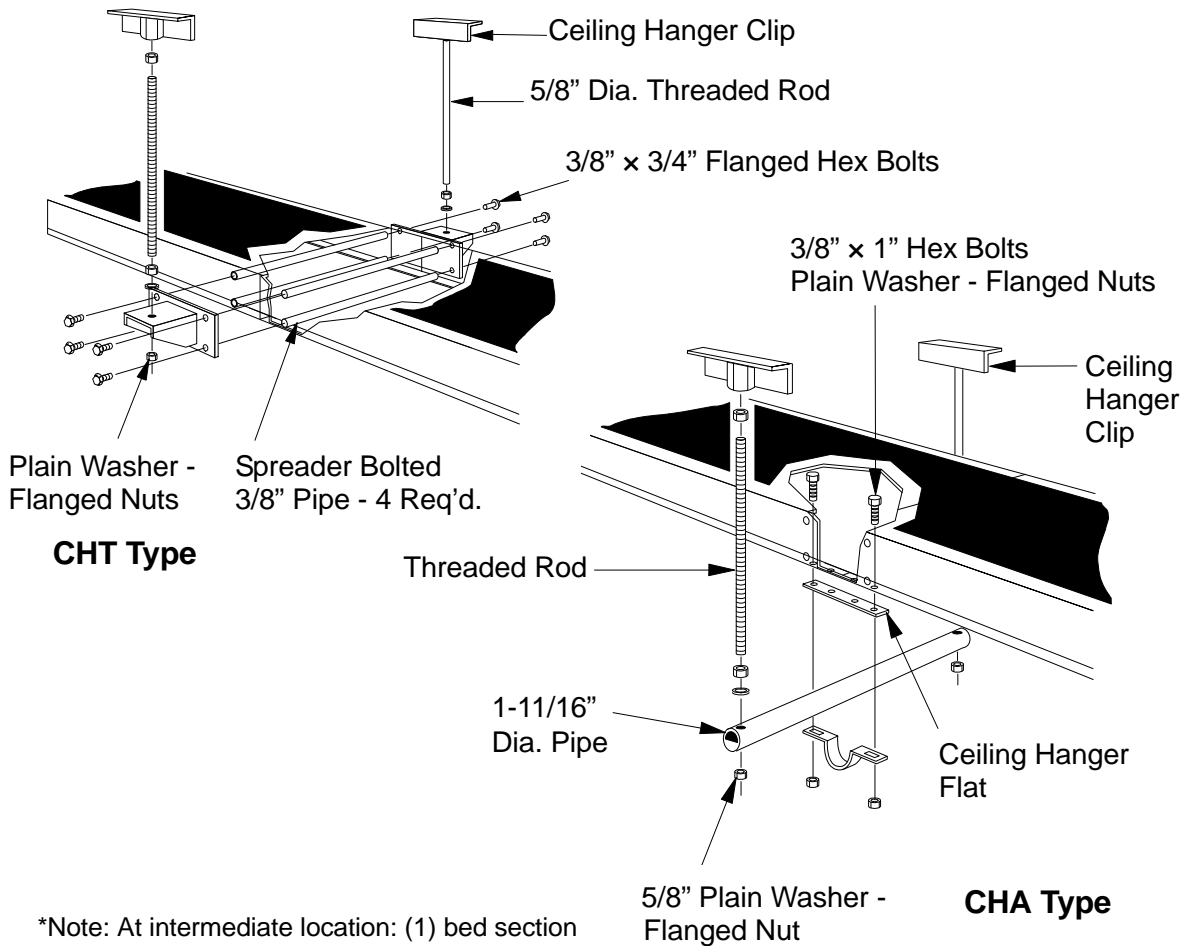


Figure G - 4 Splicing of Floor Supported Slider Bed Section



\*Note: At intermediate location: (1) bed section holes are field drilled. (2) check clearance with return rollers and spreaders.

Figure G - 5 – Ceiling Hangers - Types CHT and CHA

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## Power Unit Assembly

Power Units ship from the factory fully-assembled to the drive section. Check the following before beginning installation:

- Lubricant
- Reducer plugs/fittings
- Sprocket alignment and set screws

### Lubricant

Check that the reducer lubricant is up to the “Oil Level Plug.” Before adding any lubricant, refer to the manufacturer’s tags attached to the reducer.

### Reducer Plugs and Fittings

Check that the oil level and drain plugs are properly installed and sufficiently tightened. Sprocket Alignment and Fasteners

Check sprocket alignment, see Figure G - 6. Shafts must be parallel.

See “Pre-Startup Preparation”, on page G - 24, for additional information.

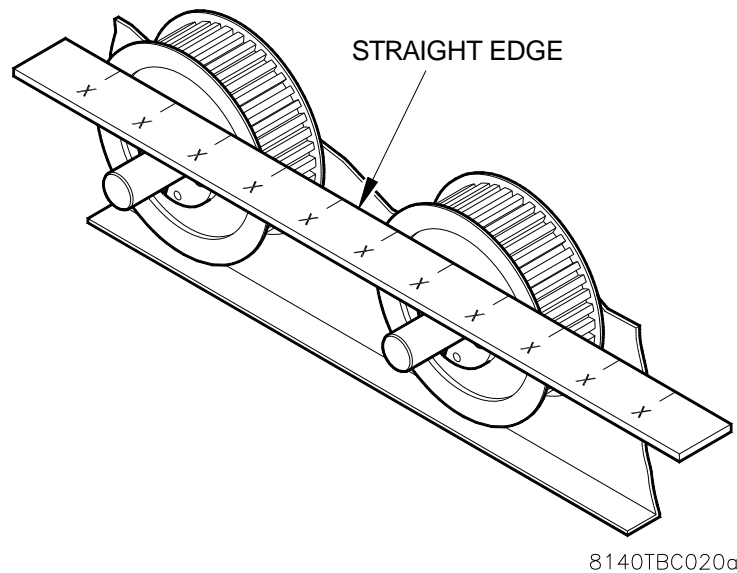


Figure G - 6 Checking Sprocket Alignment



## Installing the Upper Bend Unit

The Upper Bend Unit ships from the factory fully in one of the following conditions:

- Connected to a terminal end (End Drive or End Idler). See Figure G - 7.
- Shipped separately to connect on-site to the Intermediate Section(s) when the conveyor has a horizontal run-out. See Figure G - 8.

When installing the Upper Bend Unit, adjust the Upper Bend so that the change between the inclined and horizontal planes is equally divided between the unit's two pivot points. See Figure G - 8.

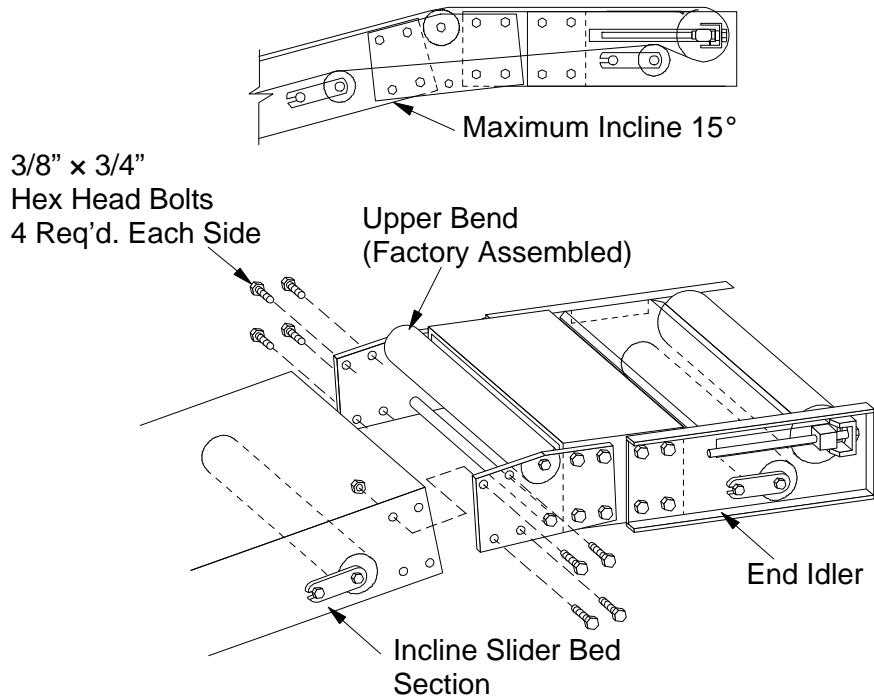


Figure G - 7 Attaching the Upper Bend Unit to a Terminal End

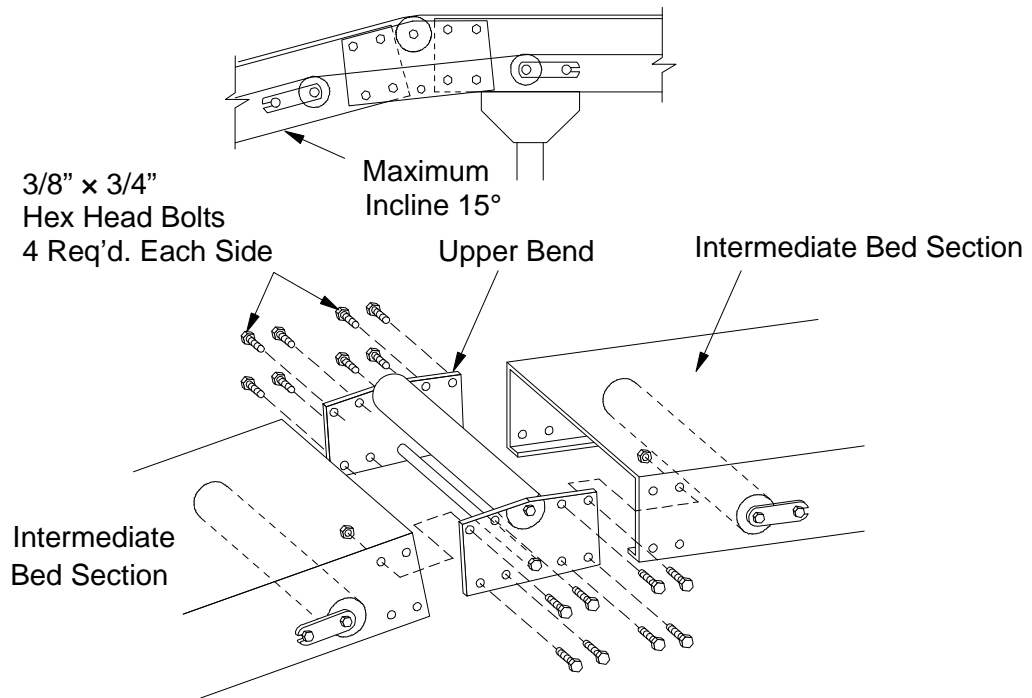


Figure G - 8 Attaching Upper Bend Unit When Conveyor Has Horizontal Run-Out

## Installing the Right-Angle Transfer Unit

The width of the downstream take-away conveyor (Right Angle Transfer Unit) must be equal to the length of the largest item conveyed plus the horizontal distance that the discharge end of the feeding conveyor extends beyond the side guide of the take-away conveyor (6" recommended). See Figure G - 9.

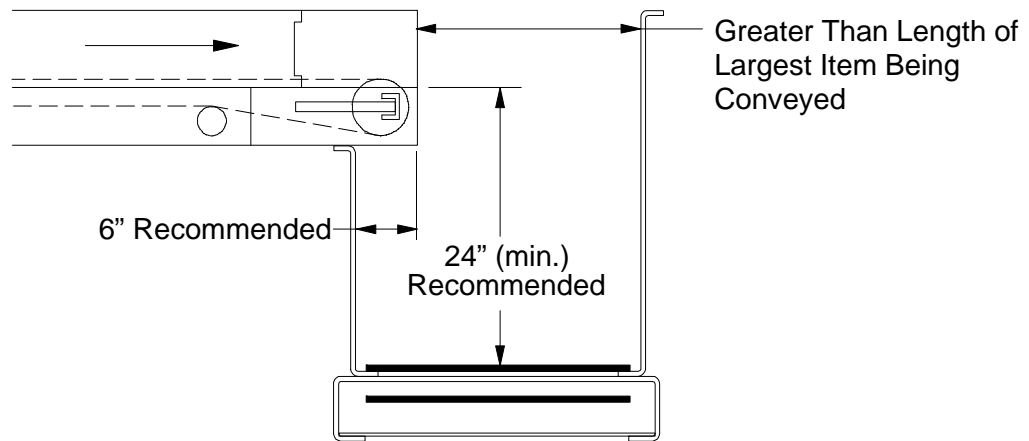


Figure G - 9 Right-Angle Transfer Unit

## Assembling the In-Line Transition

The In-Line Transition Unit is pre-assembled at the factory and connected on-site to the Intermediate Bed sections at the transition point between two adjoining Powered Trash Belt Conveyors. The downstream section may be horizontal or inclined. The transition unit contains the end terminal pulley for both the upstream and downstream sections. See Figure G - 10.

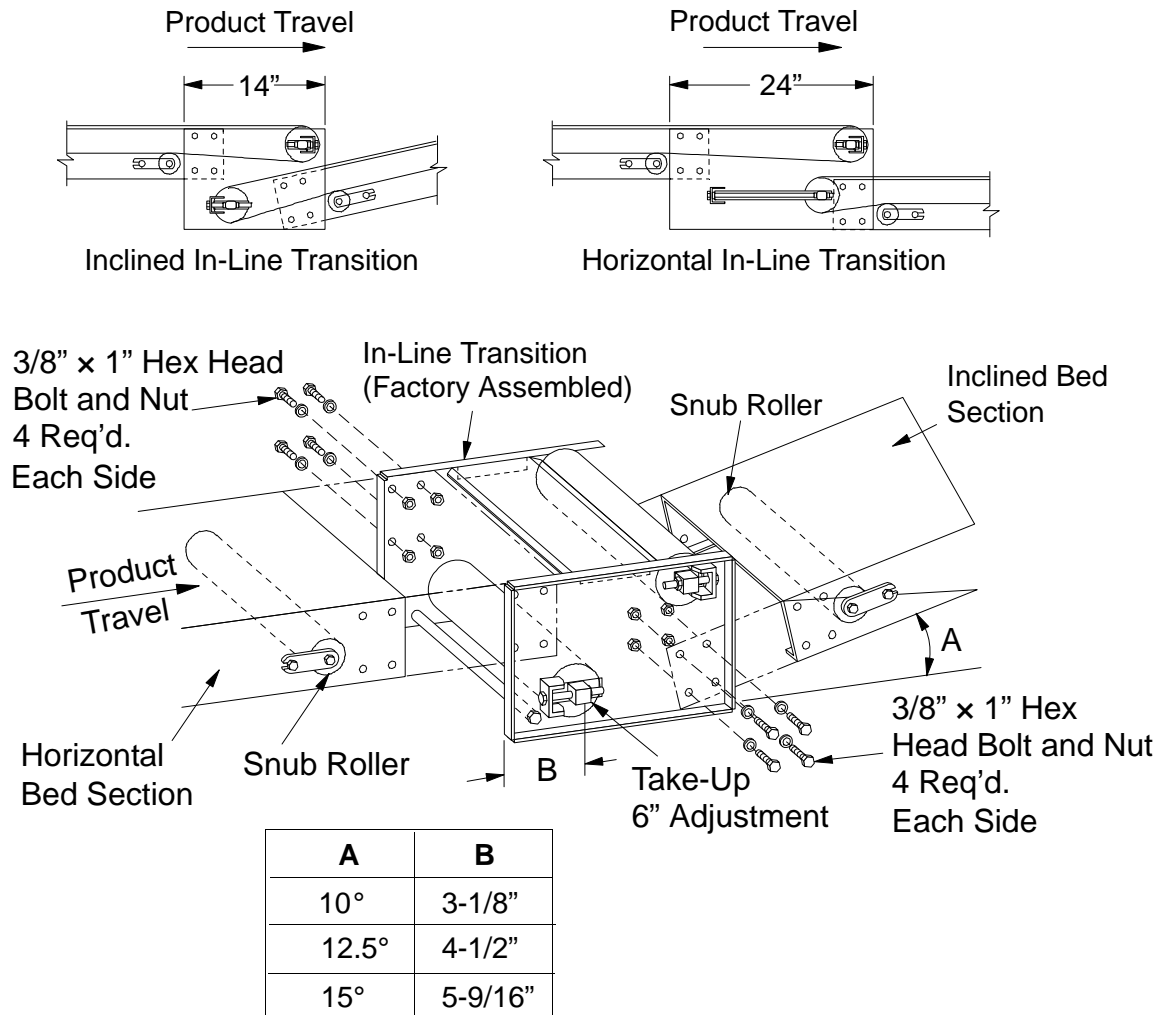


Figure G - 10 In-Line Transition Unit

## Assembling the Two-Pulley Hitch Unit

The Two-Pulley Hitch Unit is pre-assembled at the factory and connected on-site to two Intermediate Bed sections at the transition point between horizontal and inclined sections of a single Powered Trash Belt Conveyor. The Two-Pulley Hitch Unit contains all pulleys to accommodate the carrying belt and return belt runs. See Figure G - 11.

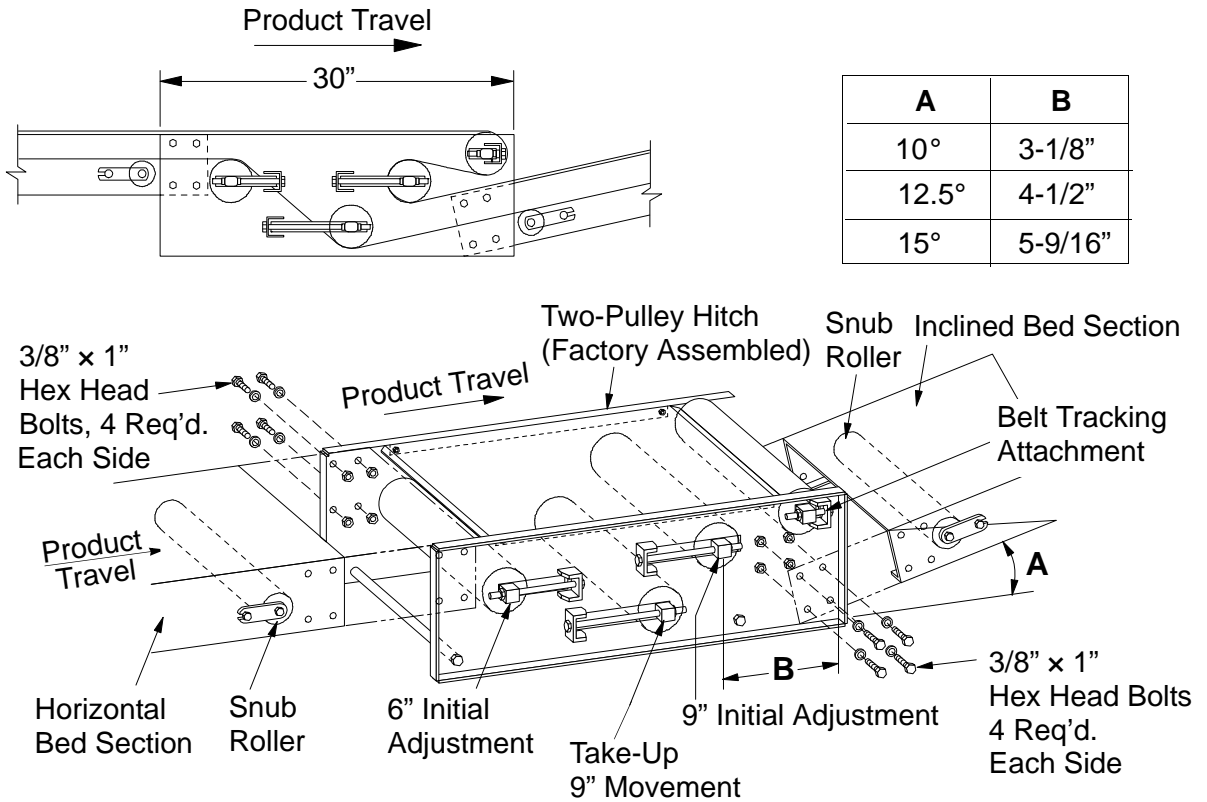


Figure G - 11 Two-Pulley Hitch Unit

## Side Guide Installation

Assemble the 1-1/2" x 2" x 3/16" stiffener angle under the slider bed (33", 39", 45", and 51" widths only) when the Side Guide is installed. Use a 5/16" x 3/4" long special truss head bolt through the side guide flange, slider bed and stiffener angle, at the holes provided in the bed.

The number of angles supplied depends on the size of the bed section:

- 12'-0" bed section - four angles required
- 10'-0" bed section - four angles required
- 7'-6" bed section - three angles required
- 5'-0" bed section - three angles required
- 6'-0" bed section - three angles required

Locate one stiffener angle 6" from each end of the slider bed. Space the intermediate angles appropriately.

For 18" high side guide rails, bolt the side guide bracket to the side of the bed at the holes provided, using 5/16" x 3/4" long special truss head bolts and flanged hex nut. This procedure is not required for 6" high side guide.

Refer to Figure G - 12 through Figure G - 16 for Side Guide assembly illustrations.

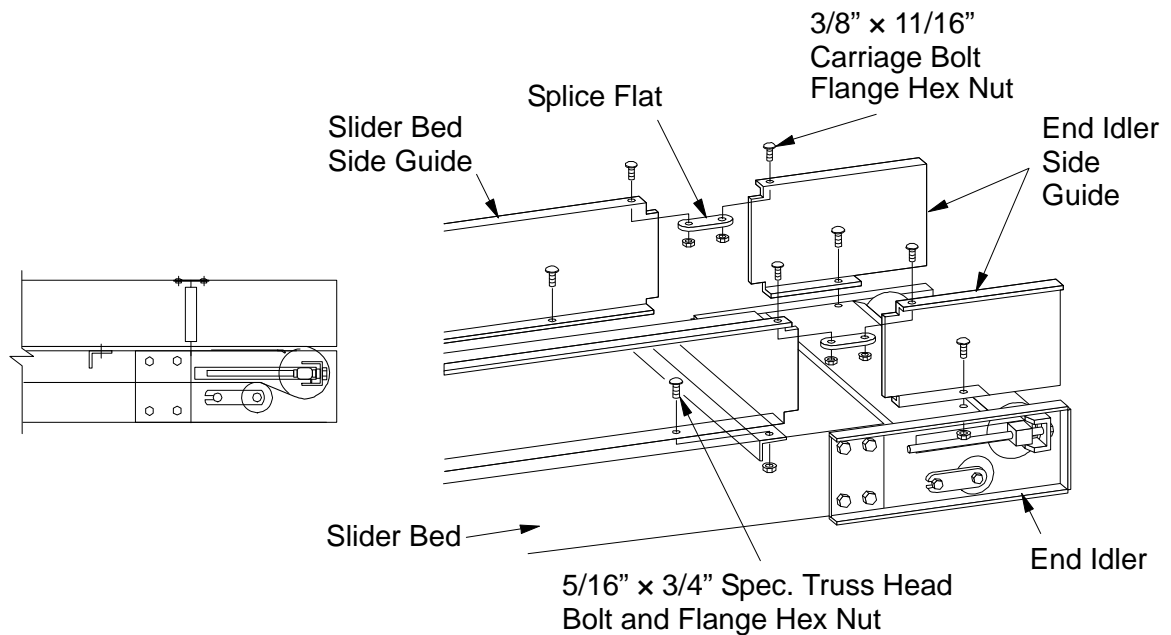


Figure G - 12 End Idler and End Take-Up Side Guide Assembly

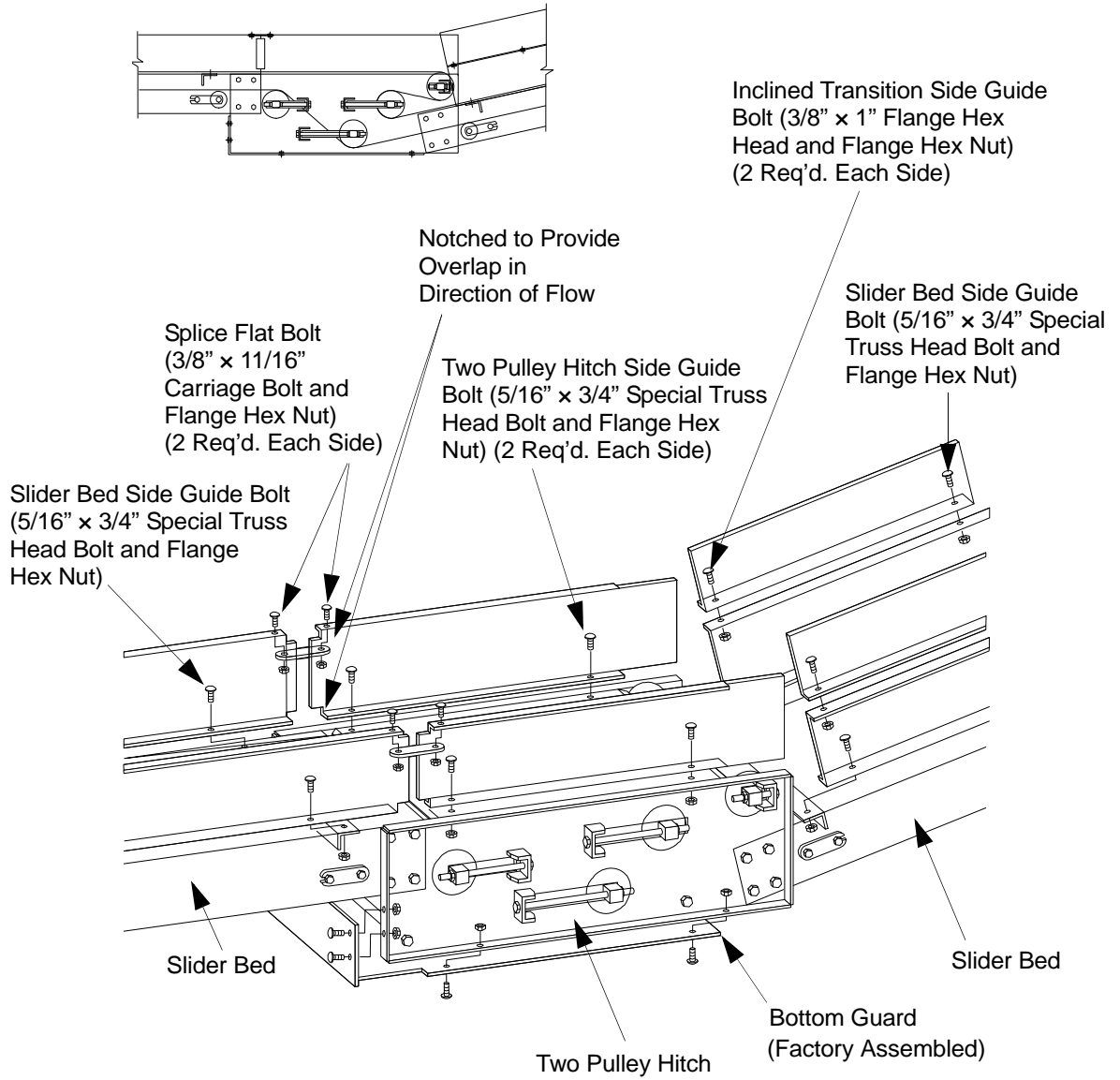


Figure G - 13 Two-Pulley Hitch Side Guide Assembly

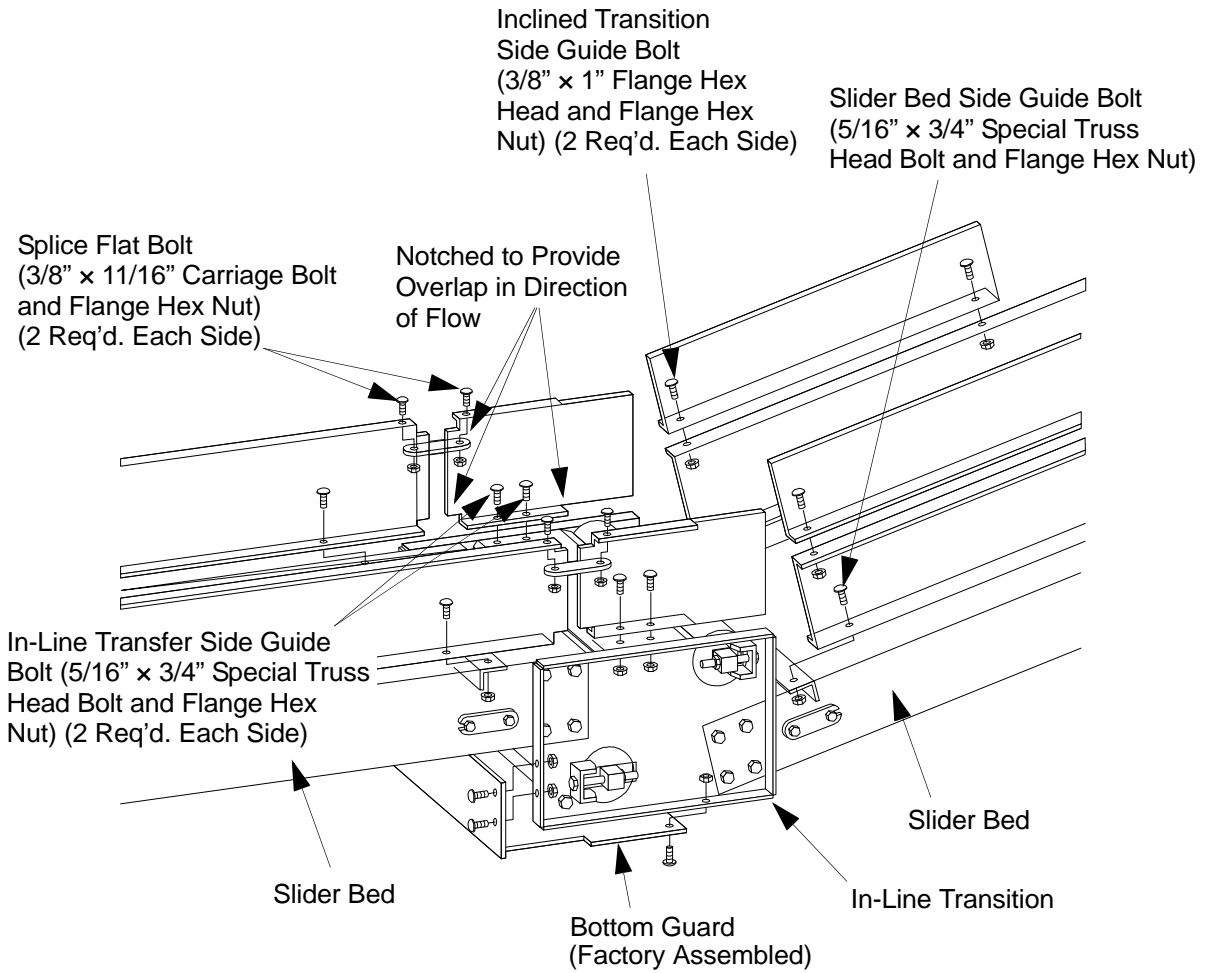
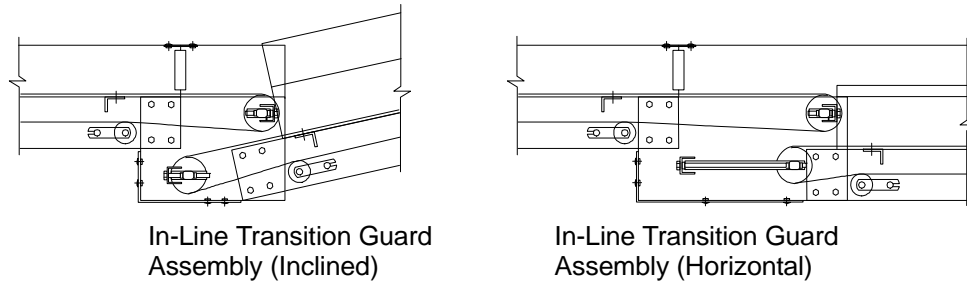


Figure G - 14 In-Line Transition Side Guide Assembly



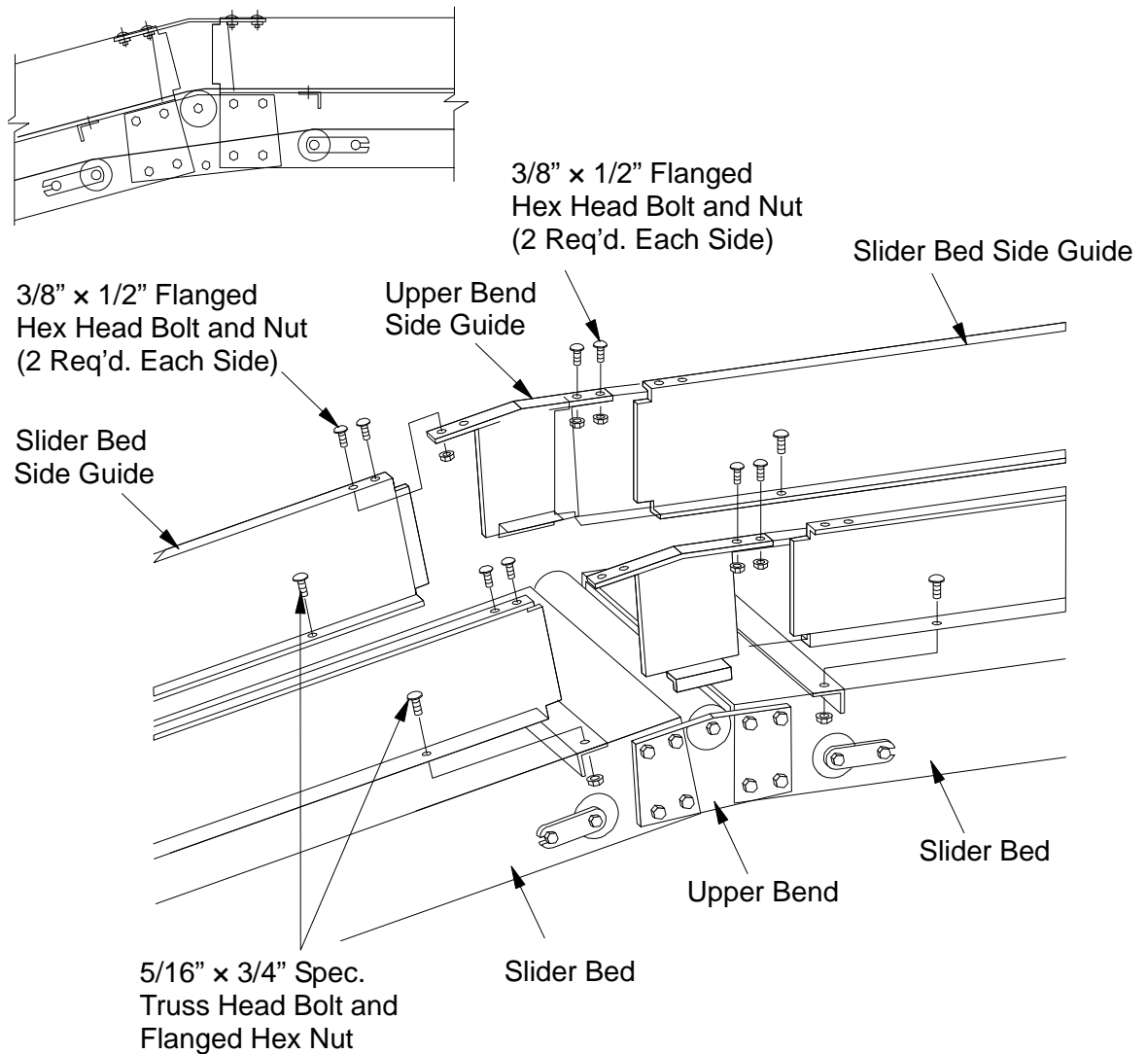


Figure G - 15 Upper Bend Side Guide Assembly

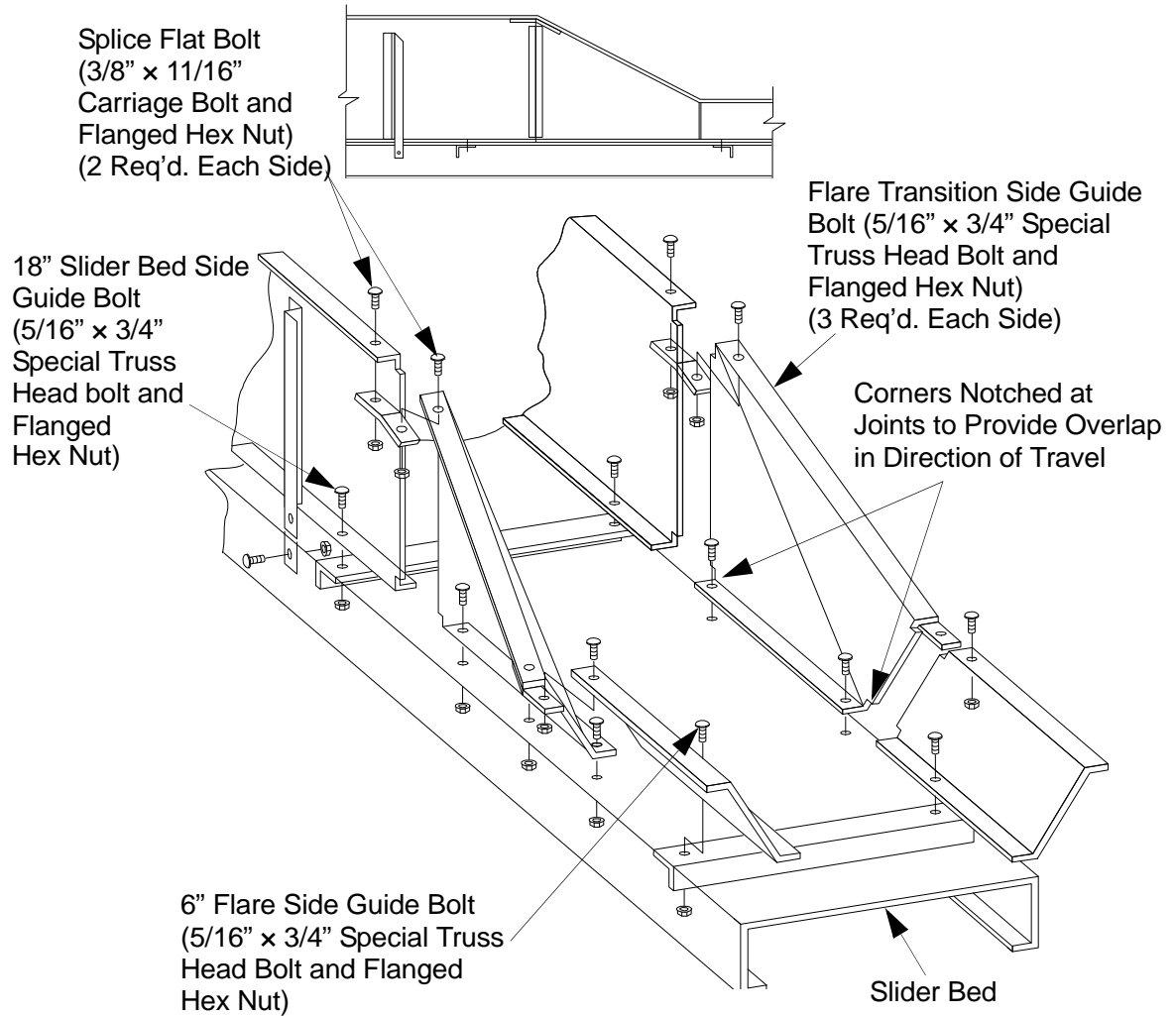


Figure G - 16 Flare Transition Side Guide Assembly

## Installing (Threading) the Belt

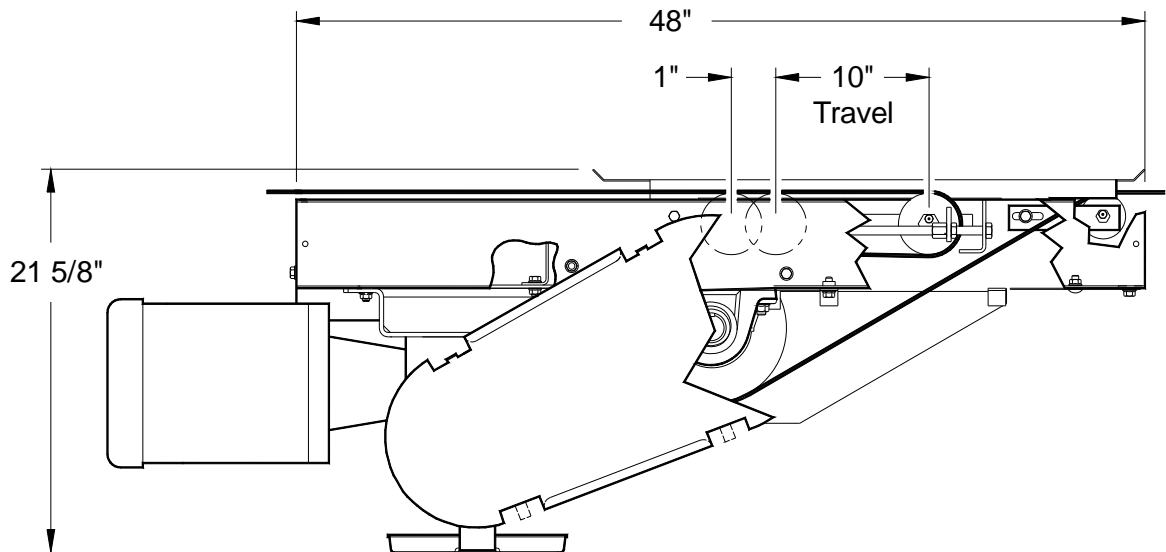
After assembling the conveyor components, install (thread) the belt.

Before installing the belt, make certain that:

- All frame sections are level, properly aligned, and securely anchored
- All pulley and roller shafts are perpendicular to the conveyor frame
- All idler pulleys and rollers rotate freely
- No dips or humps exist along the conveyor bed surface

To install the belt:

1. By turning the take-up screws, bring the take-up pulley within 1" of the positions of minimum travel. See Figure G - 17 and Figure G - 18.
2. Starting at either end of the conveyor, thread the belt under the end pulley, over the snub and return rollers and around the drive and pulleys. Follow the belt path that matches your conveyor.
3. Place the belt up and over the end pulley(s), and bring the ends together on top of the bed as near to an end idler/take-up pulley as possible.



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Figure G - 17 Intermediate Drive with Take-Up

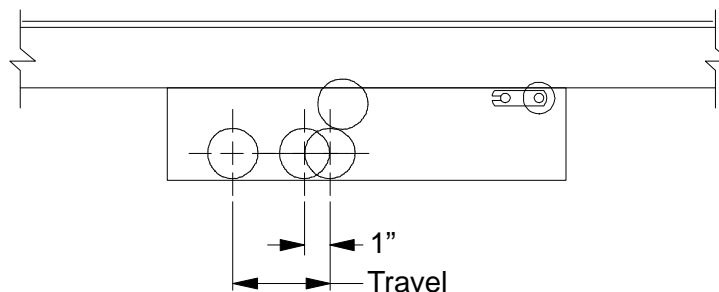


Figure G - 18 Center Take-Up

Belt length requirements are shown in Table G 2.

Table G 2: Belt Lengths

Style	Series			
	600	800	SA2000	SA2000
1	5'-0"	6'-0"	-	-
2	-	-	8'-0"	8'-0"
3B	9'-0"	10'-0"	-	-
3C	5'-0"	6'-0"	-	-
3F	15'-0"	16'-0"	-	-
3G	14'-0"	15'-0"	-	-
4B	-	-	11'-0"	10'-0"
4C	-	-	8'-0"	8'-0"
4D	-	-	16'-0"	15'-0"
4E	-	-	15'-0"	14'-0"

### Cutting the Belt Square

To assure against many common belt problems, square belt ends before lacing. A properly squared belt trains correctly and distributes stress evenly through the splice.

To cut the belt ends:

1. Pull the belt ends together and secure them to the bed with appropriate clamps. See Figure G - 19.

If excess belt remains, overlap the belt ends and pull the belt until the belt sag between the return rollers is about 1" (with conveyor take-up at minimum take-up position); then mark the cut line with chalk or a pencil.

2. Cut belt ends precisely square to ensure proper belt tracking and even distribution of the tension load through the belt splice:
  - Using chalk or pencil, mark the center of the belt at a number of points about 1' apart in the vicinity of the planned cut.
  - Using a straightedge, mark the centerline of the belt by passing the line through as many center marks as possible.
  - Using a steel square, mark the cut line perpendicular to the drawn centerline.
  - Carefully cut the belt with a sharp knife or belt cutting tool.
3. Chamfer corners on squared cut ends of the belt by cutting off a triangle measuring 1/2" along the belt width by 1-1/2" along the belt length.

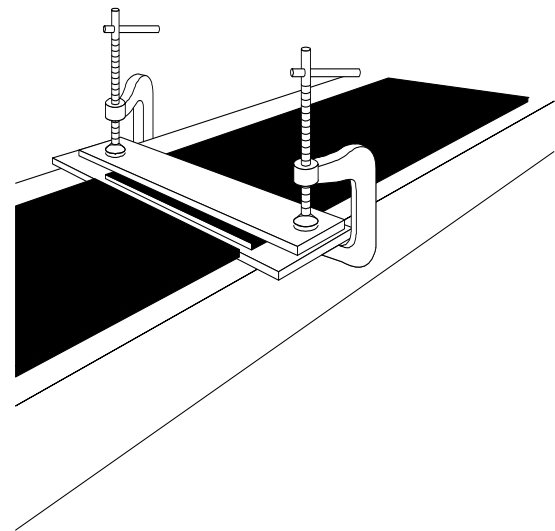


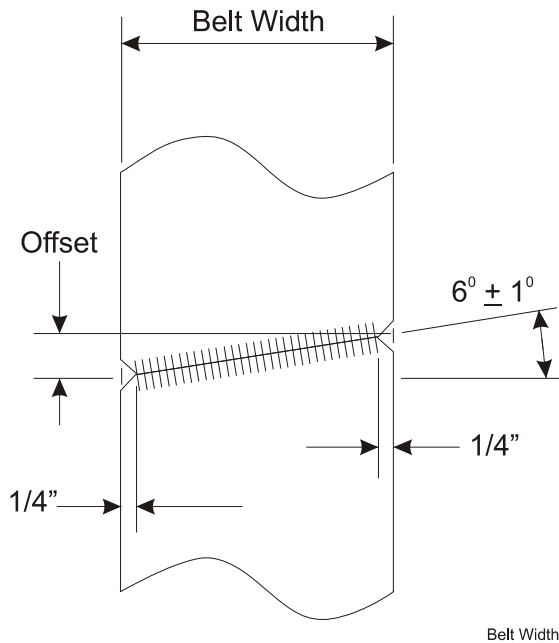
Figure G - 19 Cutting the Belt

## Splicing the Belt

Splice the belt with the supplied lacing. Follow the lacing manufacturer's instructions.

## Replacing the Belt(s)

When replacing the belt(s), it may be beneficial in certain applications to splice the belt on a bias to reduce noise. When the belt is spliced on a bias, Intelligrated engineering requires the angle of the splice to be less than 7 degrees. Use the table below as a guide for common belt widths and dimensions. Each end of the belt must be cut at the exact same angle to ensure proper belt tracking. Be sure to take the offset measurement before trimming 1/4" from the corners, so as not to exceed the maximum bias angle.



Common Belt Widths	Offset Dimension for 6 Degree Bias
12"	1-1/4"
18"	1-7/8"
24"	2-1/2"
30"	3-1/8"
36"	3-13/16"

---

## Installing the Underside Guard - Intermediate Sections

### Horizontal

Place the guard panels inside the bed so they are supported by the lower flanges of the bed. To properly align the support cutouts, start at the end of a standard length Intermediate Section.

The number and size of guard panels supplied depends on the size of the bed section:

- 12'-0" bed section - six 2'-0" long panels.
- 10'-0" bed section - four 2'-6" long panels.
- 7'-6" bed section - three 2'-6" long panels.
- 5'-0" bed section - two 2'-6" long panels.

Slide the panels longitudinally to butt the end flanges of adjacent panels. Fasten the flanges using a 1/4" x 1/2" round head machine screw. See Section View A-A, Figure G - 20.

### Incline/Decline

This guard is designed for horizontal conveyors and incline/decline conveyors up to 15°.

For inclines/declines 5° to 15°, fasten one guard panel per conveyor section to the slider bed flanges, to prevent any movement of the panels downhill while the conveyor is running. Use self-tapping screws. See Figure G - 20. For inclines or declines greater than 15°, fasten all panels to the bed.

The following Powered Trash Belt Conveyor components ship with underside personnel guards and factory-assembled:

- End Drive
- Intermediate Drive
- End Idler
- Center Take-Up
- Two-Pulley Hitch
- In-Line Transfer
- Upper Bend Unit

Guards removed during installation or check out must be reinstalled prior to conveyor operation.

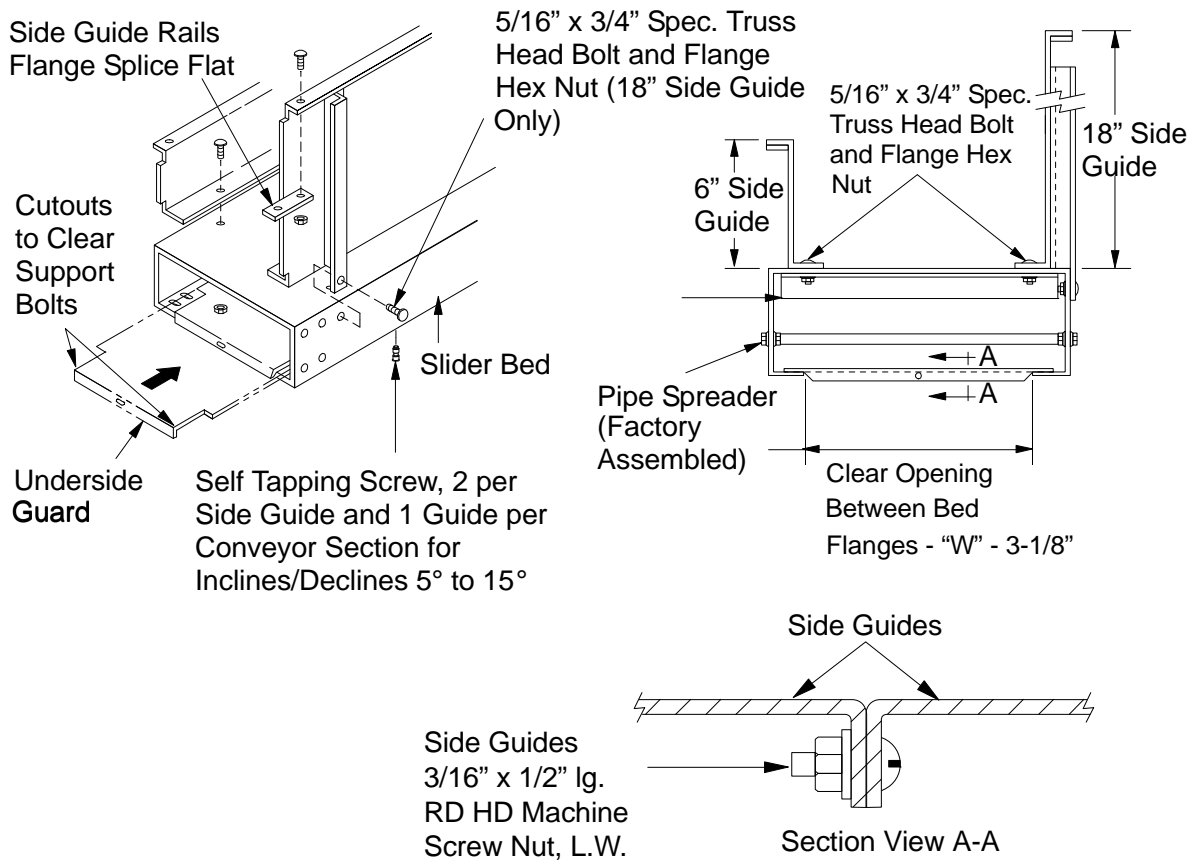


Figure G - 20 Installing Underside Guards for Intermediate Sections

## Installing Electrical Wiring

Electrical wiring must be installed by a licensed electrician familiar with the operation and adjustment requirements of the conveyor. The conduit and wiring apparatus must not interfere with required access to the conveyor.

A lockable disconnect switch with an appropriate service rating must be mounted near and wired to each drive motor. All power connections to the motor must be routed through the disconnect switch. This allows service personnel making repairs or adjustments to the drive to physically lockout the motor.

After completing the wiring, the electrician should "bump" each drive motor, and if necessary, modify the connections to achieve proper rotation for the required direction of belt travel.

---

## Pre-Startup Preparation

To ensure the safety of personnel, and proper operation of the conveyor, perform the following pre-operation checks before and during conveyor startup.

### Pre-Operation Checklist

Perform the following:

1. Check that the power unit has proper oil level and that the vent plug is installed, as shown on the installation and maintenance tag attached to the power unit.
2. Check that the belt has been properly threaded.
3. Check that the lacing connection has been properly made.
4. With the chain guard removed, check alignment, lubrication, and tension of the drive chain and sprockets, as shown on the chain Maintenance Label, located on the inside of the chain guard. Also, check that the set screws in the sprocket hubs are tight.
5. Check that the conveyor is free of all foreign objects.
6. Check that the power unit has been properly connected.
7. Check that all personnel are clear of the conveyor, and that they are aware the conveyor is about to be started.
8. Check that all safety guards are in place.
9. Jog the power unit and check for proper belt travel.
10. Adjust the take-up pulley until the belt tension is sufficient to prevent the belt from slipping on the drive pulley.

---

**WARNING:** Ensure that the take-up pulley is adjusted equally on both sides; otherwise, the belt will run off the pulley.

---

11. Review all Safety Precautions listed in this Section. See “Safety Precautions” on page G - 2.



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## Belt Tracking

At this point, the conveyor should have been properly installed, all sections aligned, and all carrier rollers level and square with the frame. The belt is installed with all pulleys, snub, and return rollers at right angles to the conveyor frame, and all pre-start-up precautions observed. Now you are ready to track the belt.

---

**WARNING:** Belt tracking is performed while the conveyor is running, and is therefore dangerous. Only trained and qualified personnel must perform the belt tracking function. Personnel must always be alert for any unsafe condition and use extreme care when tracking the belt.

---

## Principles of Belt Tracking

You must understand the principles of belt tracking in order to properly track the belt:

- **Crowned Pulleys** - Belts connecting parallel shafts tend to run toward that part of the pulley which is largest in diameter. Therefore, pulleys are crowned to keep the belt on center.
- **Taut Belt** - The belt must be sufficiently tensioned, so it does not slip on the drive pulley. Do not overtighten.
- **Parallel Shafts** - If the pulley shafts are not parallel, the belt will creep toward the side where the shaft centers are closest. For pulley adjustment, see Figure G - 23 through Figure G - 25.

## Instructions for Belt Tracking

1. When first tracking the belt, place qualified personnel at each end of the conveyor to observe possible belt tracking problems.
2. It is seldom possible to make pulley shafts perfectly parallel. Make corrective adjustments with the snub rollers. See Figure G - 23 through Figure G - 27.
3. A common mistake is to adjust the end pulleys for any belt tracking problem. Adjust the end pulleys only for mis-tracking on the pulley at the discharge end of the conveyor. See Figure G - 23.
4. Note that the belt creeps toward the side of the pulley or snub roller that it touches first. Make adjustments accordingly. See Figure G - 23 through Figure G - 27.
5. All adjustments should be slight. Allow sufficient time for the belt to react to the adjustment, especially if the conveyor operates at slow speeds. Multiple revolutions of the belt are required for the belt to reach equilibrium.

## Examples of Belt Tracking

As shown in Figure G - 23 and Figure G - 24, the belt always creeps to the right side of the conveyor. The right side of the conveyor is the side to your right when you are facing in the direction of forward travel of the product. See Figure G - 21. Forward travel is the direction of travel used to convey the largest amount of product.

The terminal ends are identified by their location in relation to the forward direction of product travel.

The conveyor's infeed end (forward travel) is referred to as the "tail" end, and the discharge end is the "head" end. See Figure G - 22.

Reversing travel is not applicable to the Powered Trash Belt Conveyor.

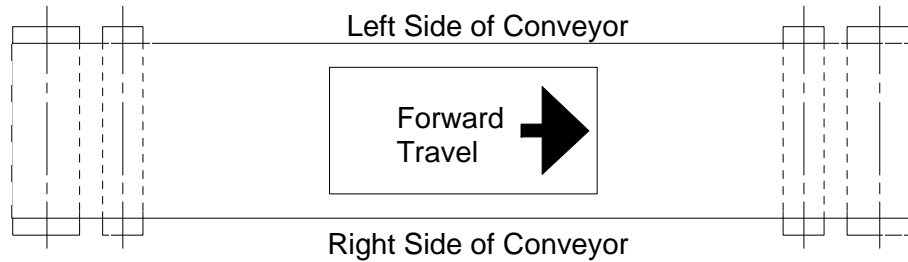


Figure G - 21 Direction of Travel

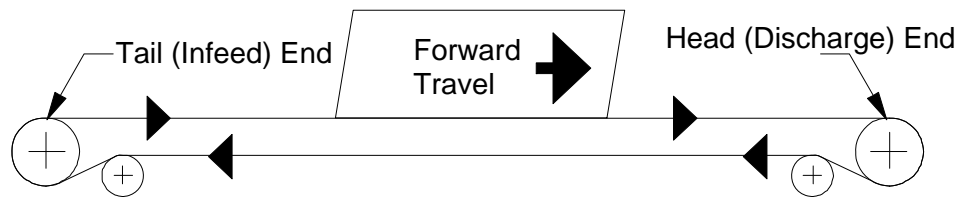


Figure G - 22 Product Travel From Tail End to Head End

During forward product travel, if the belt creeps to the right on the head pulley (drive/idler), adjust the right side of the head pulley in direction "F" (Forward) or the left side in direction "R" (Rearward). See Figure G - 23.

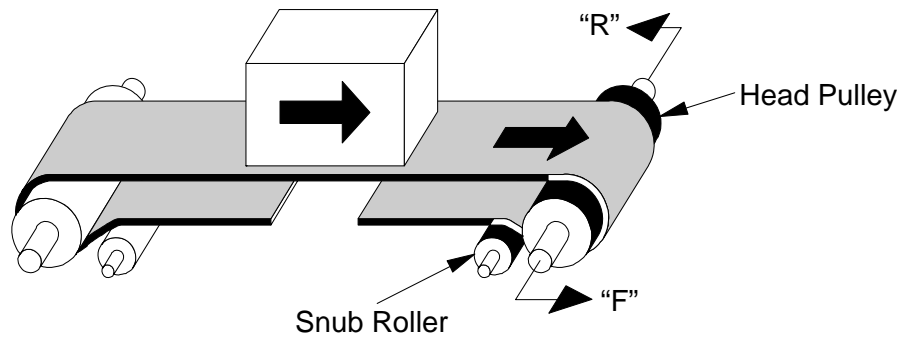


Figure G - 23 Adjusting the Right Side of the Head Pulley

During forward product travel, if the belt creeps to the right on the tail pulley, adjust the right side of the tail end snub roller in direction "R" or the left side in direction "F". See Figure G - 24.

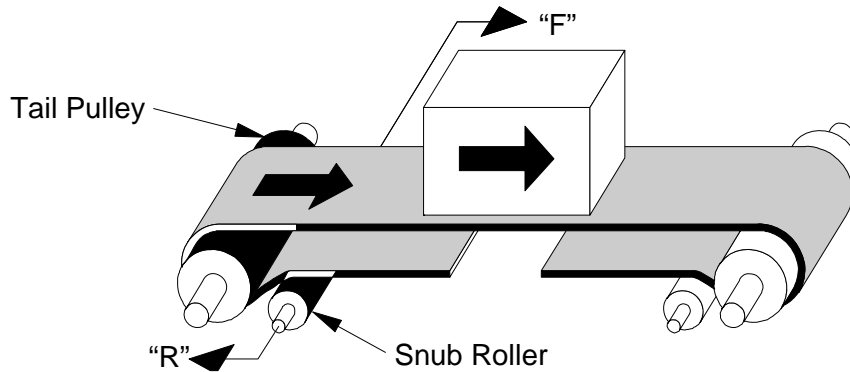


Figure G - 24 Adjusting the Right Side of the Tail End Snub Roller

During forward product travel, if the belt creeps to the right side of Pulley A, adjust the right side of Pulley A in direction "F" or the left side in direction "R". See Figure G - 25.

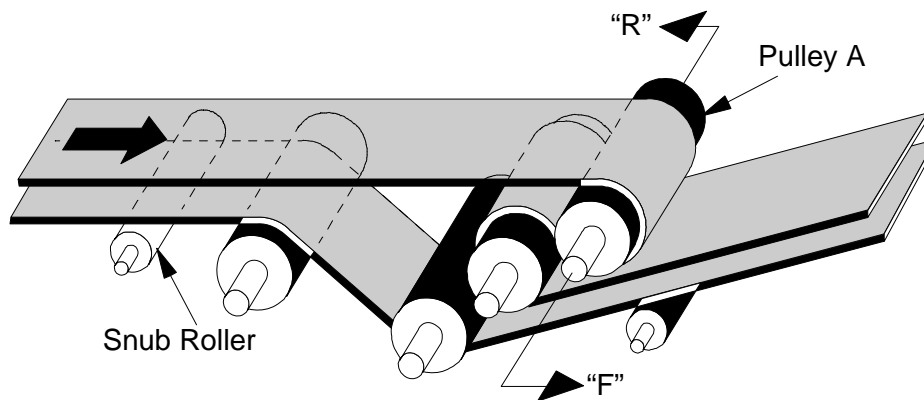


Figure G - 25 Tracking the Two-Pulley Hitch

During forward product travel, if the belt creeps to the right of the upper bend, adjust the right side of the upper bend roller in direction “F” and/or the left in direction “R”. See Figure G - 26.

Proper installation is a key factor in tracking the belt at the upper bend. Make certain the unit is level from side-to-side, and that both sides are adjusted evenly.

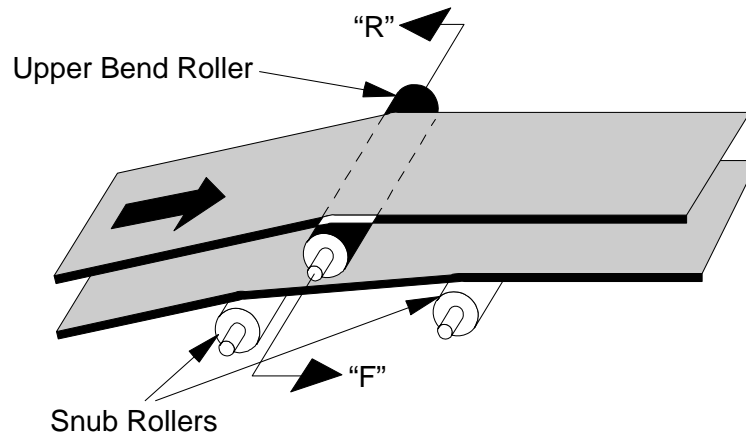


Figure G - 26 Adjusting Upper Bend Snub Rollers for Tracking the Return Run of Belting

With the belt travel as shown in Figure G - 27, if the belt creeps to the near side of the drive and take-up pulleys, adjust the near side of snub roller A in direction “R” and/or the far side in direction “F.”

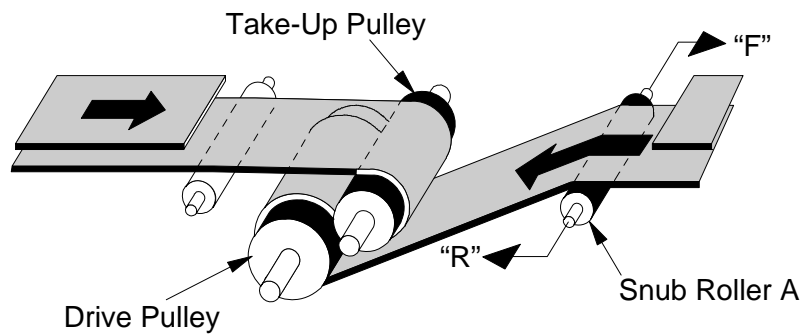


Figure G - 27 Adjusting the Near Side of the Snub Roller A for Tracking Intermediate Drives

## Belt Tracking Checklist

Perform the following:

1. Check the entire belt path for serious tracking problems that require immediate attention.
2. Watch the belt's position at a given point for at least one complete rotation. If the belt wanders off center and then returns to the center position, no adjustments are necessary. When the belt wanders off center, it is caused by camber in the belt length which will tend to straighten out in time.
3. If the upper run of belt runs "off-center" the full length of the conveyor, first make adjustments of the snub roller as shown in Figure G - 24. Then, if necessary, adjust the end pulley as shown in Figure G - 23.
4. Observe the belt's return run and its position on each return roller. Adjust any roller that causes the belt to move off center.
5. If the belt mis-tracks at the upper bend unit, adjust the upper bend or snub rollers as shown in Figure G - 26.
6. If the belt mis-tracks at the Intermediate Drive unit, adjust the snub roller proceeding the drive as shown in Figure G - 27.

## Adjusting Belt Tension

Tension the belt by adjusting the Take-Up Pulley. See Figure G - 28 through Figure G - 30. Adjustments must be made equally on both sides and in small increments.

Adjust the Take-Up Pulley so that the belt tension is just tight enough to prevent the belt from slipping on the drive pulley. Excess tension will reduce the life of the belt, lacing, snub rollers, and pulley bearings.

**WARNING:** You may need to remove the chain guard before adjusting the Take-Up Pulley. When adjusting the Take-Up Pulley, stay clear of the chain and drive components.

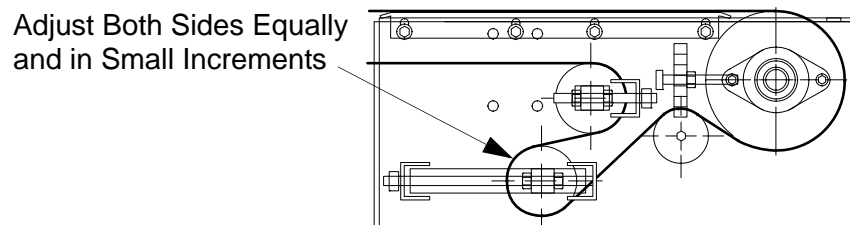
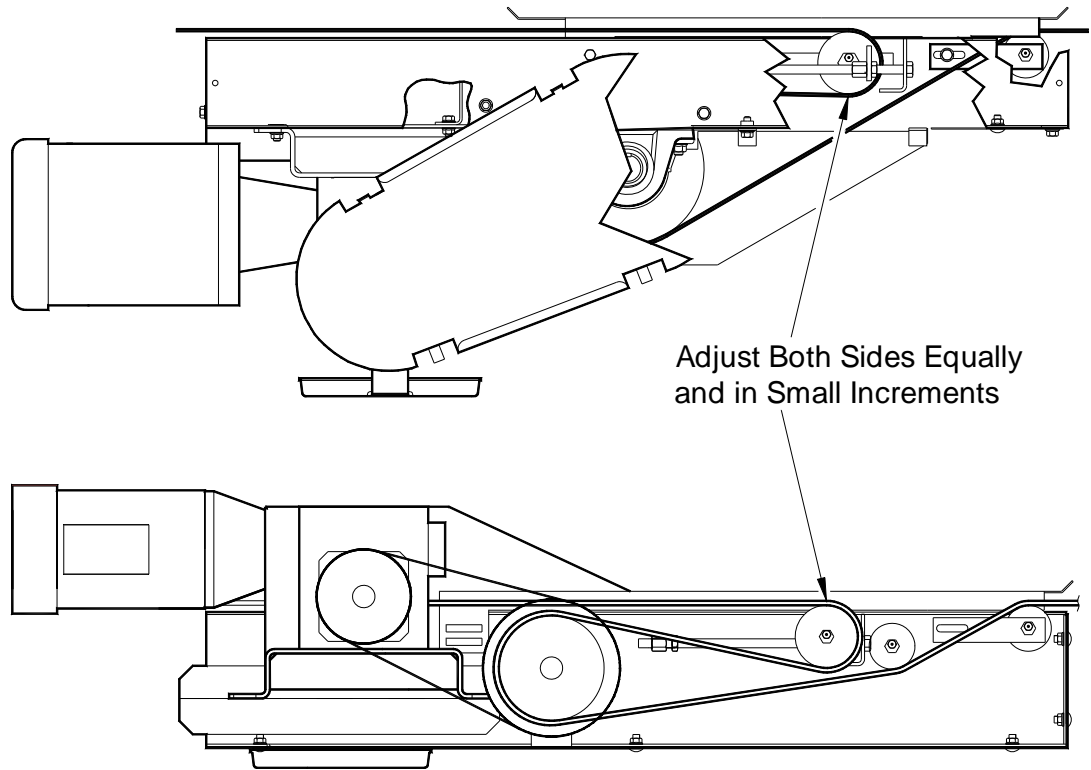


Figure G - 28 End Drive Take-Up



Adjust Both Sides Equally  
and in Small Increments

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Figure G - 29 Intermediate Drive Take-Up

## Adjusting Snub Rollers

A typical Snub Roller mounting is illustrated in Figure G - 30. The assembly of the clips, bolts, etc. is common for all End Drive Take-Ups and Idlers. To adjust, loosen both the bolt and nut on one side and shift the roller as required.

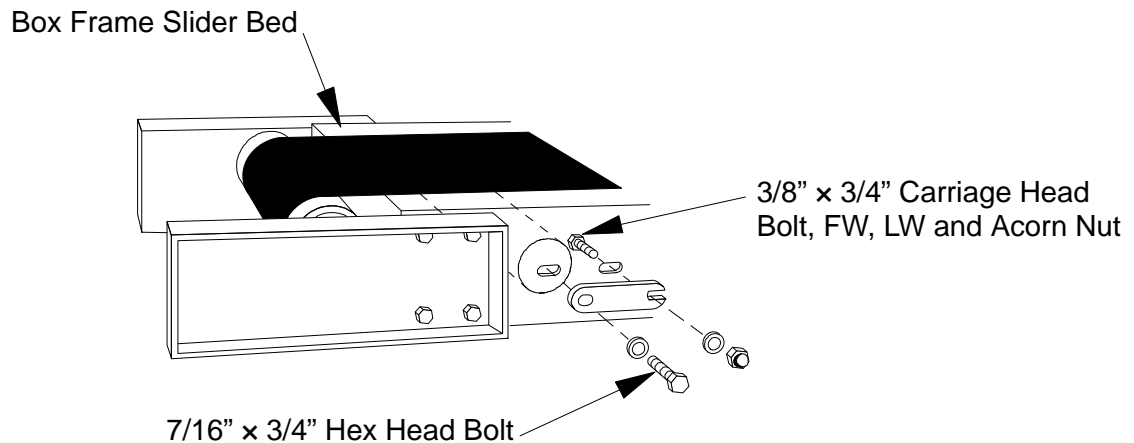


Figure G - 30 Adjustable Snub Roller Assembly

End Drives also have a Snub Roller. Adjustment requires that the two bolts be loosened before the roller can be shifted. See Figure G - 31.

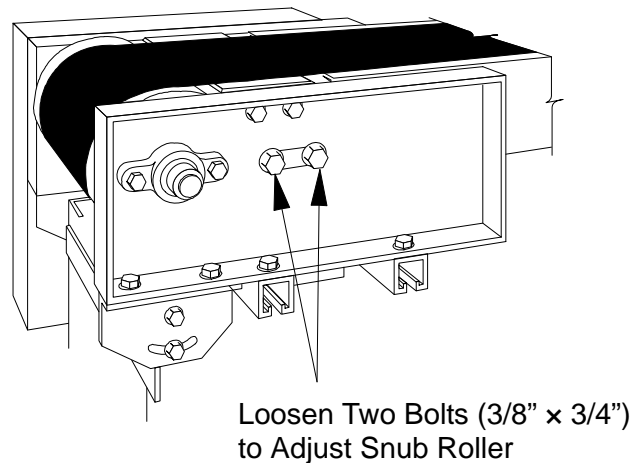


Figure G - 31 Adjusting an End Drive Snub Roller





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## *SECTION H: MAINTENANCE*

### **General**

The recommended inspection and maintenance functions described in this Section apply to intermittent-duty conveyor applications. Additional functions may be required for continuous-duty operation or extreme environmental conditions.

### **Maintenance Safety**

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**WARNING:** Maintenance must be performed only by qualified personnel who are trained in normal and emergency operations of the conveyor and who are knowledgeable of all safety devices, their locations, and functions.

Before performing maintenance on a conveyor, make certain that the conveyor's power disconnect is locked in the OPEN position and tagged to prevent accidental or unexpected application of power.

Do not perform maintenance while the conveyor is running unless specifically instructed to do so in this manual.

Note: Other than belt tracking and checking chain tension, it is NOT necessary to have the conveyor turned ON to perform any of the work described in this section.

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Before restarting a conveyor:

- Remove all foreign objects from the conveyor.
- Be sure that all guards and safety devices are properly installed and working.
- Make sure that all persons are clear of the conveyor and are aware that the conveyor is about to be restarted.

### **New Installations**

All newly installed equipment should be inspected frequently and serviced as needed during the first 40 hours of operation. See "Initial Start-up and Run-in Period" on page H - 2. Thereafter, an appropriate maintenance program should be established and followed. See Table H 1.

### **Maintenance Logs**

Maintenance logs should be kept on all conveyor installations. Each log sheet should show:

- The date when an Inspection or Maintenance function was performed
- Details of the Inspection or Maintenance function
- Names of personnel performing the Inspection or Maintenance function

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## Initial Start-up and Run-in Period

### Chain and Sprockets

Check the drive chain tension daily for the first week of operation, then monthly. Refer to the “Chain Maintenance” label on the inside of chain guard.

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**WARNING:** Chain tension must be checked while the conveyor is running with the chain guard removed. When checking, be careful to stay clear of the chain and drive components.

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### Power Unit Reducer

Grove and Reliance reducers are supplied with “lifetime” synthetic lubricants (Mobile SHC-634) that do not need to be changed after the unit is put into service.

**Note:** All reducers tend to run hot when first put into operation until the maximum break-in efficiency is reached (approximately 120 hours).

## Scheduled Inspections and Maintenance

Intervals indicated for performing inspections and maintenance should be considered for an 8 hour per day operation. An application may subject the equipment to conditions that would necessitate more frequent maintenance. This may best be determined by performing maintenance more frequently when the conveyor is first put into operation, and then lengthening the intervals based on experience.

Table H 1: Scheduled Maintenance

	Components	Item Check									
		Lubrication	Oil Level	Tension	Wear	Alignment	Fasteners	Set Screws	Proper	Physical	Operation
Weekly	Belt			X	X	X				X	
	Belt Lacing									X	
	Carrier/Belt Return Rollers									X	X
	Electrical Devices								X	X	X
	General Structure						X			X	X
	Power Unit - Reducer		X								
	Safety Guards/Devices								X	X	X
Monthly	Bearings - External						X	X		X	
	Drive Chains and Sprockets	X		X	X	X	X	X		X	
	Timing Belts and Sprockets			X	X	X	X	X		X	X
	Take-up/Idler Pulleys									X	X
	Power Unit - Motor						X			X	
	Power Unit - Reducer						X			X	
	Pulley Lagging									X	
	Supports and Hangers						X			X	
Semi Annually 1040 hrs.	Bearings - External	X									
	Power Unit - Motor	X									
	Power Unit - Reducer	X	X								

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## Daily Inspections

General walk-through inspections of the conveyor equipment during daily plant operation are recommended. Listen for unusual noises and carefully observing the system. For continuous duty applications, conduct conveyor inspections once each shift.

Frequently check equipment safety guards, warning signs, lights, and alarms associated with the operation of the conveyor system and keep them in good condition to ensure the safety of all plant personnel. Report and promptly correct any unusual conveyor noise, oil leaks, and operational problems.

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## **Weekly Inspections**

### **Belting**

Check that the belt is tracking properly along the entire conveyor length. Make appropriate adjustments of snub rollers, etc. if required; check that the belt tension is sufficient to prevent the belt from slipping on the drive pulley under the maximum required load. Remove any buildup of product spillage.

### **Belt Lacing**

Check the lacing for damage or protrusions which might cause damage to the conveyor or product. If the lacing needs to be replaced and the take-up permits, cut both ends of the belt square and re-splice. If the take-up does not permit, cut and lace in a short length of belting (1'-0" long minimum).

### **Carrier and Belt Return Rollers**

Check that all rollers are in place and turning freely. Remove any buildup of dirt or product spillage. Take care in keeping cleaning materials from coming in contact with the ball bearings.

### **General Structure and Operation**

Check the conveyor's physical condition, looking for loose fasteners, and damaged or wearing components. Listen for unusual noises such as squeaking bearings, chains jumping sprockets, etc.

Check that the conveyed product travels along the length of the conveyor without obstruction or hesitation.

### **Power Unit Reducer**

Check for signs of oil leaking on the floor and/or in the drip pan. If leaking persists or the amount of leakage is significant, repair or replace the unit. Until corrections have been made, closely monitor the unit's oil level.

### **Safety Guards and Devices**

Check that the safety guards, warning signs, light, and alarms are in place and in proper working condition. Check that all Emergency Stop pull-cords and/or push buttons are functioning properly.

### **Electrical Devices**

Periodically inspect and adjust photocells, proximity sensors, limit switches, etc. as needed. Wipe lenses and reflectors on photoelectric devices clean on a daily basis. For additional maintenance provisions, refer to the appropriate instructions provided by vendors.

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## Monthly Maintenance

### External Bearings

Check that all mounting bolts, set screws, etc., are securely tightened, and that no lubricant is coming out of the seals. Listen for any unusual noises.

### Internal Bearings

Check that the bearings are fully-pressed into the roller tube, and that the lubricant is not coming out of the seals. Listen for any unusual noises.

### Power Unit Motor

Remove any build-up of dirt/dust around the motor vent openings. Check that all mounting bolts are securely tightened and that the motor lead wires are securely connected.

Unless specified, wick-oil sleeve bearings should be lubricated every 2000 to 4000 hours. After the first 4000 hours of operation lubricate with 3 or 4 drops of light grade mineral oil or SAE10W motor oil. Refer to the motor lubrication plate or vendors instruction tag(s).

### Power Unit Motor/Brake

Due to normal wear, the brakes require periodic inspection and adjustment. For instructions, refer to the vendors installation and maintenance manual or contact the manufacturer for additional information.

### Power Unit Reducer

Check the oil level while the unit is warm, but not running. If required, add oil through the "fill" hole until the oil begins to run out of the "oil level" hole. All standard reducers are filled by the manufacturer with a synthetic gear lubricant. When replenishing the oil, be sure to use the same brand and type. DO NOT MIX lubricants. For further information, refer to the instruction tag attached to the unit.

To prevent oil leakage, apply Teflon tape or Permatex to the threads of the fill plug and oil level plug before reinstalling. Properly install and tighten the plugs before putting the unit back into operation.

Hub City reducers only - Wipe off any dirt on the breather plug which could clog the unit and interfere with its operation.

### Power Unit Sprockets

Check sprocket alignment by placing a straight edge across the face of the sprockets simultaneously.

Inspect chain sprockets for need of lubrication. If required, lubricate the chain lightly with SAE 30 oil. DO NOT use grease. Also check teeth for wear. Realign if required,

### Power Unit Chains

Lubricate and check tension per instructions given on the "Chain Maintenance" label located on the inside of the chain guard. Remove any dirt or dried oil with a kerosene soaked rag.

## Power Unit Timing Belts

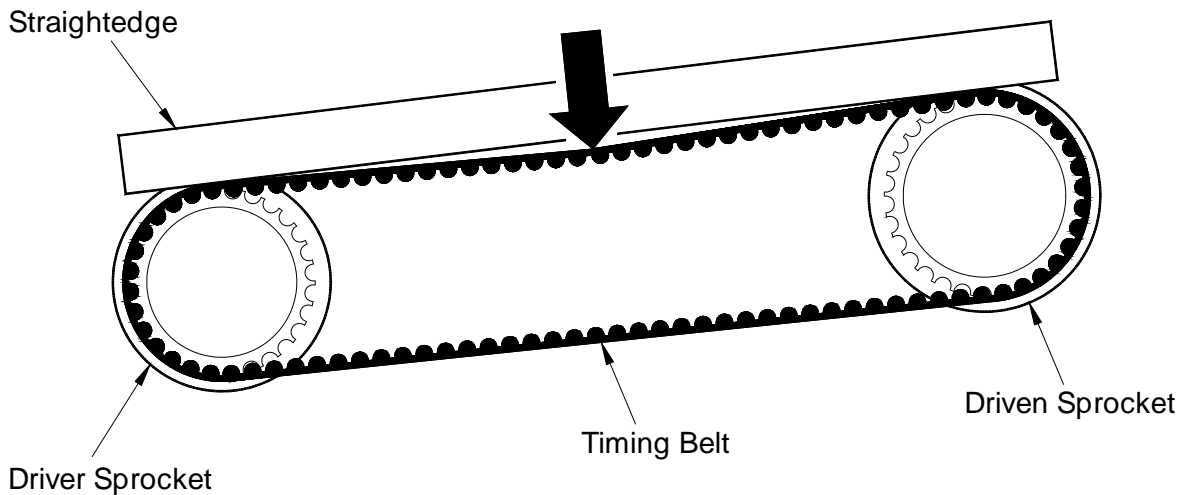
Adjust reducer to remove any belt slack and achieve a snug belt tension.

Use the following steps to check belt tension:

1. Measure the center distance between the driver and driven sprockets to determine the belt span length. See Figure H - 1.
2. Determine the correct deflection for the span as follows: Deflection = Span Length ÷ 64.
3. Use a spring-scale tension checker (possible source Browning) to determine the force required to produce the required deflection. See Table H 2.

Table H 2: Timing Belt Deflection/Force

Belt		Deflection
Pitch	Width	Force
8mm	12mm	7 lbs.
	22mm	15 lbs.
	35mm	20 lbs.
Pitch	42mm	23 lbs.



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Figure H - 1 Measuring Timing Belt Deflection

## Drive Sprockets

Check the alignment by placing a straight-edge across the face of both sprockets simultaneously. Also check for wear on the sprocket teeth and side bars of the chain. If loose, tighten the sprocket fasteners.

## Drive Pulley and Lagging

Check the pulley alignment and make certain that all mounting bolts are securely tightened. Check for worn or damaged lagging on the drive pulley. Repair or replace as required.

## Supports and Hangers

Check that all floor supports and/or ceiling hangers are in good physical condition and have not been damaged. Check that all fasteners are securely tightened and that none are missing.

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## Semi-Annual Maintenance

### Power Unit Motor

Units up to 5 HP are lubricated for life. For 7.5 HP motors, refer to the manufacturer's motor lubrication plate or operating instruction tag wired to the motor.

### Power Unit Reducer

Check that all fasteners are secure.

### External Pulley Bearings

All external bearings have lubed-for-life bearing cartridges, and do not require periodic lubrication.

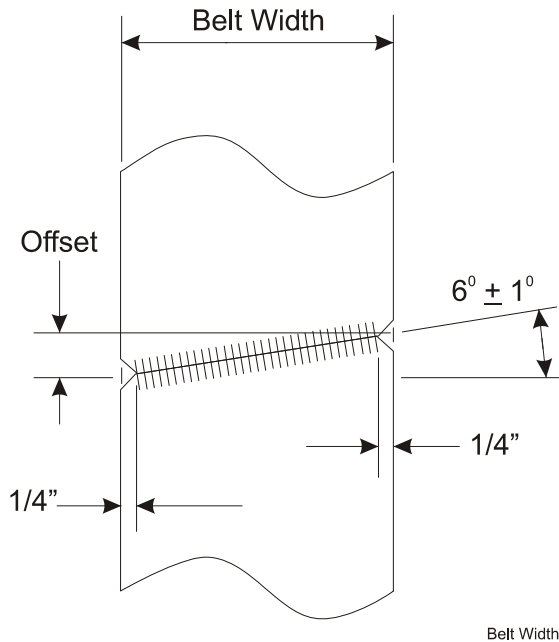
If desired, the bearings may be re-lubricated using the grease-fitting that is provided in all bearing housings. Once grease is added, the bearing must be re-lubricated every 6 months with a lithium based ball bearing grease or compatible grease conforming to NLG1 Grade 2 consistency.

Add the grease slowly and sparingly while the pulley is rotating until a slight showing of grease forms around the seals. **DO NOT OVER LUBRICATE.** Too much grease may damage the seals. If a bearing is over greased; remove the fitting to allow the excess grease to escape. Replace the fitting and wipe clean before putting the conveyor back into operation.



## Replacing the Belt(s)

When replacing the belt(s), it may be beneficial in certain applications to splice the belt on a bias to reduce noise. When the belt is spliced on a bias, Intelligrated engineering requires the angle of the splice to be less than 7 degrees. Use the table below as a guide for common belt widths and dimensions. Each end of the belt must be cut at the exact same angle to ensure proper belt tracking. Be sure to take the offset measurement before trimming 1/4" from the corners, so as not to exceed the maximum bias angle.



Common Belt Widths	Offset Dimension for 6 Degree Bias
12"	1-1/4"
18"	1-7/8"
24"	2-1/2"
30"	3-1/8"
36"	3-13/16"

## Troubleshooting

This section outlines basic troubleshooting provisions for the Trash belt conveyor. For troubleshooting the specific conveyor system installed, always check the maintenance information. Basic troubleshooting is outlined in Table H 3.

**CAUTION:** Do not clear jams or reach into any unit before first turning off the equipment power source(s) and making certain that all moving parts are fully stopped. To avoid personal injury or equipment damage, lockout and tag the conveyor operation control(s) before attempting to correct any malfunction.

Table H 3: Basic Troubleshooting Problems and Solutions

Problem	Cause	Solution
Conveyor does not start.	Electrical power shut off or control circuit not energized.  System control devices (photo-cells, limit switches, etc.) out of adjustment or defective.  Motor overload block open.	Check that system control panel(s) are energized. Be certain emergency stop devices are not activated.  Adjust or replace.  Check conveyor drive system and overload sizing before resetting.
Conveyor shuts off.	Accumulation photocell or other control device(s) actuated or defective.  Emergency stop activated.  Power or component failure at system control center.  Motor overload.	Check conveyor accumulation or obstruction of control device; replace control device if defective.  Correct condition and reset according to control logic.  Refer to vendor manuals.  Check conveyor drive system and overload sizing before re-starting.
One part of belt creeps to one side.	Belt ends not cut square.	Cut the belt ends perfectly square using a T-square.

Table H 3: Basic Troubleshooting Problems and Solutions (Continued)

Problem	Cause	Solution
Entire belt creeps to one side.	<p>Improper loading of belt.</p> <p>Belt shifts to low side. The base structure or conveyor frame is not level or is crooked.</p> <p>Alignment of pulleys; drive, tail, pulleys, or snub rollers are out of line or not perpendicular with the center line of the conveyor.</p> <p>Underside of the belt is dirty.</p>	<p>Center the product on the belt. Load in direction of travel.</p> <p>Stretch a string along the edge of the frame, check alignment of the frame and correct. Next, check the level of support structure.</p> <p>Use a T-square against the edge of the conveyor to recheck and square the pulleys.</p> <p>Remove foreign matter, because it creates a new crown on the pulley/roller face adversely affecting the tracking.</p>
Belt creeps to one side in head (discharge) pulley area.	Head pulley is out of alignment (not perpendicular with the center line of the conveyor).	First, adjust the snub roller. Second, realign the head pulley by advancing (belt travel direction) the end of the pulley to which the belt has shifted.
Belt creeps to one side in tail (infeed) pulley area.	Tail pulley is out of alignment (not perpendicular with the center line of the conveyor).	First, adjust the snub roller. Second, realign the tail pulley by advancing (return belt travel direction) the end of the pulley to which the belt has shifted.
Belt wanders irregularly.	<p>The conveyor is over-belted. This results in the belt being too stiff to properly operate over the pulley diameters.</p> <p>Off center or improper loading.</p>	<p>Change to the proper belt or use pulleys with larger diameters.</p> <p>Correct loading procedure.</p>
Edge wear is excessive.	<p>Belt edges fold up on conveyor guards and frame.</p> <p>Belt shifts to opposite side and rubs excessively due to side loading.</p> <p>Refer to previous Belt Problems to eliminate edge rubbing.</p>	<p>Remove the rough areas on the conveyor guards or frame.</p> <p>Loading in direction of belt travel will improve this condition.</p>

Table H 3: Basic Troubleshooting Problems and Solutions (Continued)

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
Belt fasteners pulling out.	Fasteners are incorrect size	Re-lace the belt with proper size fasteners.
	Too much tension on belt.	Relieve tension until belt will run without slipping on the drive pulley.
	Pulley diameters too small for the thickness of belt used.	Replace with larger diameter pulleys or thinner belt, if practical.

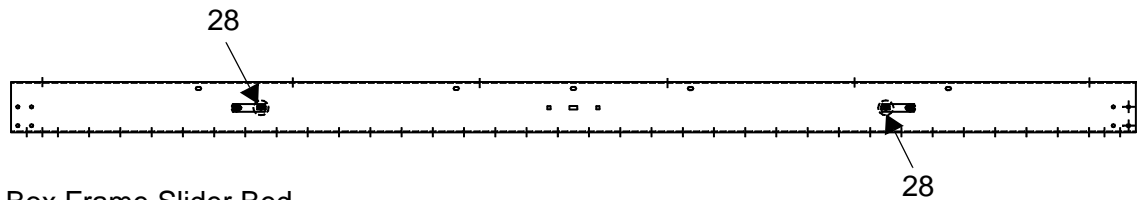
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**SECTION I: PARTS IDENTIFICATION****General Information**

The purpose of this section is to identify parts for a quality preventative maintenance program and to minimize the chances for extended down time.

The following pages illustrate the location of these parts as they apply to each particular unit. Keep in mind that these illustrations only apply to the standard product line. These items will show on the bill-of-material as a coded item.

There will be items on the bill-of-material such as gearmotors, sprockets, chain, etc., that will show up on the price sheets only.

**Intermediate Sections****Box Bed**

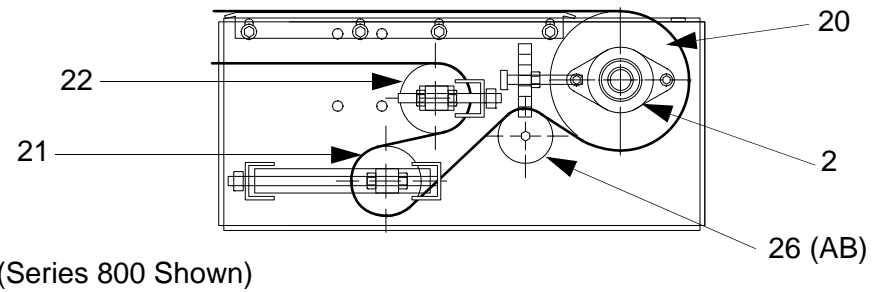
Box Frame Slider Bed

Figure I - 1 Box Bed Intermediate Section

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## End Drive

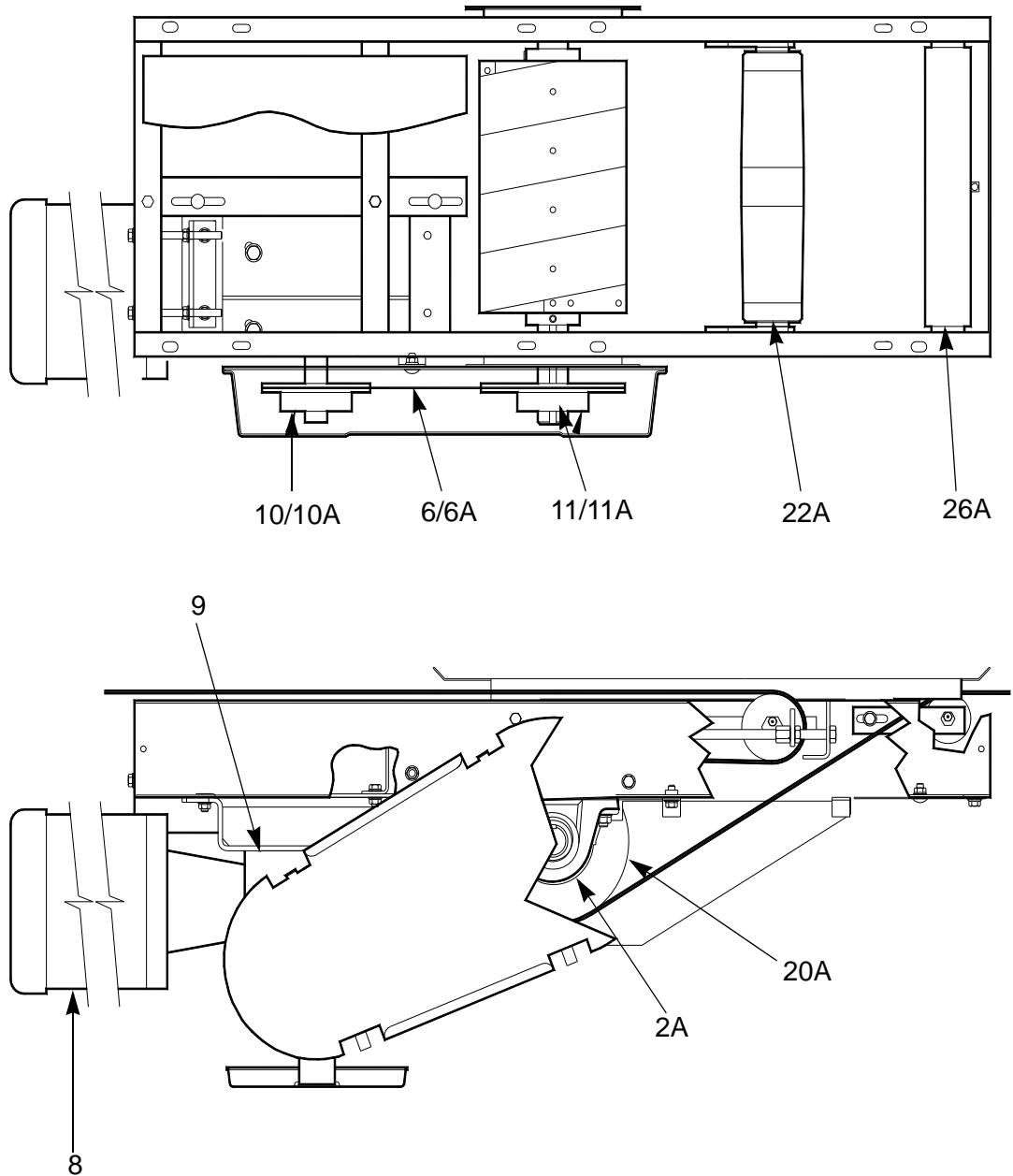
### End Drive with Take-Up



(Series 800 Shown)

Figure I - 2 End Drive Section with Take-Up

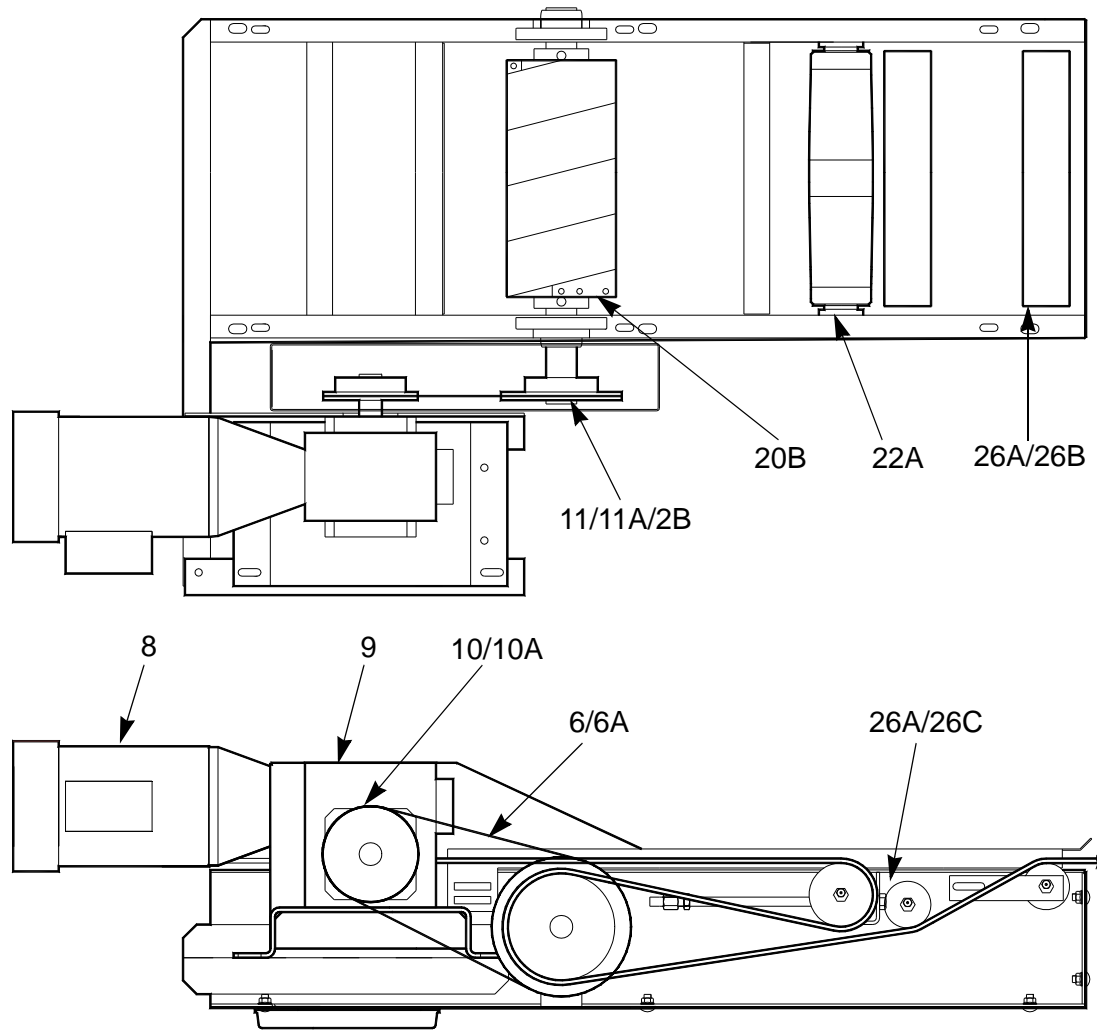
**Intermediate Drives**  
**SA2000 - Intermediate Section**



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Figure I - 3 SA2000 - Intermediate Section

**SA2001 - Intermediate Section - Low Profile**



8100FKI006.

Figure I - 4 SA2001 - Intermediate Section - Low Profile



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## End Idler Sections Take-Up

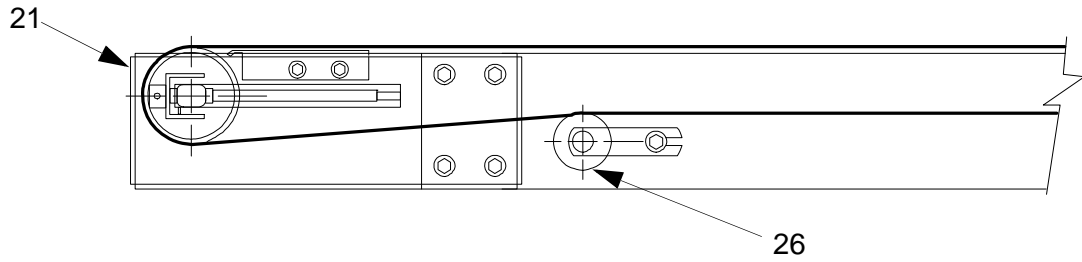


Figure I - 5 Idler Take-Up

## PTO

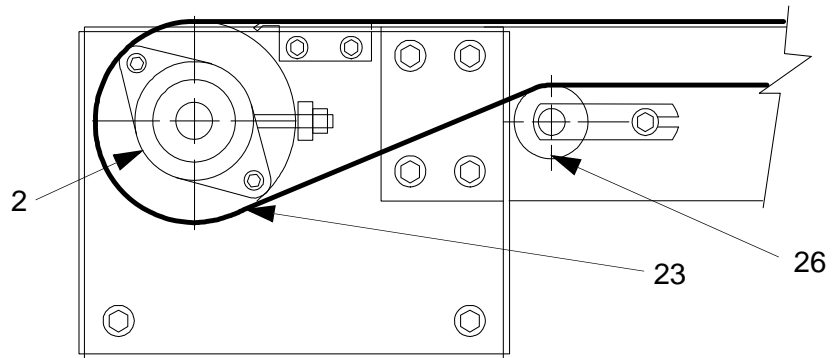


Figure I - 6 Idler PTO

## Auxiliary Take-Up Sections Manual (3.5" Pulleys)

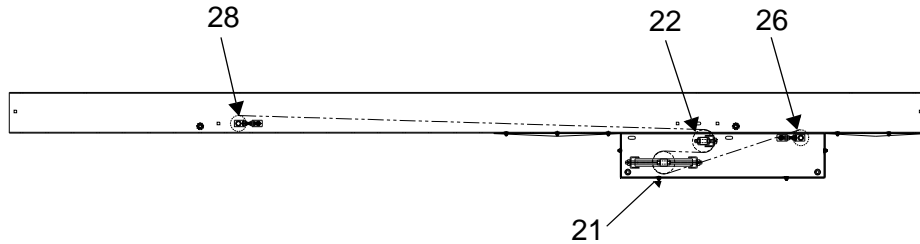


Figure I - 7 Auxiliary Take-Up Section - Manual (3.5" Pulleys)

## Manual - 6" Pulleys

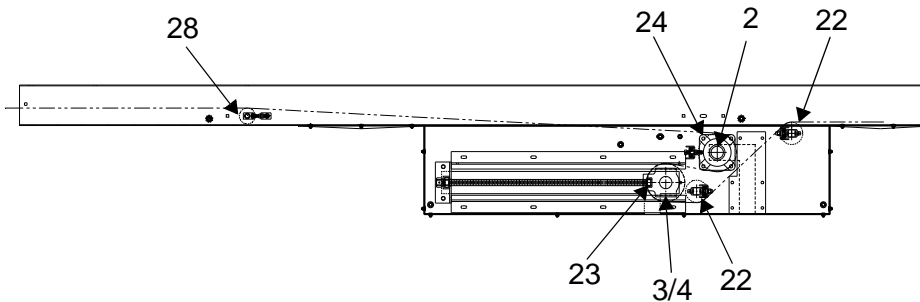


Figure I - 8 Auxiliary Take-Up Section - Manual (6" Pulleys)

## Automatic (Air) - 6" Pulleys

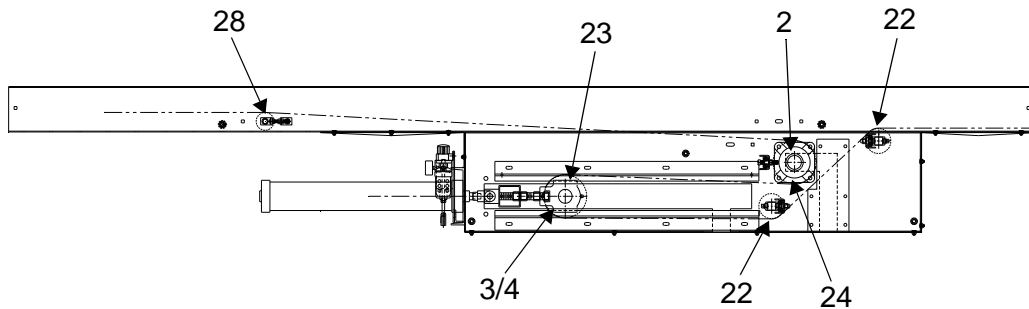
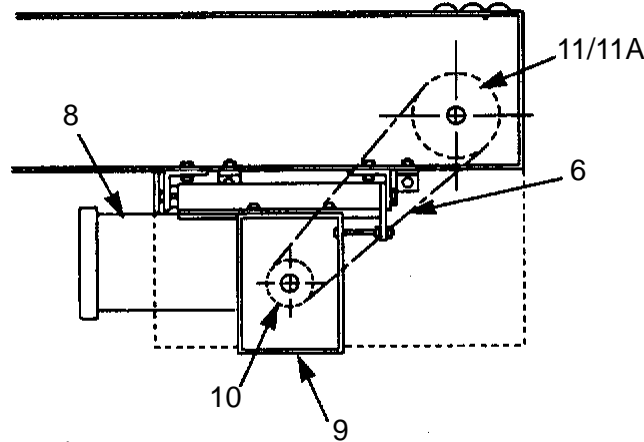


Figure I - 9 Auxiliary Take-Up Section - Automatic (Air) (6" Pulleys)

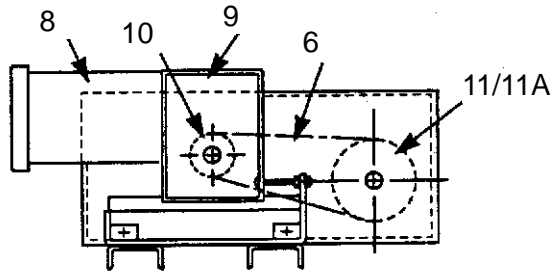
**Power Units**  
**Under-Hung Mount**



(RH Assembly Shown)

Figure I - 10 Power Unit - Under-hung Mount

**Side-Mounted**



(RH Assembly Shown)

Figure I - 11 Power Unit - Side-Mounted

Table I 1: Reducer Assembly Designation

Under-hung Mount			Side-Mount		
Assembly	Brand	Designation	Assembly	Brand	Designation
Series 4/6/800 (RH-Shown) SA2000 (RH-Shown)	Grove	3	Series 4/6/800 (LH-Opp) SA2001 (LH-Opposite)	Grove	2
	Reliance	L1		Reliance	K1
Series 4/6/800 (LH-Opp) SA2000 (LH-Opposite)	Grove	2	Series 4/6/800 (RH-Shown) SA2001 (RH-Shown)	Grove	3
	Reliance	K1		Reliance	L1

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## Miscellaneous Sections

### In-Line Transition Unit - Horizontal

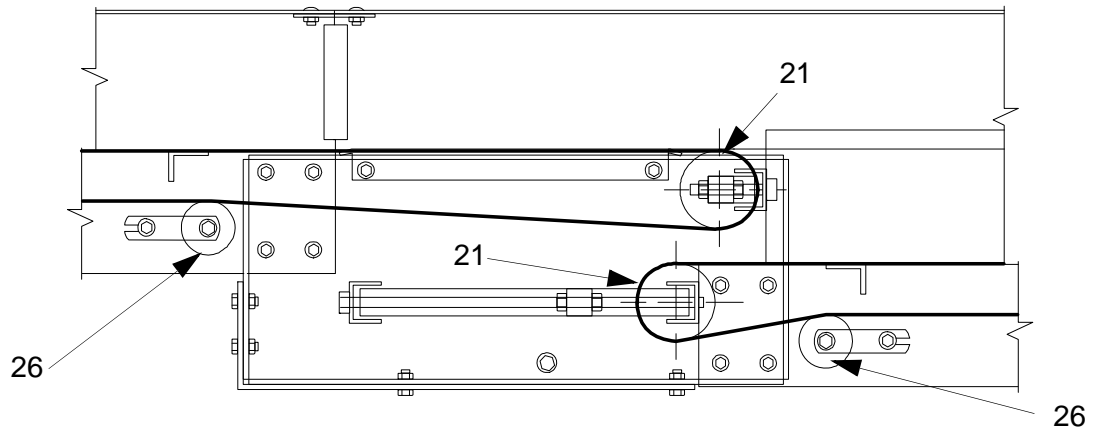


Figure I - 12 In-Line Transition Unit (Horizontal)

### In-Line Transition Unit - Inclined

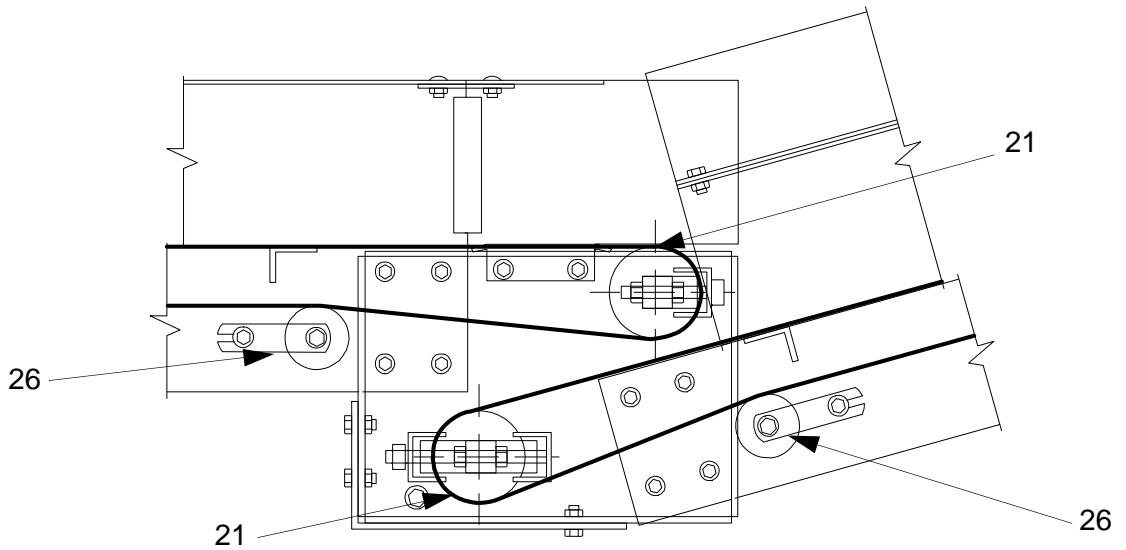


Figure I - 13 In-Line Transition Unit (Inclined)

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## Two-Pulley Hitch with Variable Degree Incline

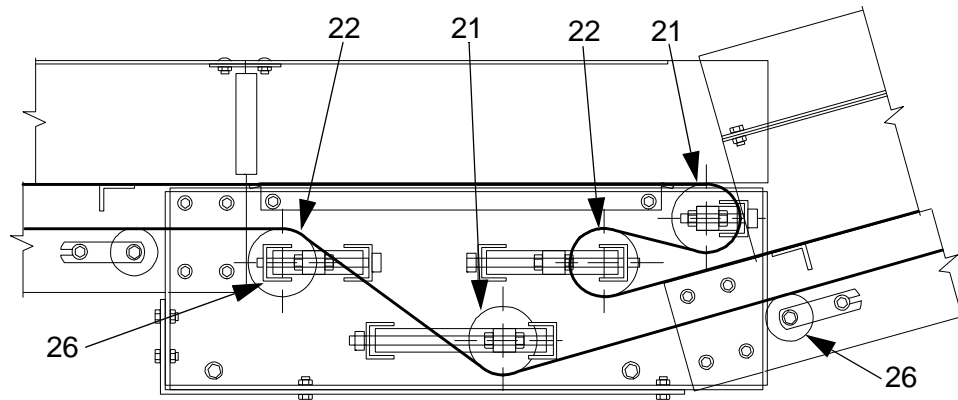


Figure I - 14 Two-Pulley Hitch with Variable Degree Incline

## Upper Bend Unit

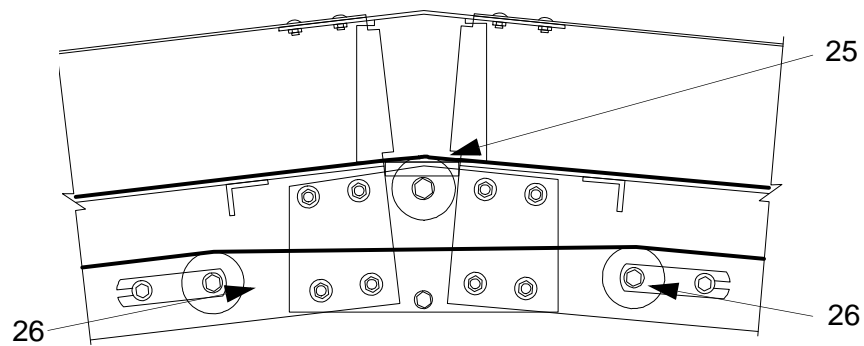


Figure I - 15 Upper Bend Unit

## Non-Width Related Parts

Key No.	Part Description	Part Number
1	Air Cylinder 4x24 Flange Mounted Aluminum Body	27-2832
2	Bearing, 2-Bolt Flange, 1-3/16" BR - Pressure Lubricated	40-0985
	Bearing, 2-Bolt Flange, 1-7/16" BR - Pressure Lubricated	40-0987
	Bearing, 2-Bolt Flange, 1-11/16" BR - Pressure Lubricated	40-0990
	Bearing, 2-Bolt Flange, 1-15/16" BR - Pressure Lubricated	40-0995
	Bearing, 4-Bolt Flange, 1-15/16" BR - Pressure Lubricated	40-0970
2A	Bearing, 2-Bolt Flange, 1-11/16" BR - Pressure Lubricated (SA2000)	7522411
2B	Bearing, Pillow Block, 1-11/16" BR - Pressure Lubricated (SA2001)	7712387
3	Bearing, Take-Up, 1-15/16" BR (5/16" Wide Slot)	70-0145
4	Bearing, Take-Up, 1-15/16" BR (11/16" Wide Slot)	70-0161
5	Bearing, (3174-GT) for No. G251GT Roller (11/16" Hex BR)	35-0200
	Bearing, (Miller MF-2) for No. G251HS Roller (11/16" Hex BR)	35-0372
	Bearing, for 3.5" Diameter, Take-Up and Idler Pulley (1-1/8" SQ BR)	35-0360
6	Chain - RC-50	20-0970
	Chain - RC-50 Connector Link	20-0040
	Chain - RC-60 (High-Speed)	20-0987
	Chain - RC-60 Connector Link	20-0986
	Chain - RC-80 (High Speed)	20-0989
	Chain - RC-80 Connector Link	20-0070
	Chain - RC-100 (High Speed)	20-1000
	Chain - RC-100 Connector Link	20-0080
6A	Timing Belt - Pitch / Width / Length	
	8mm / 21mm / 1200mm	7001504
	8mm / 21mm / 1280mm	7001506
	8mm / 36mm / 1200mm	7001512
	8mm / 36mm / 1280mm	7001514
	14mm / 37mm / 1400mm	7001519
7	Reg and Gauge 0-160 w/Bracket	27-1741
12	Pressure Switch 10-150 psi	30-2407

Key No.	Part Description	Part Number			
	C-Face Motor	Baldor		Reliance	
		Motor	Brake Motor	Motor	Brake Motor
8	208-230/460V-3PH-60HZ - Standard Efficiency				
	1/2HP 56C	7155562	7742489	7001600	7001631
	3/4HP 56C	7150592	7150962	7001601	7704084
	1HP 56C	7745139	7716179	7001602	7172635
	1-1/2HP 145C	7778225	7716197	7001603	7001511
	2 HP 145TC	7274611	7325286	7001604	7704091
	3 HP 182TC	7747525	7747295	7001605	7704708
	5 HP 184TC	7747294	7817618	7001606	7001612
	7-1/2 HP 213TC	7329946	7005792	7001607	7001613
	208-230/460V-3PH-60HZ - Premium Efficiency				
	1/2HP 56C	7002040	7002030	7830000	7001621
	3/4HP 56C	7002041	7002031	7001615	7001622
	1HP 56C	7002042	7002032	7888089	7001623
	1-1/2HP 145C	7002043	7002033	7001632	7001625
	2 HP 145TC	7002044	7002034	7001617	7001626
	3 HP 182TC	7002045	7002035	7001633	7001627
	5 HP 184TC	7002046	7002036	7001618	7001628
	7-1/2 HP 213TC	7002047	7002037	7001619	7001629
	575V-3PH-60HZ - Standard Efficiency				
	1/2HP 56C	7717583	-	7002088	-
	3/4HP 56C	7717584	7152666	7002089	7002090
	1HP 56C	7717598	7717586	-	7002091
	1-1/2HP 145C	7331614	-	-	-
	2 HP 145TC	7763322	-	-	-
	3 HP 182TC	7362599	-	-	-
	5 HP 184TC	7866559	-	-	-
	7-1/2 HP 213TC	7005793	-	-	-
	575V-3PH-60HZ - Premium Efficiency				
	1/2HP 56C	7002050	7002060	7001621	7002092
	3/4HP 56C	7002051	7002061	7001622	7002093
	1HP 56C	7002052	7002062	7001623	7002094
	1-1/2HP 145C	7002053	7002063	7001625	7002095
	2 HP 145TC	7002054	7002064	7001626	7002096
	3 HP 182TC	7002055	7002065	7001627	7002097
	5 HP 184TC	7002056	7002066	7001628	7002098
	7-1/2 HP 213TC	7002057	7002067	7001629	7002099

Key No.	Item		Part Number			
	C-Face Reducer					
			Assembly			
			Series 600 and 800 RU-LS		Series 600 and 800 LU-RS	
			SA2000 - Shown (RH)		SA2000 - OPP (LH)	
			SA2001 - OPP (LH)		SA2001 - Shown (RH)	
	Reducer		Grove	Reliance	Grove	Reliance
Reducer Model	Motor Frame	3	L1	2	K1	
9	<b>5:1 Ratio</b>					
	218	56C	7005800		7005801	-
	218	145TC	7005802	-	7005803	-
	220	56C	7005804	-	7005805	-
	220	145TC	7005806	-	7005141	-
	220	184TC	7005807	-	7005808	-
	224	145TC	7005809	-	7005810	-
	224	182TC	7005035	-	7005811	-
	226	56C	7030646	-	7030645	-
	226	145TC	7030649	-	7030648	-
	226	182TC	7005021	-	7030474	-
	226	184TC	7005021	-	7030474	-
	230	184TC	7005039	-	7005812	-
	232	213TC	7005813	-	7005814	-
	175	56C	-	7005899	-	7005900
	175	145TC	-	7005901	-	7005902
	200	56	-	7005920	-	7005921
	200	145TC	-	7005922	-	7005923
	200	182TC	-	7005924	-	7005925
	262	56C	-	7005940	-	7005941
	262	145TC	-	7005942	-	7005943
	262	182TC	-	7005944	-	7005945
	262	184TC	-	7005944	-	7005945
350	184TC	-	7005968	-	7005969	



Key No.	Item		Part Number			
	C-Face Reducer					
			Assembly			
			Series 600 and 800 RU-LS		Series 600 and 800 LU-RS	
			SA2000 - Shown (RH)		SA2000 - OPP (LH)	
			SA2001 - OPP (LH)		SA2001 - Shown (RH)	
Reducer		Grove	Reliance	Grove	Reliance	
Reducer Model	Motor Frame	3	L1	2	K1	
9	<b>7.5:1 Ratio</b>					
	220	56C	7005815	-	7005025	-
	220	145TC	7005159	-	7005027	-
	224	145TC	7005816	-	7005036	-
	224	182TC	7005817	-	7005818	-
	230	184TC	7005819	-	7005820	-
	232	213TC	7005821	-	7005822	-
	242	213TC	7005823	-	7005824	-
	200	56C	-	7005926	-	7005927
	200	145TC	-	7005928	-	7005929
	262	182TC	-	7005946	-	7005947
	350	182TC	-	N/A	-	N/A
	9	<b>10:1 Ratio</b>				
218		56C	7005825	-	7005826	-
220		56C	7005223	-	7005312	-
220		145TC	7005827	-	7005828	-
224		145TC	7005830	-	7005831	-
226		56C	7031010	-	7031017	-
226		145TC	7030471	-	7030470	-
230		182TC	7005832	-	7005833	-
232		182TC	7031008	-	7031009	-
232		184TC	7031008	-	7031009	-
242		184TC	7005834	-	7005835	-
242		213TC	7005836	-	7005837	-
175		56C	-	7005903	-	7005904
200		56C	-	7005930	-	7005931
200		145TC	-	7005932	-	7005933
262		56C	-	7005948	-	7005949
262		145TC	-	7005950	-	7005951
350	182TC	-	7005972	-	7005973	

Key No.	Item		Part Number			
	C-Face Reducer					
			Assembly			
			Series 600 and 800 RU-LS		Series 600 and 800 LU-RS	
			SA2000 - Shown (RH)		SA2000 - OPP (LH)	
			SA2001 - OPP (LH)		SA2001 - Shown (RH)	
	Reducer		Grove	Reliance	Grove	Reliance
Reducer Model	Motor Frame	3	L1	2	K1	
9	<b>15:1 Ratio</b>					
	218	56C	7005838	-	7005839	-
	220	56C	7005221	-	7005840	-
	220	145TC	7005033	-	7005841	-
	224	56C	7005037	-	7005158	-
	224	145TC	7005038	-	7005032	-
	226	56C	7031016	-	7031014	-
	226	145TC	7005086	-	7005030	-
	230	182TC	7005142	-	7005731	-
	232	145TC	7005842	-	7005843	-
	232	182TC	7005092	-	7005091	-
	242	184TC	7005844	-	7005845	-
	242	213TC	7005846	-	7005847	-
	175	56C	-	7005905	-	7005906
	200	56C	-	7005934	-	7005935
	262	56C	-	7005952	-	7005953
	262	145TC	-	7005954	-	7005955
	350	145TC	-	7005974	-	7005975
	350	182TC	-	7005976	-	7005977

Key No.	Item		Part Number			
		<b>C-Face Reducer</b>				
		<b>Assembly</b>				
		<b>Series 600 and 800 RU-LS</b>		<b>Series 600 and 800 LU-RS</b>		
		<b>SA2000 - Shown (RH)</b>		<b>SA2000 - OPP (LH)</b>		
		<b>SA2001 - OPP (LH)</b>		<b>SA2001 - Shown (RH)</b>		
<b>Reducer</b>		<b>Grove</b>	<b>Reliance</b>	<b>Grove</b>	<b>Reliance</b>	
<b>Reducer Model</b>	<b>Motor Frame</b>	<b>3</b>	<b>L1</b>	<b>2</b>	<b>K1</b>	
9	<b>20:1 Ratio</b>					
	218	56C	7005848	-	7005849	-
	220	56C	7005850	-	7005851	-
	224	56C	7005852	-	7005853	-
	224	145TC	7005854	-	7005333	-
	226	56C	7031012	-	7031013	-
	226	145TC	7005081	-	7005080	-
	230	182TC	7005855	-	7005320	-
	232	145TC	7030647	-	7031018	-
	232	182TC	7005090	-	7005089	-
	242	182TC	7005856	-	7005857	-
	242	184TC	7005856	-	7005857	-
	175	56C	-	7005907	-	7005908
	200	56C	-	7005936	-	7005937
	262	56C	-	7005746	-	7005956
	262	145TC	-	7005957	-	7005958
	350	145TC	-	7005978	-	7005979
350	182TC	-	7005980	-	7005981	

Key No.	Item		Part Number			
	C-Face Reducer					
			Assembly			
			Series 600 and 800 RU-LS		Series 600 and 800 LU-RS	
			SA2000 - Shown (RH)		SA2000 - OPP (LH)	
			SA2001 - OPP (LH)		SA2001 - Shown (RH)	
Reducer		Grove	Reliance	Grove	Reliance	
Reducer Model	Motor Frame	3	L1	2	K1	
9	<b>25:1 Ratio</b>					
	218	56C	7005858	-	7005859	-
	220	56C	7005860	-	7005861	-
	224	56C	7005862	-	7005863	-
	224	145TC	7005864	-	7005865	-
	226	56C	7031015	-	7031011	-
	230	145TC	7005866	-	7005867	-
	232	145TC	7005085	-	7005084	-
	232	182TC	7005088	-	7005087	-
	175	56C	-	7005909	-	7005910
	200	56C	-	7005744	-	7005913
	262	56C	-	7005754	-	7005742
	262	145TC	-	7005959	-	7005960
	350	145TC	-	7005982	-	7005983
	350	182TC	-	7005984	-	7005985
	<b>30:1 Ratio</b>					
	218	56C	7005868	-	7005869	-
	224	56C	7005870	-	7005783	-
	226	56C	7005069	-	7005068	-
	230	56C	7005871	-	7005872	-
	232	145TC	7005083	-	7005082	-
	242	145TC	7005874	-	7005875	-
	242	182TC	7005766	-	7005876	-
	175	56C		7005911		7005912
	200	56C		7005914		7005915
	262	56C		7005961		7005962
	350	145TC		7005986		7005541

Key No.	Item		Part Number			
	C-Face Reducer					
			Assembly			
			Series 600 and 800 RU-LS		Series 600 and 800 LU-RS	
			SA2000 - Shown (RH)		SA2000 - OPP (LH)	
			SA2001 - OPP (LH)		SA2001 - Shown (RH)	
	Reducer		Grove	Reliance	Grove	Reliance
Reducer Model	Motor Frame	3	L1	2	K1	
9	<b>40:1 Ratio</b>					
	220	56C	7005877	-	7005878	-
	224	56C	7005879	-	7005328	-
	226	56C	7005065	-	7005064	-
	230	56C	7005880	-	7005881	-
	232	145TC	7005075	-	7005074	-
	242	145TC	7005882	-	7005883	-
	242	182TC	7005321	-	7005884	-
	200	56C	-	7005916	-	7005917
	262	56C	-	7005752	-	7005963
	350	145TC	-	7005987	-	7005988
9	<b>50:1 Ratio</b>					
	224	56C	7005885	-	7005886	-
	232	56C	7005887	-	7005888	-
	232	145TC	7005073	-	7005072	-
	242	145TC	7005889	-	7005890	-
	200	56C	-	7005918	-	7005919
	262	56C	-	7005964	-	7005965
	350	56C	-	7005989	-	7005990
350	145TC	-	7005991	-	7005992	

Key No.	Item		Part Number			
	<b>C-Face Reducer</b>					
			<b>Assembly</b>			
			<b>Series 600 and 800 RU-LS</b>		<b>Series 600 and 800 LU-RS</b>	
			<b>SA2000 - Shown (RH)</b>		<b>SA2000 - OPP (LH)</b>	
			<b>SA2001 - OPP (LH)</b>		<b>SA2001 - Shown (RH)</b>	
	<b>Reducer</b>		<b>Grove</b>	<b>Reliance</b>	<b>Grove</b>	<b>Reliance</b>
<b>Reducer Model</b>	<b>Motor Frame</b>	<b>3</b>	<b>L1</b>	<b>2</b>	<b>K1</b>	
9	<b>60:1 Ratio</b>					
	220	56C	7005891	-	7005892	-
	224	56C	7005893	-	7005894	-
	226	56C	7005061	-	7005060	-
	230	56C	7005895	-	7005896	-
	232	56C	7005067	-	7005066	-
	232	145TC	7005071	-	7005070	-
	242	145TC	7005897	-	7005898	-
	200	56C	-	7005938	-	7005939
	262	56C	-	7005966	-	7005967
	350	56C	-	7005993	-	7005994
	350	145TC	-	7005995	-	7005996

Key No.	Item		Part Number					
	Chain Sprocket (Power Unit - Driver)							
	Size - Teeth - Belt Width	Sprocket Hub Type (TL Bushing No.)	Reducer Output Shaft Diameter					
.875			1.000	1.125	1.250	1.500	1.875	
10	Series 600 and 800 - End Drive							
	RC50 - 11T	Type B Hub	745505					
	RC50 - 13T	Type B Hub	745513	745512	745510			
	RC50 - 14T	Type B Hub			745514			
	RC50 - 17T	Type B Hub			745517			
	RC60 - 9T	Type B Hub	745100					
	RC60 - 10T	Type B Hub	745101		745102			
	RC60 - 11T (TL Bushing)	Type B Hub	745111	745110	745112			
		Type TL Hub (1008)	745631		745631			
			230701					
	RC60 - 13T (TL Bushing)	Type B Hub			745133			
		Type TL Hub (1210)	745633	745633	745633			
			230716	230717	230718			
	RC60 - 14T (TL Bushing)	Type B Hub			745142		745144	
		Type TL Hub (1210)	745634	745634	745634		745634	
			230716	230717	230718			
	RC60 - 15T (TL Bushing)	Type TL Hub (1610)	745635	745635	745635		745635	
			230746	230747	230748		230753	
	RC60 - 16T (TL Bushing)	Type B Hub					745165	
		Type TL Hub (1610)					745636	
							230753	
RC60 - 17T (TL Bushing)	Type B Hub					745176		
	Type TL Hub (1610)			745637		745637		
				230748		230753		
RC60 - 18T (TL Bushing)	Type TL Hub (1610)	745638	745638	745638		745638		
		230746	230747	230748		230753		
RC60 - 19T (TL Bushing)	Type TL Hub (1610)	745639	745639	745639		745639		
		230746	230747	230748		230753		
RC60 - 20T (TL Bushing)	Type TL Hub (2012)					745640		
						230785		
RC60 - 21T (TL Bushing)	Type TL Hub (2012)					745641		
						230785		

Key No.	Item		Part Number					
	Chain Sprocket (Power Unit - Driver)							
	Size - Teeth - Belt Width	Sprocket Hub Type (TL Bushing No.)	Reducer Output Shaft Diameter					
.875			1.000	1.125	1.250	1.500	1.875	
10	RC60 - 22T (TL Bushing)	Type TL Hub (2012)		745642	745642		745642	
				230777	230778		230785	
	RC60 - 25T (TL Bushing)	Type TL Hub (1008)????					745645	
	RC60 - 26T (TL Bushing)	Type TL Hub (1210)					745646	
	RC60 - 29T (TL Bushing)	Type TL Hub (1610)					745649	
							230753	
	RC60 - 30T (TL Bushing)	Type TL Hub (1610)					745650	
							230753	
	RC80 - 11T	Type B Hub					745313	
	RC80 - 12T	Type B Hub					745322	
	(TL Bushing)	Type TL Hub (1615)					745683	
							230766	
	RC80 - 13T	Type B Hub					745333	
	(TL Bushing)	Type TL Hub (1615)					745684	
							230766	
	RC80 - 14T	Type B Hub					745342	
	(TL Bushing)	Type TL Hub (1615)					745685	
							230766	
	RC80 - 16T	Type B Hub					745360	
	(TL Bushing)	Type TL Hub (2012)						745687
							230786	
RC80 - 17T	Type B Hub						745372	
(TL Bushing)	Type TL Hub (2012)						745688	
							230786	
RC80 - 18T	Type TL Hub (2012)						745689	
							230786	
RC80 - 19T	Type TL Hub (2012)						745690	
							230786	
RC80 - 20T	Type TL Hub (2517)						745691	
(TL Bushing)							230798	
RC80 - 21T	Type TL Hub (2517)						745692	
(TL Bushing)							230798	
RC80 - 23T	Type TL Hub (2517)						745694	
(TL Bushing)							230798	



Key No.	Item		Part Number						
	Chain Sprocket (Power Unit - Driver)								
	Size - Teeth - Belt Width	Sprocket Hub Type (TL Bushing No.)	Reducer Output Shaft Diameter						
.875			1.000	1.125	1.250	1.500	1.875		
10	RC100 - 10T	Type B Hub						745500	
	RC100 - 11T	Type B Hub						745432	
		Type TL Hub						745718	
		(SDS)						230759	
	RC100 - 12T	Type B Hub						745440	
		Type TL Hub						745719	
		(SDS)						230759	
	RC100 - 13T	Type TL Hub						745723	
		(2012)						230786	
	RC100 - 14T	Type TL Hub						745758	
		(2517)						230798	
	SA2000 and SA2001 - Intermediate / Low-Profile Drive								
	RC60 - 16T (TL Bushing)	Type TL Hub (1610)		7788120	7788120	7788120	7788120		
				7115210	7115213	7115223	7115228		
	RC60 - 19T (TL Bushing)	Type TL Hub (1610)		7742721	7742721	7742721	7742721		
				7115210	7115213	7115223	7115228		
	RC60 - 20T (TL Bushing)	Type TL Hub (2012)		7743918	7743918	7743918	7743918		
				7115235	7115228	7115227	7721059		
	RC60 - 21T (TL Bushing)	Type TL Hub (2012)		7120512	7120512	7120512	7120512	7120512	
				7115235	7115228	7115227	7721059	7115234	
RC60 - 22T (TL Bushing)	Type TL Hub (2012)		7000092	7000092	7000092	7000092			
			7115235	7115228	7115227	7721059			
RC60 - 23T (TL Bushing)	Type TL Hub (2012)		7125294	7125294	7125294	7125294			
			7115235	7115228	7115227	7721059			
RC60 - 25T (TL Bushing)	Type TL Hub (2012)		7730801	7730801	7730801	7730801	7730801		
			7115235	7115228	7115227	7721059	7115234		

Key No.	Item		Part Number					
	Chain Sprocket (Power Unit - Driver)							
	Size - Teeth - Belt Width	Sprocket Hub Type (TL Bushing No.)	Reducer Output Shaft Diameter					
.875			1.000	1.125	1.250	1.500	1.875	
10A	Timing-Belt Sprocket (Power Unit - Driver)							
	8mm-30T-21 (TL Bushing)	Type TL Hub (1108)		7001533				
				7001513				
	8mm-32T-21 (TL Bushing)	Type TL Hub (1210)		7001534	7001534			
				7200560	7115208			
	8mm-32T-36 (TL Bushing)	Type TL Hub (1210)				7001551		
						7115207		
	8mm-34T-21 (TL Bushing)	Type TL Hub (1610)		7001535	7001535	7001535		
				7115210	7115213	7115223		
	8mm-34T-36 (TL Bushing)	Type TL Hub (1210)				7001552		
						7115207		
	8mm-36T-21 (TL Bushing)	Type TL Hub (1610)		7001536	7001536			
				7115210	7115213			
	8mm-36T-36 (TL Bushing)	Type TL Hub (1610)			7001553			
					7115213			
	8mm-38T-21 (TL Bushing)	Type TL Hub (1610)		7001537	7001537	7001537		
				7115210	7115213	7115223		
	8mm-38T-36 (TL Bushing)	Type TL Hub (1610)			7001554	7001554	7001554	
					7115213	7115223	7732428	
	8mm-40T-21 (TL Bushing)	Type TL Hub (2012)		7001538	7001538	7001538		
				7115235	7115228	7115227		
	8mm-40T-36 (TL Bushing)	Type TL Hub (2012)				7001555		7001555
						7115227		7115234
	8mm-42T-21 (TL Bushing)	Type TL Hub (2012)		7001539	7001539	7001539		
				7115235	7115228	7115227		
	8mm-42T-36 (TL Bushing)	Type TL Hub (2012)			7001556			
					7115228			
	8mm-45T-21 (TL Bushing)	Type TL Hub (2012)		7001540	7001540	7001540		
			7115235	7115228	7115227			
8mm-48T-21 (TL Bushing)	Type TL Hub (2012)		7001541	7001541	7001541			
			7115235	7115228	7115227			
8mm-48T-36 (TL Bushing)	Type TL Hub (2012)				7001558			
					7115227			
8mm-50T-21 (TL Bushing)	Type TL Hub (2012)		7001542	7001542	7001542			
			7115235	7115228	7115227			

Key No.	Item		Part Number					
	Chain Sprocket (Power Unit - Driver)							
	Size - Teeth - Belt Width	Sprocket Hub Type (TL Bushing No.)	Reducer Output Shaft Diameter					
.875			1.000	1.125	1.250	1.500	1.875	
10A	14mm-28T-37 (TL Bushing)	Type TL Hub (2012)					7001566	7001566
							7721059	7115234
	14mm-30T-37 (TL Bushing)	Type TL Hub (2517)				7001568	7001568	7001568
						7001524	775668	7174980
	14mm-32T-37 (TL Bushing)	Type TL Hub (2517)					7001570	7001570
							7756668	7174980
	14mm-34T-37 (TL Bushing)	Type TL Hub (2517)					7001572	7001572
							7756668	7174980
	14mm-36T-37 (TL Bushing)	Type TL Hub (2517)					7001574	7001574
							7756668	7174980
	14mm-40T-37 (TL Bushing)	Type TL Hub (3020)				7001578		
						7001527		

Key No.	Item	Part Number			
11	Chain Sprocket (Pulley Driven)				
	Size - Teeth - Belt Width	Sprocket Hub Type (TL Bushing No.)	<b>Reducer Output Shaft Diameter</b>		
			1.187"	1.427"	1.675"
	Series 600 and 800 - End Drive				
	RC50 - 13T	Type B Hub	745511		
	RC60 - 21T  (TL Bushing)	Type B Hub		745207	
		Type TL Hub (2012)		745641	
				230781	
	RC60 - 27T  (TL Bushing)	Type B Hub			745270
		Type TL Hub (2012)			745647
					230782
	RC80 - 15T  (TL Bushing)	Type B Hub		745350	
		Type TL Hub (1615)		745686	
				230769	
	RC80 - 19T  (TL Bushing)	Type B Hub			745392
		Type TL Hub (2012)			745690
					230782
	RC100 - 15T  (TL Bushing)	Type TL Hub			745725
		(2517)			230793
	SA2000 and 2001 - Intermediate / Low Profile				
RC60 - 26T  (TL Bushing)	Type TL Hub			7717361	
	(2012)			7115238	
RC60 - 32T  (TL Bushing)	Type TL Hub			7742328	
	(2012)			7115238	

Key No.	Item	Part Number		
11A	Timing-Belt Sprocket (Pulley - Driven)			
	8mm-71T-21 (TL Bushing)	Type TL Hub (2517)		7001548
				7115239
	8mm-71T-36 (TL Bushing)	Type TL Hub (2517)		7001563
				7115239
	8mm-75T-21 (TL Bushing)	Type TL Hub (2517)		7001549
				7115239
	8mm-75T-36 (TL Bushing)	Type TL Hub (2517)		7001564
				7115239
	8mm-80T-21 (TL Bushing)	Type TL Hub (2517)		7001550
				7115239
	8mm-80T-36 (TL Bushing)	Type TL Hub (3020)		7001565
				7000084
14mm-50T-37 (TL Bushing)	Type TL Hub (3020)		7001582	
			7000084	
14mm-53T-37 (TL Bushing)	Type TL Hub (3020)		7001583	
			7000084	
14mm-56T-37 (TL Bushing)	Type TL Hub (3525)		7001584	
			7000085	
Note: "B" = Sprocket with finished bore. "TL" = Sprocket with taper-bore bushing. "H" = Sprocket with split taper bushing.				

## Width Related Parts

Key No.	Part Description	Conveyor Width "W" - Part Number						
		15"	21"	27"	33"	39"	45"	51"
20	Pulley w/Shaft, Crown Face, Lagged, Single Shaft Extension (End/Center Drive-Power Unit)							
	Series 600 - 6.5" / 1-7/16"	68-3202	68-3203	68-3204	68-3205	68-3206	68-3207	68-3208
	Series 800 - 8.5" / 1-11/16"	68-3302	68-3303	68-3304	68-3305	68-3306	68-3307	68-3308
20A	Pulley w/Shaft, Drive, Crown Face, Lagged (SA2000 Intermediate Drive)							
	8-1/4" dia., 1-11/16" Shaft							
20B	Pulley w/Shaft, Drive, Crown Face, Lagged (SA2001 Low Profile Intermediate Drive)							
	6-1/4" dia., 1-11/16" Shaft							
21	Pulley / Axle, Crown Face (Series 600/800 Idler/Take-Up; Hor./Incl. Transition)							
	Pulley - 3.5" CF / 1-1/8" SQ. BR	50-1216	50-1217	50-1218	50-1219	50-1220	50-1221	50-1222
	Axle - 1-1/8" Square	69-0912	69-0913	69-0914	69-0915	69-0916	69-0917	69-0918
22	Pulley / Axle, Flat Face (Series 600/800 Idler/Take-Up; Aux. Air T.U.; Hor./Incl. Transition)							
	Pulley - 3.5" FF / 1-1/8" SQ. BR	50-1216	50-1217	50-1218	50-1219	50-1220	50-1221	50-1222
	Axle - 1-1/8" Square	69-0912	69-0913	69-0914	69-0915	69-0916	69-0917	69-0918
22A	Pulley & Axle, Take-Up, Crown Face, (SA2000 / 2001 Intermediate / Low Profile)							
	3-1/2" x 1-1/16" HX BR							
	Axle - 1-1/16" CRS Hex							
23	Pulley w/Shaft, Crown Face, No Shaft Extension (Series 1000 Tail End Idler; Aux. Air T.U.)							
	6.0" CF / 1-15/16"	68-3231	68-3232	68-3233	68-3234	68-3235	68-3236	68-3237
24	Pulley w/Shaft, Flat Face, No Shaft Extension (Aux. Air T.U.)							
	6.0" FF / 1-15/16"	68-3238	68-3239	68-3240	68-3241	68-3242	68-3243	68-3244
25	Roller / Axle, (Carrier - Nose-Over)							
	Roller - No. G251HS	50-2474	50-2475	50-2476	50-2466	50-2467	50-2468	50-2470
	Axle - 11/16" Hex	50-1329	50-1330	50-1331	50-1332	50-1333	50-1334	50-1335
26	Roller / Axle, (Snub)							
	Roller - No. G251GT	50-1401	50-1405	50-1409	50-1413	50-1415	50-1417	50-1419
	Roller - No. G251AB	49-1831	49-1832	49-1833	49-1834	49-1835	49-1836	49-1837
26A	Roller - Adjustable / Fixed Snub SA2000 and SA2001							
	2-9/16" x 11/16 HX BR							
26B	Shaft - Adjustable Snub SA2001							
	11/16' CRS Hex							

Key No.	Part Description	Conveyor Width "W" - Part Number						
		15"	21"	27"	33"	39"	45"	51"
26C	Shaft - Fixed Snub SA2001							
	11/16' CRS Hex							
28*	Roller w/Axle, (Belt Return)							
	RLR G196 GH P 01 14.81 NC	7496307	-	-	-	-	-	-
	RLR G196 GH P 01 20.81 NC	-	7496409	-	-	-	-	-
	RLR G196 GH P 01 26.81 NC	-	-	7496506	-	-	-	-
	RLR G196 GH P 01 32.81 NC	-	-	-	7496585	-	-	-
	RLR G196 GH P 01 38.81 NC	-	-	-	-	7496643	-	-
	RLR G196 GH P 01 44.81 NC	-	-	-	-	-	7496670	-
	RLR G196 GH P )1 50.81 NC	-	-	-	-	-	-	7496674
29	BELT __" PVC90 FS x FS	190355	190491	190550	190582	190595	190597	190598
30	BELT LACING - Clipper							
	No. 1A 6" long (FS x FS) (Qty. Req.)	190701 (4)	190701 (6)	190701 (8)	190701 (10)	190701 (12)	190701 (14)	190701 (16)
	BELT LACING PIN - Clipper							
	No. 25 (for No. 1A Lacing) (Qty. Req.)	190709 (1)	190709 (1.5)	190709 (2)	190709 (2.5)	190709 (3)	190709 (3.5)	190709 (4)
	BELT LACING ALLIG #7	190880	190892	190894	190896	190898	190901	190902

\*Roller Description Explanation

(Example) RLR G196 GH P 01 14.81 NC

RLR = Roller  
 G = Roller Tube Material/Finish) Galvanized Steel  
 196 = (Roller Tube) 1.90" dia x 16 gage (.065" wall)  
 GH = (Bearing Type) Greased, Commercial Bearing  
 P = Plain Steel Axle  
 01 = Spring-Loaded Axle; Fixed Roller w/o Grooves  
 14.81 (Roller Width) = Conveyor Width "W" MINUS .19"  
 NC = No Cover

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## Lubricants and Paints

Part Description	Part Number
Reducer Lubricant	
Grove, Above +20° F (1 Gallon)	Consult Factory
Grove, -20° F to +20° F (1 Gallon)	Consult Factory
Reliance, Above +20° F (1 Gallon)	Consult Factory
Reliance, -20° F to +20° F (1 Gallon)	Consult Factory
Paint	
Medium Gray - Spray Can	959002
FKI Logistex Satin Gray - Spray Can	7900005





## SA2000 - Intermediate Drive

### ITEM CLASS B 3 1 1

#### How To Order

An SA2000 Intermediate Drive is ordered by entering a Call-Up line which includes the “Required Fields” to define the drive and “Options Fields” to define the options to be supplied.

**Call-Up Line Format** - State the Call-Up in the order shown below and in Table J 1 and Table J 2.

SA2000 - W - SPEED - HP - REDUCER/MOTOR - VOLTAGE - OPTIONS

#### Example - SA2000 Intermediate Drive Application

SA2000 Intermediate Drive - 21” “W” - Nominal Belt Speed of 60 fpm - 1 HP - Grove Reducer and Baldor Motor - 230-460VAC, 3 PH, 60HZ - Timing Belt Drive.

**Example Call-Up Line** - SA2000-21-60-1-GB-V1-TB

**Call-Up Required Fields** - Table J 1 lists the Required Fields in the order to be stated in the Call-Up.

Table J 1: Required Call-Up Fields

Field	Description	Call-Up Entry
“W” (Select 1 Only)	Between Frame	15, 21, 27, 33, 39, 45, 51
SPEED (Select 1 Only)	Speed (fpm) for Chain Drive	30, 45, 60, 75, 90, 105, 120, 135, 150, 165, or 180
	Speed (fpm) for Timing Belt Drive	30, 45, 60, 75, 90, 105, 120, 135, 150, 165, 180, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450, 475, or 500
HP (Select 1 Only)	Horsepower for Chain Drive	.5, .7, 1, 1.5, 2, or 3
	Horsepower for Timing Belt Drive	.5, .7, 1, 1.5, 2, 3, 5, or 7.5
REDUCER/ MOTOR (Select 1 Only)	Grove/Baldor	GB
	Grove/Reliance	GR
	Dodge (TiGear)/Reliance	DR
	Dodge (TiGear)/Baldor	DB
VOLTAGE (Select 1 Only)	208-230/460 VAC, 3 PH, 60 HZ	V1
	575 VAC, 3 PH, 60 HZ	V2
	115 VAC, 1 PH, 60 HZ	V3

**Call-Up Option Fields** - Table J 2 lists the Option Fields in the order to be stated in the Call-Up.

Table J 2: Option Call-Up Fields

Option Description	Call-Up Entry
For Opposite Hand Unit	OPP
Brake Motor with Brake Coil Wired into Motor	B1
Brake Motor with 115 Volt Brake Coil Wired Separate from Motor (with “PE” option only)	B2
Timing Belt Drive	TB
Premium Efficient Motor	PE
Clutch - Brake (56 Double C-Face with 90 Volt Coil)	CB
Clutch - Brake Power Supply (Required on all standard orders with “CB” option)	PS

## SA2001 - Intermediate Drive - Low Profile

### ITEM CLASS B 3 1 1

#### How To Order

An SA2001 Intermediate Drive is ordered by entering a Call-Up line which includes the "Required Fields" to define the drive and "Options Fields" to define the options to be supplied.

**Call-Up Line Format** - State the Call-Up in the order shown below and in Table J 3 and Table J 4.

SA2001 - W - SPEED - HP - REDUCER/MOTOR - VOLTAGE - OPTIONS

#### Example - SA2001 Intermediate Drive Application

SA2001 Intermediate Drive - Low Profile - 21" "W" - Nominal Belt Speed of 60 fpm - 1 HP - Grove Reducer and Baldor Motor - 230-460VAC, 3 PH, 60HZ - Timing Belt Drive.

**Example Call-Up Line** - SA2001-21-60-1-GB-V1-TB

**Call-Up Required Fields** - Table J 3 lists the Required Fields in the order to be stated in the Call-Up.

Table J 3: Required Call-Up Fields

Field	Description	Call-Up Entry
"W" (Select 1 Only)	Between Frame	15, 21, 27, 33, 39, 45, 51
SPEED (Select 1 Only)	Speed (fpm) for Chain Drive	30, 45, 60, 75, 90, 105, 120, 135, 150, 165, or 180
	Speed (fpm) for Timing Belt Drive	30, 45, 60, 75, 90, 105, 120, 135, 150, 165, 180, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450, 475, or 500
HP (Select 1 Only)	Horsepower for Chain Drive	.5, .7, 1, 1.5, 2, or 3
	Horsepower for Timing Belt Drive	.5, .7, 1, 1.5, 2, 3, 5, or 7.5
REDUCER/ MOTOR (Select 1 Only)	Grove/Baldor	GB
	Grove/Reliance	GR
	Dodge (TiGear)/Reliance	DR
	Dodge (TiGear)/Baldor	DB
VOLTAGE (Select 1 Only)	208-230/460 VAC, 3 PH, 60 HZ	V1
	575 VAC, 3 PH, 60 HZ	V2
	115 VAC, 1 PH, 60 HZ	V3

**Call-Up Option Fields** - Table J 4 lists the Option Fields in the order to be stated in the Call-Up.

Table J 4: Option Call-Up Fields

Option Description	Call-Up Entry
For Opposite Hand Unit	OPP
Brake Motor with Brake Coil Wired into Motor	B1
Brake Motor with 115 Volt Brake Coil Wired Seperate from Motor (with "PE" option only)	B2
Timing Belt Drive	TB
Premium Efficient Motor	PE
Clutch - Brake (56 Double C-Face with 90 Volt Coil)	CB
Clutch - Brake Power Supply (Required on all standard orders with "CB" option)	PS

## End Idler Section

### ITEM CLASS B 3 4 2

(F1) IDLERS

(F3) RETURN ROLR

(F2) SNUB ROLR

(F4) BPG GUARDS

Description	Dwg. No.	15" W	21" W	27" W	33" W	39" W	45" W	51" W
IU PBT 12-10/	16808 B	788121	788122	788123	788124	788125	788126	788127
IU PBT 10-10/	16808 B	788128	788129	788130	788131	788132	788133	788134
IU PBT 8-4/	16808 B	788135	788136	788137	788138	788139	788140	788141
IU PBT 5-10/	16808 B	788142	788143	788144	788145	788146	788147	788148

IU = IDLER UNIT

## Intermediate Bed Section

### ITEM CLASS B 3 4 4

(F1) RETURN ROLR

Description	Dwg. No.	15" W	21" W	27" W	33" W	39" W	45" W	51" W
IS PBT 12-0/	16670 B	671381	671382	671361	671362	671363	671364	671365
IS PBT 10-0/	16670 B	671383	671384	671366	671367	671368	671369	671370
IS PBT 7-6/	16670 B	671385	671386	671371	671372	671373	671374	671375
IS PBT 5-0/	16670 B	671387	671388	671376	671377	671378	671379	671380

IS = INTERMEDIATE SECTION

## Auxiliary Take-Up Section

### ITEM CLASS B 3 4 3

(F1) INTERMEDIATE PAN

(F3) RETURN ROLR

(F2) SNUB ROLR

(F4) BPG GUARDS

Description	Dwg. No.	15" W	21" W	27" W	33" W	39" W	45" W	51" W
CTU PBT	16810 B	788209	788210	788211	788212	788213	788214	788215

(F1) INTERMEDIATE PAN

(F4) BPG GUARDS

(F2) SNUB ROLR

(F5) CTK AIR

(F3) RETURN ROLR

Description	Dwg. No.	15" W	21" W	27" W	33" W	39" W	45" W	51" W
CTU PBT AIR	17746 B	784550	784551	784552	784553	784554	784555	784556

CTU = CENTER TAKE-UP UNIT

## Miscellaneous

The following parts and assemblies have no options.

Description	Dwg. No.	15" W	21" W	27" W	33" W	39" W	45" W	51" W	Item Class
INLINE (INCL) TRANSFER __ PBT	15205 D	679811	679812	679813	679814	679815	679816	679817	B347
2 PULL HITCH INCLIN ASSY PBT __	15206 D	679821	679822	679823	679824	679825	679826	679827	B345
INLINE (HORIZ) TRANSFER __ PBT	15207 D	679831	679832	679833	679834	679835	679836	679837	B347
NO ASSY PBT __	15208 D	679801	679802	679803	679804	679805	679806	679807	B346
PBT BPG/DUST COVER 12'-0"	NA	002400	002401	002402	002403	002404	002405	002406	B349
PBT BPG/DUST COVER 10'-0"	NA	002407	002408	002409	002410	002411	002412	002413	B349
PBT BPG/DUST COVER 7'-6"	NA	002414	002415	002416	002417	002418	002419	002420	B349
PBT BPG/DUST COVER 5'-0"	NA	002421	002422	002423	002424	002425	002426	002427	B349

### ITEM CLASS B 3 4 9

Description	Dwg. No.	12'-0"	10'-0"	7'-6"	5'-0"	Item Class
PBT 18" SIDE GUARD __'__"	11781 D	633201	633202	633203	633204	B349
PBT 6" SIDE GUARD __'__"	11761 D	633205	633206	633207	633208	B349
PBT FLARED 6" SIDE GUARD __'__"	11761 D	633209	633210	633211	633212	B349

Description	Dwg. No.	PART NO.	
		RH	LH
NO SIDE GUARD 6" PBT	13370 B	633231	633231
NO SIDE GUARD 18" PBT	13370 B	633232	633232
SIDE GUARD HORIZ TRANS __ 6PBT	13369 B	633235	633236
SIDE GUARD HORIZ TRANS __ 18PBT	13369 B	633237	633238
FLARED GUARD HORIZ TRANS __ 6PBT	13369 B	633213	633214
SIDE GUARD INCLIN TRANS __ 6PBT	13369 B	633239	633240
SIDE GUARD INCLIN TRANS __ 18PBT	13369 B	633241	633242
FLARED GUARD INCLIN TRANS __ 6PBT	13369 B	633215	633216
SIDE GUARD HITCH W/IN __ 6PBT	13369 B	633243	633244
SIDE GUARD HITCH W/IN __ 18PBT	13369 B	633245	633246
FLARED GUARD HITCH W/IN __ 6PBT	13369 B	633217	633218
SIDE GUARD 800 END DR __ 6PBT	13369 B	633251	633252
SIDE GUARD 800 END DR __ 18PBT	13369 B	633253	633254
SIDE GUARD 6/800 ID __ 6PBT	13369 B	633255	633256

SIDE GUARD 6/800 ID __ 18PBT	13369 B	633257	633258
SIDE GUARD 1000 ID __ 6PBT	13369 B	633259	633260
SIDE GUARD 1000 ID __ 18PBT	13369 B	633261	633262
FLARE TRANS GUARD 6 TO 6 __ PBT	13373 D	633263	633264
FLARE TRANS GUARD 6 TO 18__ PBT	13374 D	633265	633266

Description	Dwg. No.	15" W	21" W	27" W	33" W	39" W	45" W	51" W
6" END GUARD TU __ PBT	13375 D	633270	633271	633272	633273	633274	633275	633276
18" END GUARD TU __ PBT	13375 D	633277	633278	633279	633280	633281	633282	633283

## Belting

### ITEM CLASS B 3 9 1

Description	15" W 12" Belt	21" W 18" Belt	27" W 24" Belt	33" W 30" Belt	39" W 36" Belt	45" W 42" Belt	51" W 48" Belt
BELT __" PVC90 FS x FS	190355	190491	190550	190582	190595	190597	190598
BELT LACING - Clipper No. 1A	190712	190713	190714	190715	190716	190718	190718
BELT LACING ALLIG #7 __"	190880	190892	190894	190896	190898	190901	190902

Table J 5: Calculation of Belt Length

Belt Brushed x FS	Series			
	600	800	SA2000	SA2000
1	5'-0"	6'-0"	-	-
2	-	-	8'-0"	8'-0"
3B	9'-0"	10'-0"	-	-
3C	5'-0"	6'-0"	-	-
3F	15'-0"	16'-0"	-	-
3G	14'-0"	15'-0"	-	-
4B	-	-	11'-0"	10'-0"
4C	-	-	8'-0"	8'-0"
4D	-	-	16'-0"	15'-0"
4E	-	-	15'-0"	14'-0"
<b>CSPS Accessories</b>				
<b>Acc. Code</b>		<b>Length</b>		
AXT		5'		
AAT		5'		

Belt Length FS = (Bed Length Field (8) + Extension Field (19)) x 2 + Table J 5.