Product Manual

T/C Chain Powered Roller Conveyor

Application Guidelines, Specifications, Installation Procedures, Maintenance, and Spare Parts

Intelligrated®

8500 03/05

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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

SAFETY IS IN YOUR HANDS

Do Not Climb, Sit, Stand, Walk, Ride, or Touch the Conveyor at Any Time

Do Not Perform Maintenance on Conveyor Until Electrical, Air, Hydraulic and Gravity Energy Sources Have Been Locked Out or Blocked

Operate Equipment Only With All Approved Covers and Guards in Place

Do Not Load a Stopped Conveyor or Overload a Running Conveyor

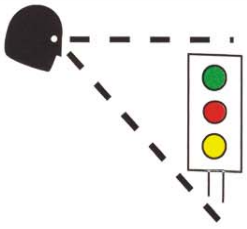
Ensure That All Personnel Are Clear of Equipment Before Starting

Allow Only Authorized Personnel To Operate or Maintain Material Handling Equipment

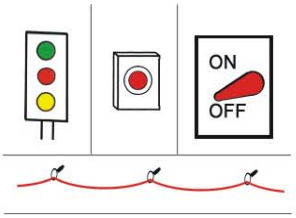
Do Not Modify or Misuse Conveyor Controls

Keep Clothing, BodyParts, and Hair Away from Conveyors

Remove Trash, Paperwork, and Other Debris Only When Power is Locked Out and Tagged Out



Ensure That ALL Controls and Pull Cords are Visible and Accessible



Know the Location and Function of All Stop and Start Controls

Report All Unsafe Conditions Jams should be cleared ONLY BY Authorized, Trained, Personnel

POST IN PROMINENT AREA

SECTION A: PRODUCT SUMMARY

Table A.1 – Product Summary for the CS T/C250 and PRS Chain Powered Roller Conveyor

Conveyor	**Components**			
Model T/C250 **Type/Function** Straight/Transportation **Model T/C** **Type/Function** Curve and Junction/Transfer **Model PRS** **Type/Function** Straight/Skewing	**Widths "W"**	**PRS Lengths**	**T/C250 Lengths**	**Straight Rollers**
	16" 22" 28" 34" 40"	10' 10' 10' and 15' 10', 15' and 20' 10', 15' and 20	Limited by Effective Pull (max.)	No. G196G/CR No. G196GT No. G196HS/CR No. G196FZ No. G196AB
	Live Load Cap.	**Tapered Rollers**	**Curve Arcs**	**Curve Extensions**
	100 lbs./ft. **Effective Pull Cap.** T/C250 = 500 lbs. T/C = 250 lbs. PRS = 250 lbs.	No. G254HS/CR No. G254AB **Str. Roller Centers** T/C = 3" PRS = 3" **Curve Roller Centers** 2-5/8" @ IR	30°, 45°. 60°, 90° and 180° **Curve Frame Types** Type 26IR = 2'-6" Inside Radius (IR) Type TTF = (True Taper) IR Varies by the frame width	Available in 1" increments between curve section and drive and/or take-up components
Comments	**Junction Types**	**Junction Angles**	**Junction Extensions**	**Internal Drive Chain**
	Straight Combination Parallel 90° Curve	30° and 45°	Available in 1" increments between spur, curve and/or drive components	RC-40
	End Drive Unit		**Power Unit**	**Speeds**
	T/C250 and PRS At Discharge End (Only) Left or Right Hand Side Mount or Underhung	**T/C** At Discharge End or Infeed End Left or Right Hand Side Mount or Underhung	Reliance / Hub City 1/2, 3/4, 1, 1-1/2, 2, 3, and 5 HP	45, 60, 75, 90, 120, 150, 180, 210, and 240 fpm
	Fixed Side Guides		**Adjustable Side Guides**	
	Rail Type	**Mounting Type**	**Rail Type**	**Mounting Type**
	A: 1-3/4 Angle B: 2-5/8" Channel C: 7" Channel D: 10" Channel	A: Bolt-to-Frame B: Spacer C: Inset - 2" Outset - 2"	D Single Rail E Double Rail	D Straight Arm E Offset Arm
	Supports/Hangers	**Options**	**Accessories**	**Paint**
	Type FSM Floor Supports Type CHA / B Ceiling Hangers	Cold Room Design Freezer Design Sub-Zero Design	Traffic Controller Deflectors Turning Posts Turning Wheel Turning Roller	Medium Gray

SECTION B: APPLICATION GUIDELINES

Introduction

Product Line

The CS T/C Chain Powered Roller Conveyor is a line of chain-powered roller curves, junctions, and straights that provide the positive transportation and transfer of the product. The T/C conveyor is required for applications with interconnecting auxiliary and/or main-line conveyors.

The complete T/C curves and junctions are available in 17 configurations (styles); in five standard widths of 16”, 22”, 28”, 34”, and 40”; with nine standard speeds, (45 to 240 fpm) to serve the requirements of almost any light to medium-unit transfer application. They may either be driven by an adjoining conveyor via a PTO unit or powered by their own power unit (1/2 to 5 HP).

The straight conveyor is available in 1’-0” length increments from 4’-0” to 150’-0”; in five widths (16”, 22”, 28”, 34”, and 40”); with 3” roller centers; with power units up to 5 HP for speeds up to 240 fpm.

Traction type drive wheels mounted between pairs of rollers apply the driving force of a roller chain to the carrier rollers in both curve and straight sections. The chain and drive wheels are fully-enclosed to eliminate nip and pinch points.

Functions of the T/C Conveyor

The T/C conveyor functions are:

- **Transporting Product:** The T/C conveyor transports loads at continuous, controlled speeds.
- **Transferring Product:** The T/C curves and junctions chain the directional flow of loads between auxiliary or main-line conveyors.
- **Skewing Product:** The PRS roller skew conveyor aligns items along one side of the conveyor.

Capabilities

The T/C conveyors convey items that have a firm and flat bottom surface. Including such items as cartons, cases, tote pans, pails, etc. Junctions require that the conveyed items have side surfaces that can withstand the impact and contact with a case deflector and/or turning wheel.

Item Length - Minimum: There should be at least three carrier rollers under an item at all times. The minimum item length dimension is equal to 3X the roller center dimension (see Figure B-1).

For straight conveyors, the 3X roller center rule results in the minimum recommended item lengths to be 9”.

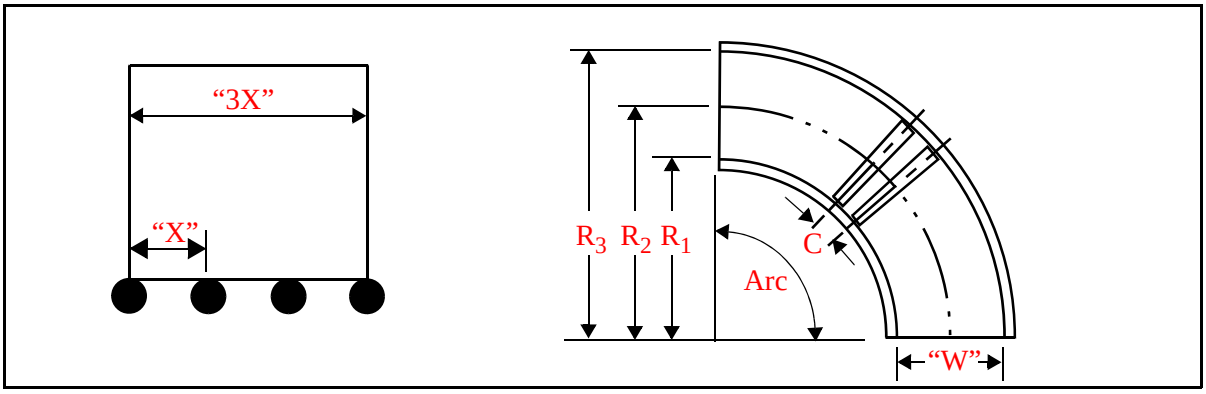


Figure B.1 – Minimum Item Length

Figure B.2 – Curve Roller Center Dimensions

For curves, use the “R2” dimension shown in Table B.1 for the type of curve (TTF or 26IR) being applied. Use the “R3” roller center dimension when conveying narrow items on wide curves. When aligining items to the inside rail of the curve, apply a 9” minimum length (see Figure B-2).

Table B.1 – Curve Section - Roller Center Dimensions

Dimension	**Conveyor Width - “W”**				
	16”	**22”**	**28”**	**34”**	**40”**
Model 26IR (2’ 6” IR Frame)					
Roller Center @ R1 Roller Center @R2 Roller Center @ R3	2-5/8” 3-5/16” 4”	2-5/8” 3-5/8” 4-1/2”	2-5/8” 3-7/8” 5-1/8”	2-5/8” 4-1/8” 5-5/8”	2-5/8” 4-3/8” 6-1/8”
Model TTF (True-Taper Frame)					
Roller Center @ R1 Roller Center @ R2 Roller Center @ R3	2-5/8” 3-5/16” 4”	2-5/8” 3-5/16” 4-1/8”	2-5/8” 3-3/8” 4-3/16”	2-5/8” 3-3/8” 4-1/8”	2-5/8” 3-1/2” 4-3/8”

Item Length - Maximum: The only factor limiting the length of an item is its ability to negotiate a curve or make a junction transfer.

Item Width - Maximum: It is recommended that conveyed items not exceed the width of the carrier rollers.

It is good practice to keep the load within the width (“W”) of the conveyor.

If it is determined that the items will not hang up, it may be acceptable to allow the product to over-hand the conveyor’s frame rails.

Item Weight: The maximum unit weight should not exceed 100 lbs. per foot.

Conveyor Lengths: The T/C250 conveyor (w/DISDU) is available from 4’-0” to 150’-0” in 1’-0” increments. For conveyors w/INDU, the maximum length is limited by the conveyor’s pull factor.

For Model PRS (powered skew conveyors), the length required (10’, 15’, or 20’) is dependent on the conveyor’s width and the minimum width(s) of the products being conveyed.

Conveyor Width: It is good practice to keep the load within the width of the conveyor.

A scale drawing should be made to determine the correct width for junctions (and the main-line conveyor).

If it is determined that the items will not hang up, it may be acceptable to allow product to overhang the conveyor’s frame rails.

Direction of Travel: T/C straight conveyor, curves and junctions are equipped with discharge drive units (DISDU), and are limited to one-way travel applications. For additional information, see *Drive Unit Locations* in this Section.

Conveyors with infeed drive units (INDU) may be operated in either direction. The units have two chain-tensioners to provide proper tensioning in both directions of travel.

Calculate a “reversing” conveyor’s Effective Pull for both directions of travel. Select horsepower based on highest EP.

Horizontal Travel: The T/C conveyor is intended for horizontal operation. It may be slightly inclined or declined in a system where it must compensate for the difference in elevation between the adjoining upstream and down-stream conveyors.

The amount of incline is limited by the friction between the carrier rollers and the conveyed items. Plastic totes will usually convey up to 3°, while corrugated cartons will convey up to 5°. When possible, test items that must be conveyed on a “non-level” powered roller conveyor.

Inclined conveyors require additional chain pull and horsepower to elevate the product. Use the following steps to calculate an inclined conveyor's power unit requirement.

1. Calculate the horizontal Effective Pull (EP1) requirement. See Step 3a - Step 3f in the "Engineering Data" section.
2. Calculate the additional Effective Pull (EP2) required to elevate the product.

$$EP2 = (LL \times H)$$

LL = Live Load (lbs./ft.)
H = Total Elevation Change (ft.)

3. Add EP2 to EP1 for Total Effective Pull (EP) requirement.
4. Determine the required horsepower based on the conveyor's Effective Pull and speed requirements. See Step 6 in the "Engineering Data" section.

Table B.2 – Elevation Change - Per Degree of Inclines

	Conveyor Incline				
	1°	**2°**	**3°**	**4°**	**5°**
Elevation Change*	.017'	.033'	.048'	.066'	.083'
(Equivalent Inches)	0.2"	0.4"	0.6"	0.8"	1.0"

*Per Foot of Conveyor Length.
Note: Do not exceed 2 degrees incline (maximum) for Curves/Junctions.

Start and Stop Operation: With standard power units, the T/C conveyor may be used in applications with up to 6 start/stop cycles per minute. Consult the manufacturer concerning applications requiring higher start/stop rates.

Model TTF Curve Sections: True-taper frame/roller design allows a conveyed item to travel through a curve and maintain the same orientation it had when entering.

The Inside Radius (IR) of each width of frame is matched to its tapered roller to provide increasing roller speeds that are in proportion to the distance from the curve's radial center line.

Model 26IR Curve Sections: All widths have a 2'-6" IR frame with the same tapered rollers as Model TTF, and are used when "lowest cost" is the selection criteria and/or when product alignment and orientation are not critical to a system's successful operation.

Junction Sections: 30° and 45° junctions are available for transferring product between main-line and auxiliary conveyors (see Figure B.3).

Standard application practice is to use 30° junctions for diverting product and 45° for merging. Experience has shown that these two angles provide the best performance for the merging and diverting functions.

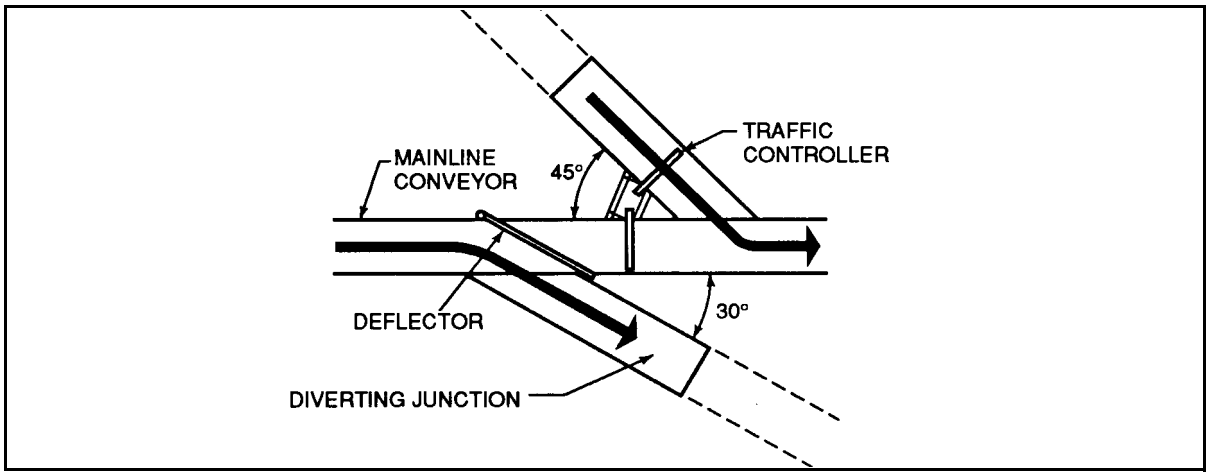


Figure B.3 – Diverting Junction Section

Curve/Junction Extension Sections: Straight intermediate section(s) are available in 1'-0" increments (from 1'-0" to 12'-0" long) for extending the overall length of T/C curves and junctions.

Extension section(s) are assembled to a curve/junction unit at installation.

Drive Unit Locations: The curves and diverting type junctions are supplied with the (standard) drive unit located at their discharge end (DISDU). Merging-type junctions are supplied with an infeed drive unit (INDU).

When optional INDUs are used in place of standard DISDUs, check the maximum length limit, see Step 4a in the "Conveyor Selection" section.

Note: For Style 16P and 20P Parallel-type junctions (w/INDU), the maximum Effective Pull is limited to 125 lbs.

Power Unit Mounting: The power unit components (right-angle, C-face motor/reducer and chain drive) may be located on either side of the conveyor. Unless specified otherwise, the unit will be supplied on the conveyor's right-hand side (when looking in the direction of travel).

Drive Component Mounting: The chain and drive wheel components are located along one of the frame's side rails.

For straight conveyors, they may be located on either the RH or LH side of the conveyor; for curves, the components are mounted on the "inner" rail; for junctions, they are mounted on the "long" rail.

A Power Transfer Unit is used with S-Curves and parallel-type junctions to transfer the drive from one side to the other as required.

Power Take-Off Units: used for slave-driving a T/C Curve or Junction from an adjoining "upstream" or "downstream" powered conveyor. The external chain/sprocket drive (1:1 ratio) and guard can be located on either side of the conveyor. If equipped with an INDU and the "drive" conveyor has a DISDU, the PTO assembly will be located on the side opposite the "driver conveyor's" power unit.

The Effective Pull requirement of the "driven" T/C conveyor must be added to that of the "driver" conveyor.

Product Accumulation: The T/C conveyor should not be used for accumulating products. The only exception to this is when an item may be momentarily held back by a traffic controller on a merging-junction.

Product Skewing/Alignment: Model PRS conveyors are designed to skew products laterally to one side of the conveyor forming an aligned column. Use Table B.3 to find the minimum item width recommended for each PRS conveyor.

Table B.3 – Minimum Recommended Package Width

PRS Length	Conveyor Length - "W"				
	16"	22"	28"	34"	40"
10'-0"	2"	8"	14"	20"	26"
15'-0"	NA	NA'	5"	11"	17"
20'-0"	NA	NA	NA	3"	9"

Items move laterally 13" in first 10'-0" and 1-3/4" for each additional foot of travel.

Environmental Conditions: Exercise caution under the following are conditions when applying.

- Contaminants

  The T/C conveyor should not be used in applications where abrasives such as glass, filings, and sand might cause damage to the drive wheels and chain. The T/C conveyor has been applied successfully in such environments by aligning the product to the side of the conveyor opposite the drive components. This allows contaminants to fall to the floor.

  The T/C conveyor has been used in areas with an oily atmosphere. In such cases, knurled rollers over drive wheels were required to assure adequate traction.

  High Temperature

  The T/C conveyor may be used in areas where the ambient temperature does not exceed 150° F. Higher temperatures can cause the molded treads and sprockets to wear prematurely and the chain lubricant to loose its effectiveness.

  Do not use the T/C conveyor to convey hot items (even though the ambient temperature of the operating area of less than 150° F). The heat transfer of the items to the rollers could cause damage to the drive wheels.
- Low Temperature

  The T/C conveyor may be equipped with optional power units, internal drive components and rollers for “cold-room” (20° to +40° F), “freezer” (0° to +20° F) and “sub-zero freezer” (0° to -20° F) applications.

  See the *Special Application Guidelines* section for specific information.
- Extreme Humidity

  The T/C conveyor should not be used in “wash-down” applications or in any similar situation where there are extremely humid conditions.

  Operational Safety: The operational safety of a materials handling system must be given prime consideration throughout all of the phases of planning, engineering, installation, and operation.

  The T/C chain-powered conveyor incorporates a number of design features that contribute to safe equipment operation. These include fully-enclosed chain drive covers and power unit enclosures.

  Systems must be designed to comply with industry safety standards, OSHA regulations and state/local codes. Once the system is installed and in operation, compliance with all safety codes, etc., must be maintained.

Special Application Guidelines

Use the following guidelines when considering the applications of the T/C conveyor in the following special applications.

High-Speed Operation: The T/C conveyor is available with optional components that provide standard conveyor speeds of 180, 210 and 240 feet per minute (fpm).

Rollers have high-speed, cage-ball bearings. Optional rollers are available with precision ABEC-grade bearings.

At higher speeds, noise-level readings of the T/C conveyor may increase. The exact amount will depend on a number of factors including the speed, the product conveyed, and the surrounding structure/equipment environment.

Monitoring an installation will reveal if additional measures are necessary to keep the readings within the required limits.

If defined noise specifications are known in advance, refer pertinent information to the main office for review.

Cold-Room Operation: Optional components are available that permit operation in “cold-rooms” where the temperature ranges from 20° to +40° F.

Note: “Cold-room” is a general term used. Other terms commonly used for the same type of application are “dairy” and “deli”.

The internal drive components are upgraded for cold-room operation with “premium” chains.

Calculate the Effective Pull for a “cold-room” conveyor the same as shown in the “Conveyor Selection” sub-section. No additional factoring is required.

Because the environment of a cold room inherently has high humidity and moisture condensation, carrier roller axles and drive shafts are zinc-plated to inhibit rust.

Freezer Operation: The T/C conveyor is available with optional components that permit operation in freezer units where the temperature ranges from +20° to 0° F.

The internal drive components are upgraded for freezer operation with “premium” chains.

The standard Effective Pull (EP) calculations must be increased by a factor of 1.25 when determining the power unit horsepower requirement. This is to account for the effects of temperature on the components and lubricants.

Sub-Zero Freezer Operation: Optional components are available that permit operation in freezer units where the temperature ranges from 0° to -20° F.

The internal drive components are upgraded with “premium” chain and lower-durometer drive wheel treads.

Increase the standard effective pull (EP) calculations by a factor of 1.25 when determining the power unit horsepower requirement. This is to account for the effects of sub-zero temperatures on the components and lubricants.

All freezer applications with conveyors located within ten feet of a freezer opening must comply with the following:

1. Drive and power units must be located at least ten feet away from the opening.
2. A conveyor line that runs through a freezer opening must be broken into two separate conveyors at the opening. A gap is required between the metal parts of the two conveyors to prevent the conduction of heat into the freezer.
3. All rollers within ten feet of the opening must be the cold-room and freezer type with plated axles and bearings with special “freezer” grease.

Mechanics of Operation

The T/C conveyor features a patented drive system for transmitting power to the carrier rollers of curves, junctions, and straight conveyors. Each conveyor consists of the following:

- **Drive Unit** - Discharge or Infeed End Type.
- **Drive Chain** - Reliable, positive drive element.
- **Drive Wheels** - Transmits uniform drive to rollers.
- **Take-Up Units** - Manually-adjusted for chain length.

The above components are designed to provide:

- the specified maximum effective chain pull.
- a constant drive force to the carrier rollers at the specified conveyor speed.

The drive unit contains an internal drive sprocket that pulls the propelling member (an RC-40 drive chain) through a series of drive wheels which are mounted to the side frame in a fixed position. The drive is powered either by a motor/reducer unit (see Figure B.4) or by the adjoining powered conveyor via power take-off unit (PTO).

Each drive wheel is mounted between a pair of carrier rollers and powers the rollers by frictional contact. The axles of the carrier rollers “float” in vertical slots (drive side frame rail only). This floating action allows the amount of “drive” transmitted to the rollers to be in proportion to the weight of the loads being conveyed.

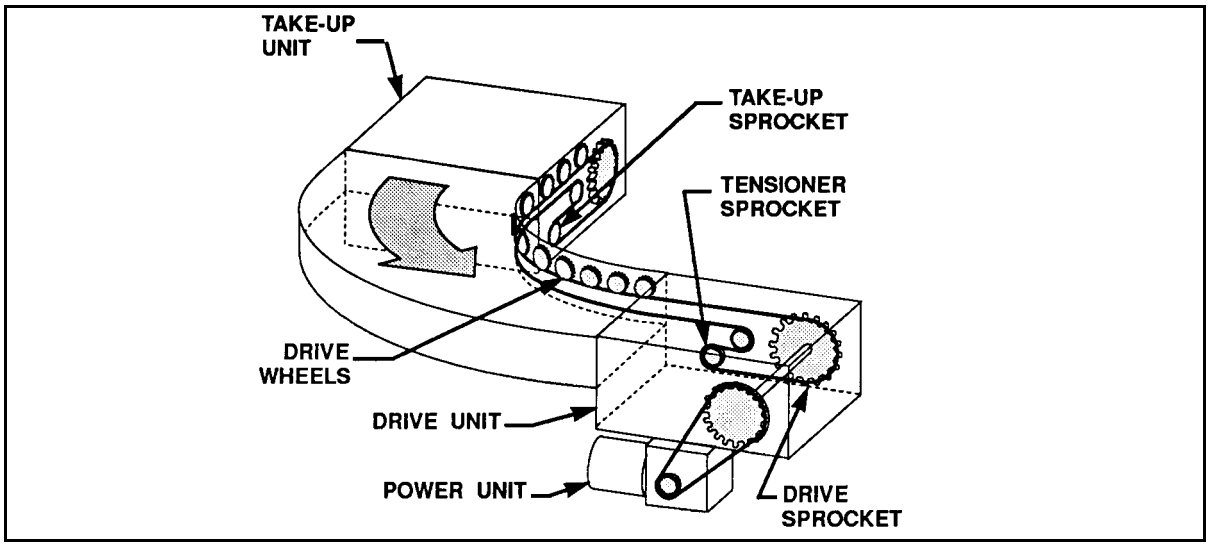


Figure B.4 – 90° Curve Shown with Discharge Drive Unit

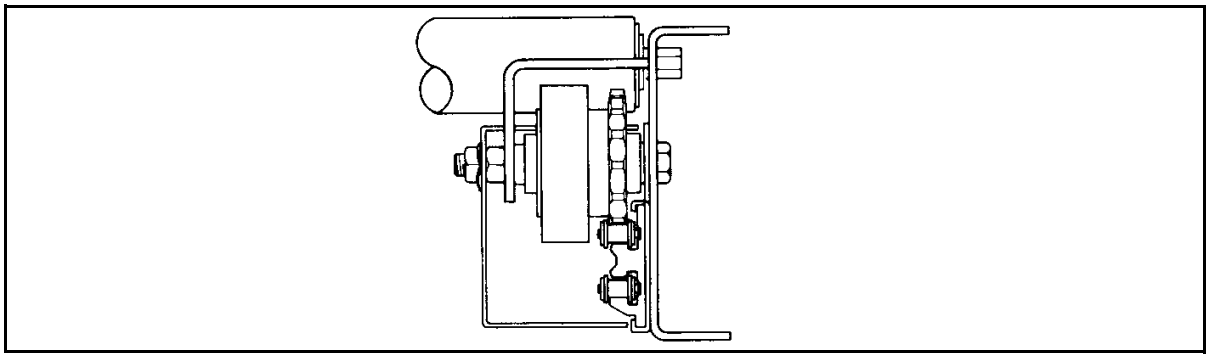


Figure B.5 – Side Frame Mounted

Note: For powered roller skew conveyor (PRS), the drive wheels are positioned directly below the carrier rollers to permit the skewing of the rollers.

The continuous drive chain loop rides in a low-fiction guide (extruded UHMW). The upper run is held in driving engagement with the drive wheel sprockets. The return run is also carried by the guide which is mounted in a fixed position on the side frame.

A series of segmental chain guards cover the chains to keep dirt and foreign objects from falling into the drive mechanism. A metal bracket is mounted above the drive wheel sprocket and between the two carrier rollers to provide protection for personnel working around the conveyor. When required, the segments and brackets are easily removed for servicing.

A chain take-up allows the sprocket to be manually adjusted for the required chain length. Conveyors with a drive unit located at the discharge end are equipped with a spring-loaded tensioner that maintains the required chain tension.

SECTION C: SPECIFICATIONS

Style 1, T/C250 Straight Conveyor

Standard Features

WIDTHS

"W" = 16", 22", 28", 34", and 40".

LENGTHS

150'-0" Maximum, 4'-0" Minimum; in 1'-0" increments.

SPEED

45, 60, 75, 90, 120, and 150 fpm (constant)

CAPACITY

Live Load = 100 lbs/ft; Effective Chain Pull = 500 lbs.

DRIVE UNIT

Model DISDU, discharge-end type with internal spring-loaded chain tensioner. Carrier rollers set high at 3" centers. All rollers powered and all components are guarded. Extended drive shaft may be located on either side of unit. (For one-way travel only).

POWER UNIT

1/2 to 5 HP, Totally-enclosed, Fan-Cooled, C-Face Motor/Reducer; chain drive to extended drive shaft. Underhung (UH) or Side-Mounted (SM).

TAKE-UP UNIT

Model INTU, infeed-end type, manual, screw-adjusted chain take-up. Carrier rollers set high at 3" centers. All rollers powered and all components are guarded.

INTERMEDIATE SECTIONS

5" deep x 10 ga. x 12'-0" long channel rails; bolted cross-members and connecting splice flats. Carrier roller(s) set high at 3" centers. Enclosed Drive Components mounted to side rail.

CARRIER ROLLERS

No. G196G rollers have galvanized tubes, greased, sealed and removable-type bearings and spring loaded 7/16" hex axles; 179 fpm maximum speed. Optional bearings available.

DRIVE COMPONENTS

No. DW1 Drive wheels mounted in a fixed position between pairs of carrier rollers. Driven by RC 40 roller chain that is supported by a UHMW guide profile.

FINISH

Powder coat medium gray.

ASSEMBLY

Right-hand (RH) Drive and Power Units will be furnished unless requested otherwise.

Optional Features Style 1, T/C250 Straight Conveyor

SPEEDS

Fixed-speeds of 180, 210 and 240 fpm. Non-standard speeds available within 30-240 fpm range.

INFEED DRIVE UNIT

Model INDU, infeed-end type (Same specifications as standard DISDU except unit has chain-tensioner and manual, screw-adjusted take-up). Used for two-way travel. Maximum length is limited by the Effective Pull requirements, 250 lbs., EP maximum.

POWER TAKE-OFF UNIT

Power transfer connection for powering (or powering from) an adjoining conveyor.

ACCESSORIES

Floor Supports and Hangers, Guard Rail and Flow Control Devices.

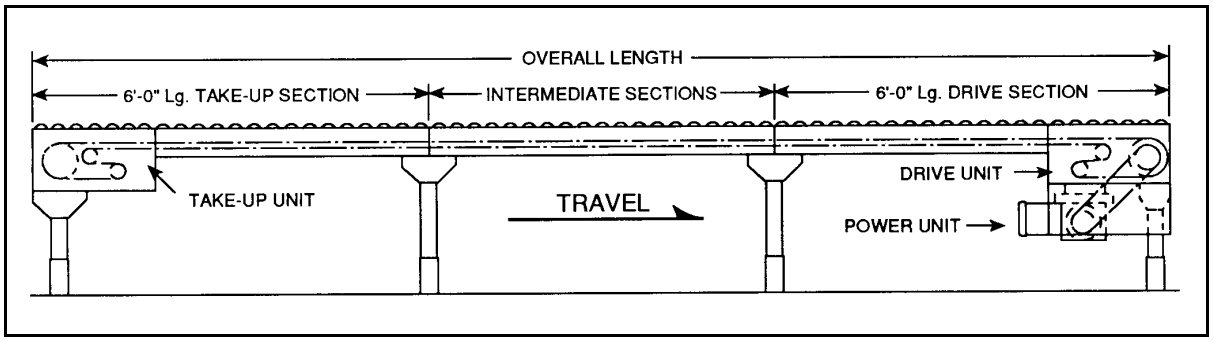


Figure C - 1 – T/C250 Straight Conveyor

PRS - Powered Roller Skew Conveyor

Standard Features

WIDTHS

"W" = 16", 22", 28", 34", and 40".

SPEEDS

45, 60, 75, 90, 120, and 150 fpm (constant).

CAPACITY

Live Load = 100 lbs./ft. Effective Chain Pull = 500 lbs.

OVERALL LENGTHS

10'-0", 15'-0", and 20'-0"

DRIVE UNIT

Model DISDU, discharge end-type; with internal spring-loaded chain tensioner. Carrier rollers set high at 3" centers. All rollers powered and all components are guarded. Extended drive shaft may be located on either side of unit.

POWER UNIT

1/2 to 3 HP, Totally-Enclosed, Fan-Cooled, C-Face Motor/Reducer; chain drive to extended drive shaft. Underhung (UH) or Side-Mounted (SM).

TAKE-UP UNIT

Model INTU, infeed end-type; manual, screw-adjusted take-up sprocket. All rollers powered and all components are guarded.

SECTIONS

10" deep x 10 ga. channel frame rails; bolted cross-members and connecting splice flats. Carrier rollers set high at 3" centers. Enclosed Drive Components mounted to side rail. RH and LH skew available.

CARRIER ROLLERS

No. G196G rollers have galvanized tubes, greased, sealed, removable-type bearings and spring-loaded 7/16" hex axles; 179 fpm maximum speed. Optional bearings available.

DRIVE COMPONENTS

No. DW1 Drive wheels mounted in a fixed position beneath carrier rollers. Driven by RC40 roller chain that is supported by UHMW guide profile.

SIDE GUIDE RAIL

5-1/2" deep x 10 ga. formed rail; plain-face (powder-coated); bolted to top flange of conveyor frame rail on one side only.

FINISH

Powder coat medium gray.

ASSEMBLY

Right Hand (RH) power units will be furnished unless requested otherwise.

Optional Features

SPEEDS

Fixed speeds of 180, 210 and 240 fpm. Non-standard speeds available with 30-240 fpm range.

POWER TAKE-OFF UNIT

Power transfer connection for powering from an adjoining conveyor.

ACCESSORIES

Floor Supports/Hangers, Guide Rail w/UHMW or Wheel-face.

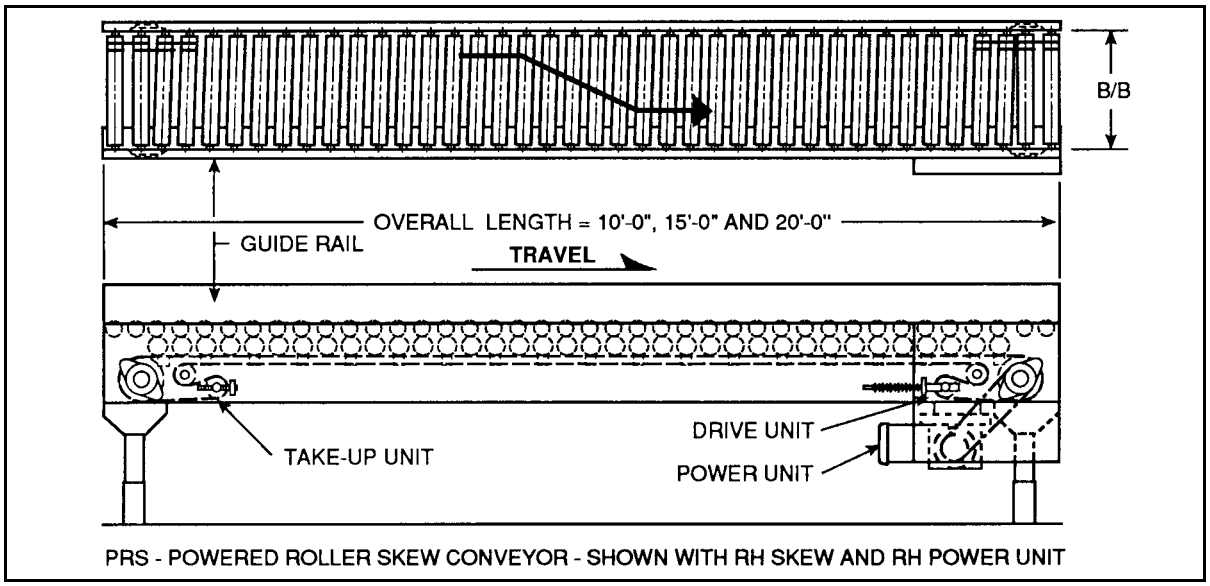


Figure C - 2 – Powered Roller Skew Conveyor

Curves and S-Curves - Style 5-9 Curves and Style 10-13 S-Curves

Standard Features

WIDTHS

"W" = 16", 22", 28", 34", and 40".

SPEEDS

45, 60, 75, 90, 120, and 150 fpm (constant)

CAPACITY

Live Load = 100 lbs./ft. Effective Chain Pull = 250 lbs.

DRIVE UNIT

Model DISDU, discharge-end type with internal spring-loaded chain tensioner. Carrier rollers set high at 3" centers. All rollers powered and all components are guarded. Extended drive shaft may be located on either side of unit. (For one-way travel only.)

POWER UNIT

1/2 to 1-1/2 HP, Totally-Enclosed, Fan-Cooled, C-Face Motor/Reducer; chain drive to extended drive shaft. Underhung (UH) or Side-Mounted (SM).

TAKE-UP UNIT

Model INTU, infeed-end type, with manual, screw-adjusted chain take-up. Carrier Rollers set high at 3" centers. All rollers powered and all components are guarded.

CURVE SECTION

5" deep x 10 ga. channel rails; bolted cross-members and connecting splice flats. Carrier rollers set high at 2-5/8" centers (at Inside Radius - "IR"). Variable "true-taper" or constant 2'-6' IR frame (all width). Enclosed Drive Components mounted to "inner" side rail.

CARRIER ROLLERS - STRAIGHT

No. G196G rollers have galvanized tubes, greased, sealed, removable-type bearings and spring-loaded 7/16" hex axles; 179 fpm maximum speed. Optional bearings available.

CARRIER ROLLERS - TAPERED

No. G254HS rollers have galvanized tubes, greased, sealed, removable-type bearings and spring loaded 7/16" hex axles; 240 fpm maximum speed. Optional bearings available.

DRIVE COMPONENTS

No. DW1 Drive wheels mounted in a fixed position between pairs of carrier rollers. Driven by RC40 side-bow type roller chain that is supported by a UHMW guide profile.

POWER TRANSFER UNIT

(S-Curves only) Internal jackshaft assembly connecting drive chains of opposing curve sections. Carrier rollers at 3" centers. Enclosed Drive Components mounted to side plates.

FINISH

Powder coat medium gray.

ASSEMBLY

Right Hand (RH) power units will be furnished unless requested otherwise.

Optional Features

SPEEDS

Fixed-speeds of 180, 210, and 240 fpm. Non-standard speeds available within 30-240 fpm range.

INFEED DRIVE UNIT

Model INDU, infeed-end type (same specifications as standard DISDU except unit has chain-tensioner and manual, screw-adjusted take-up). Use for two-way travel.

POWER TAKE-OFF UNIT

Power transfer connection for powering from an adjoining conveyor.

ACCESSORIES

Floor Supports/Hangers, Guard Rail, and Straight Extension Sections.

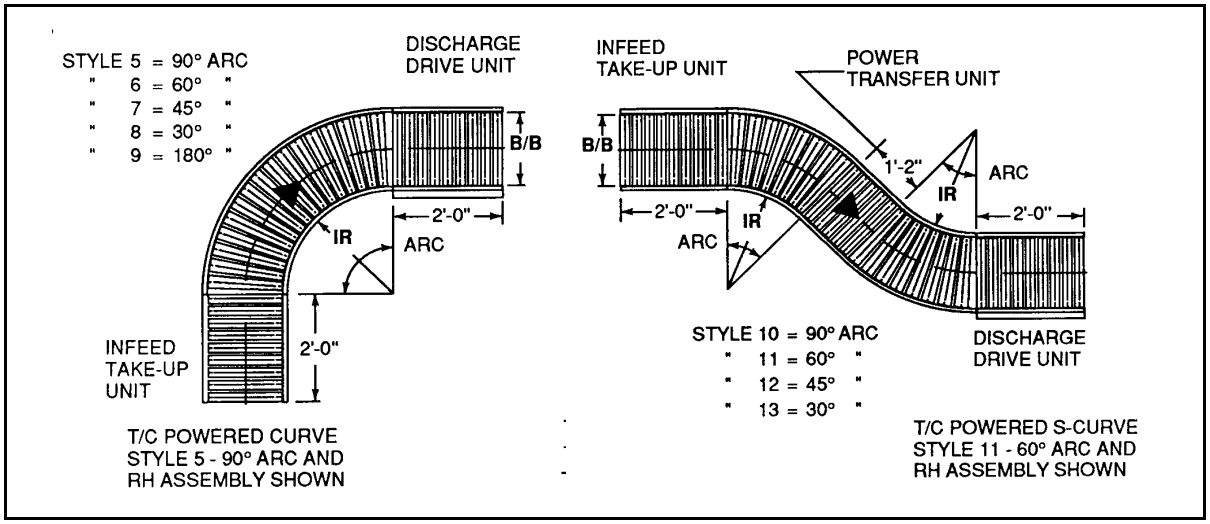


Figure C - 3 – Style 5-9 Curves and Style 10-13 S-Curves

Straight Junctions - Style 14 - 30° Diverting Type and Style 18P - 45° Merging Type

Standard Features

WIDTHS

"W" = 16", 22", 28", 34", and 40".

SPEEDS

45, 60, 75, 90, 120, and 150 fpm (constant).

CAPACITY

Live Load = 100 lbs./ft. Effective Chain Pull = 250 lbs.

SPUR ANGLE (FUNCTION)

Style 14 - 30° (Diverting); Style 18P - 45° (Merging).

DRIVE UNIT

Model DISDU (Style 14)/Model INDU (Style 18P). Carrier rollers set high at 3" centers. All rollers powered and all components are guarded. Extended drive shaft may be located on either side of unit.

POWER UNIT

1/2 TO 1-1/2 HP, Totally Enclosed, Fan-Cooled, C-Face Motor/Reducer; chain drive to extended drive shaft. Underhung (UH) or Side-Mounted (SM).

JUNCTION SECTION

5" deep x 10 ga. frame rails; bolted/welded cross-members and connecting splice flats. Carrier rollers set high at 3" centers. Enclosed Drive Components mounted to "long" rail. Manual chain take-up (in diverting-type ONLY). All components are guarded.

CARRIER ROLLERS

No. G196G Rollers have galvanized tubes, greased, sealed, removable-type bearings and spring-loaded 7/16" hex axles; 179 fpm maximum speed. Optional bearings available.

DRIVE COMPONENTS

No. DW1 Drive wheels mounted in a fixed position between pairs of carrier rollers. Driven by RC40 side-bow type roller chain that is supported by a UHMW guide profile.

FINISH

Powder coat medium gray.

ASSEMBLY

Right Hand (RH) power units will be furnished unless requested otherwise.

Optional Features

SPEEDS

Fixed-speeds of 180, 210, and 240 fpm. Non-standard speeds available within 30-240 fpm range.

POWER TAKE-OFF UNIT

Power transfer connection for powering from an adjoining conveyor.

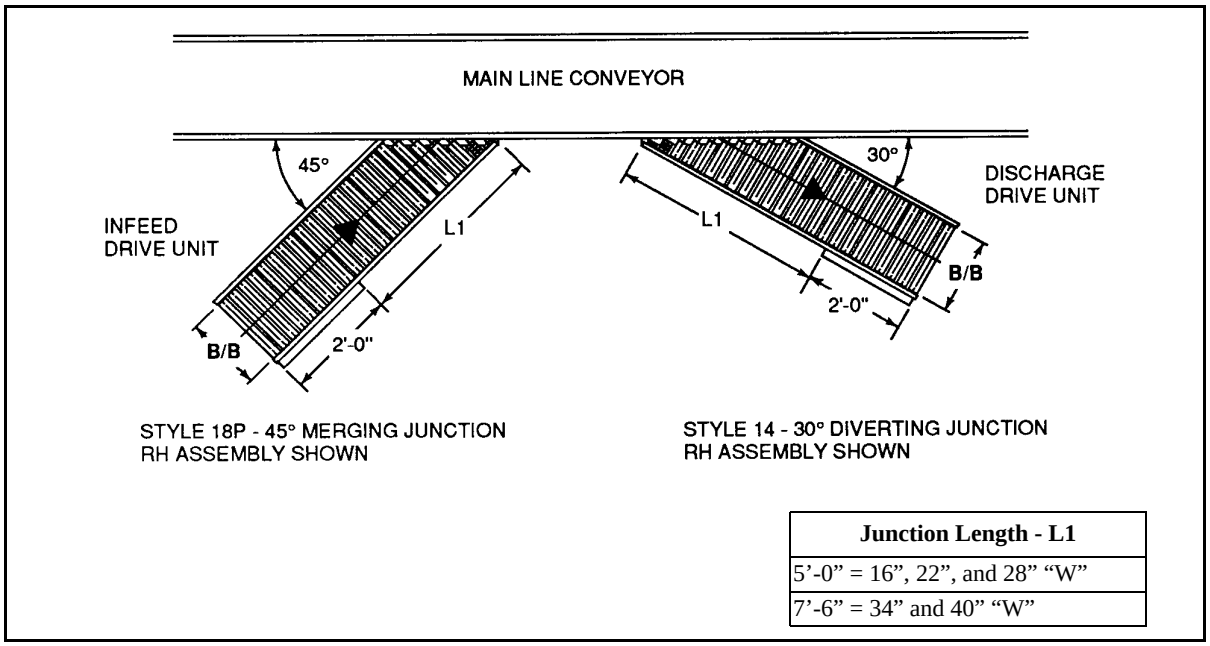
ALTERNATE DRIVE UNIT

Style 14P w/INDU for 30° merging applications

Style 18 w/DISDU for 45° diverting applications

ACCESSORIES

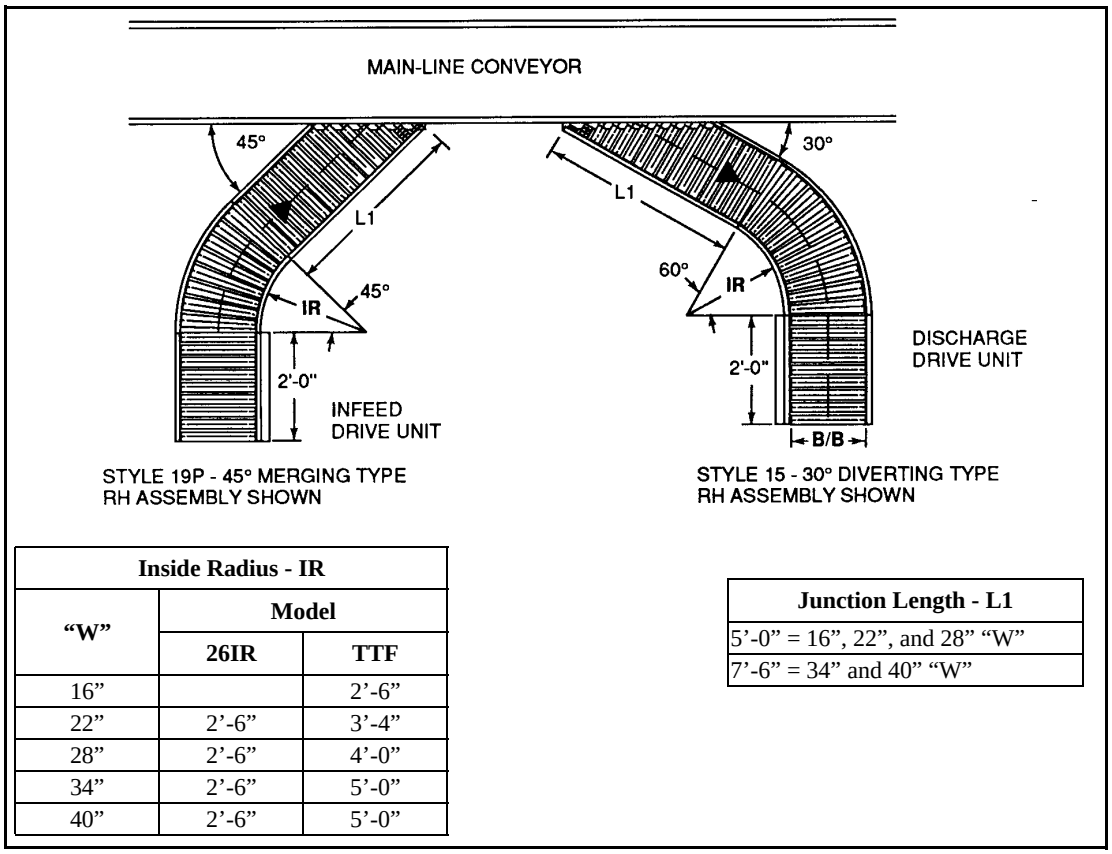
Floor Supports and Hangers, Guard Rail, and Straight Extension Sections.



Junction Length - L1
5'-0" = 16", 22", and 28" "W"
7'-6" = 34" and 40" "W"

Figure C - 4 – Style 14 - 30° Diverting Type and Style 18P - 45° Merging Type

Combination Junctions - Style 15 - 30° Diverting Type and Style 19P - 45° Merging Type



Inside Radius - IR		
"W"	Model	
	26IR	TTF
16"		2'-6"
22"	2'-6"	3'-4"
28"	2'-6"	4'-0"
34"	2'-6"	5'-0"
40"	2'-6"	5'-0"

Junction Length - L1
5'-0" = 16", 22", and 28" "W"
7'-6" = 34" and 40" "W"

Standard Features

WIDTHS

"W" =16", 22", 28", 34", and 40".

SPEEDS

45,60, 75, 90, 120, and 150 fpm (constant).

CAPACITY

Live Load = 100 lbs./ft. Effective chain Pull = 250 lbs.

SPUR ANGLE (FUNCTION)

Style 15 - 30° (Diverting); Style 19P - 45° (Merging).

DRIVE UNIT

Model DISDU (Style 15) Model INDU (Style 19P). Carrier rollers set high at 3" centers. All rollers powered and all components are guarded. Extended drive shaft may be located on either side of unit.

POWER UNIT

1/2 to1-1/2 HP, Totally-Enclosed, Fan-Cooled, C-Face Motor/Reducer; chain drive to extended drive shaft. Underhung (UH) or Side-Mounted (SM).

CURVE SECTION

5” deep x 10 ga. channel rails; bolted cross-members and connecting splice flats. Carrier rollers set high at 2-5/8” centers (at Inside Radius - “IR”). Variable “true-taper” or constant 2’-” IR frames (all widths). Enclosed Drive Components mounted to “inner” side rail.

JUNCTION SECTION

5” deep x 10 ga. frame rails; bolted/welded cross-members and connecting splice flats. Carrier rollers set high at 3” centers. Enclosed Drive Components mounted to “long” rail. Manual chain take-up (in diverting-type ONLY). All components are guarded.

CARRIER ROLLERS - STRAIGHT

No. G196G rollers have galvanized tubes, greased, sealed, removable-type bearings and spring-loaded 7/16” hex axles; 179 fpm maximum speed. Optional bearings available.

CARRIER ROLLERS - TAPERED

No. G254HS rollers have galvanized tubes, greased, sealed, removable-type bearings and spring loaded 7/16” hex axles; 240 fpm maximum speed. Optional bearings available.

DRIVE COMPONENTS

No DW1 Drive wheels mounted in a fixed position between pairs of carrier rollers. Driven by RC40 side-bow type roller chain that is supported by UHMW guide profile.

FINISH

Powder coat medium gray.

ASSEMBLY

Right Hand (RH) power units will be furnished unless requested otherwise.

Optional Features

SPEEDS

Fixed-speeds of 180, 210, and 240 fpm. Non-standard speeds available within 30-240 fpm range.

POWER TAKE-OFF UNIT

Power transfer connection for powering from an adjoining conveyor.

ALTERNATE DRIVE UNIT

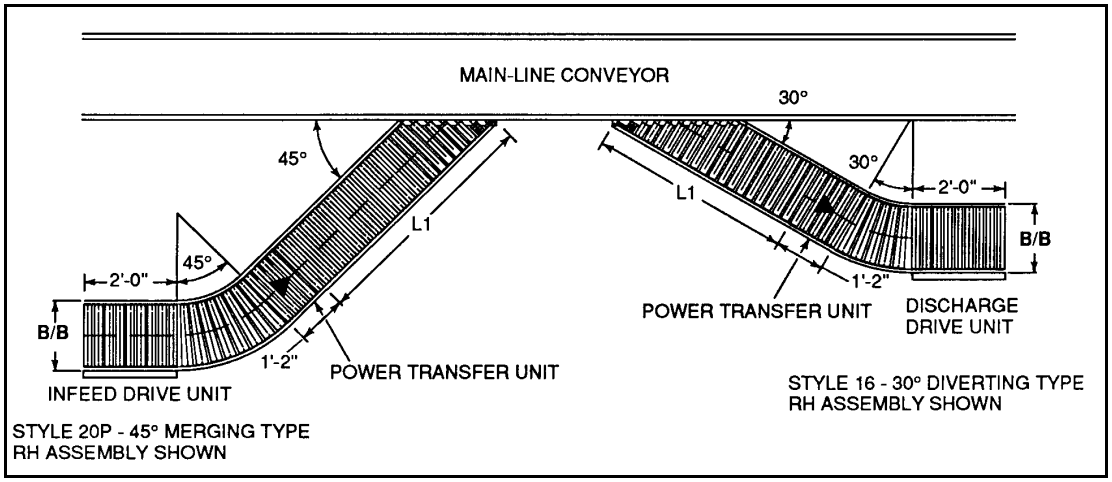
Style 15P w/INDU for 30° merging applications.

Style 19 w/DISDU for 45° diverting applications

ACCESSORIES

Floor Supports/Hangers, Guard Rail, and Straight Extension Sections.

Parallel Junctions - Style 16 - 30° Diverting Type and Style 20P - 45° Merging Type



Standard Features

WIDTHS

"W" = 16", 22", 28", 34", and 40".

SPEEDS

45, 60, 75, 90, 120, and 150 fpm (constant).

CAPACITY

Live Load = 100 lbs./ft. Effective Chain Pull = 250 lbs. (diverting); 125 lbs. (merging).

SPUR ANGLE (FUNCTION)

Style 16 - 30° (Diverting); Style 20P - 45° (Merging).

DRIVE UNIT

Model DISDU (Style 15)/Model INDU (Style 19P). Carrier rollers set high at 3" centers. All rollers powered and all components are guarded. Extended drive shaft may be located on either side of unit.

POWER UNIT

1/2 to 1-1/2 HP, Totally-Enclosed, Fan-Cooled, C-Face Motor/Reducer; chain drive to extended drive shaft. Underhung (UH) or Side-mounted (SM).

CURVE SECTION

5" deep x 10 ga. channel rails; bolted cross-members and connecting splice flats. Carrier rollers set high at 2-5/8" centers (at Inside Radius - "IR"). Variable "true-taper" or constant 2'-6" IR frames (all widths). Enclosed Drive Components mounted to "inner" side rail.

JUNCTION SECTION

5" deep x 10 ga. frame rails; bolted/welded cross-members and connecting splice flats. Carrier rollers set high at 3" centers. Enclosed Drive Components mounted to "long" rail. Manual, chain take-up mounted in tapered end. All components are guarded.

CARRIER ROLLERS - STRAIGHT

No. G196G rollers have galvanized tubes, greased, sealed, removable-type bearings and spring-loaded 7/16" hex axles; 179 fpm maximum speed. Optional bearings available.

CARRIER ROLLERS - TAPERED

No. G254HS rollers have galvanized tubes, greased, sealed, removable-type bearings and spring loaded 7/16” hex axles; 240 fpm maximum speed. Optional bearings available.

DRIVE COMPONENTS

No. DW1 Drive Wheels mounted in a fixed position between pairs of carrier rollers. Driven by RC40 side-bow type roller chain that is supported by a UHMW guide profile.

POWER TRANSFER UNIT

Internal jackshaft assembly connecting drive chains of opposing curve and junction sections. Carrier rollers at 3” centers. Enclosed Drive Components mounted to side plates.

FINISH

Powder coat medium gray.

ASSEMBLY

Right Hand (RH) power units will be furnished unless requested otherwise.

Optional Features

SPEEDS

Fixed-speeds of 180, 210, and 240 fpm. Non-standard speeds available within 30-240 fpm range.

POWER TAKE-OFF UNIT

Power transfer connection for powering from an adjoining conveyor.

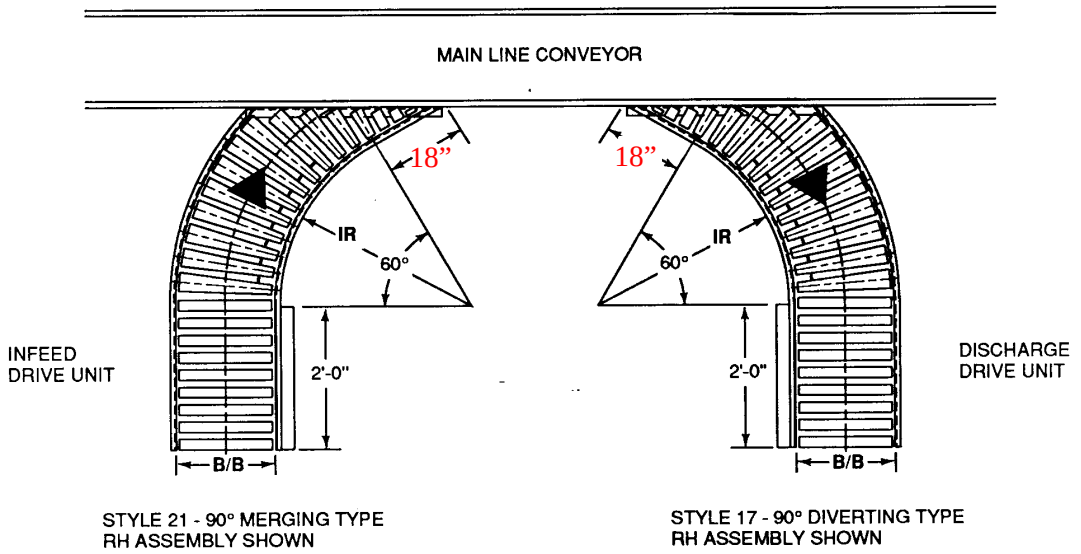
ALTERNATE DRIVE UNIT

Style 16P w/INDU for 30° merging applications, Style 20 w/DISDU for 45° diverting applications.

ACCESSORIES

Floor Supports/Hangers, Guard Rail, and Straight Extension Sections.

Curve Junctions - Style 17 - 90° Diverting Type and Style 21 - 90° Merging Type



STYLE 21 - 90° MERGING TYPE
RH ASSEMBLY SHOWN

STYLE 17 - 90° DIVERTING TYPE
RH ASSEMBLY SHOWN

Inside Radius - IR		
"W"	Model	
	26IR	TTF
16"		2'-6"
22"	2'-6"	3'-4"
28"	2'-6"	4'-0"
34"	2'-6"	5'-0"
40"	2'-6"	5'-0"

Standard Features

WIDTHS

"W" = 16", 22", 28", 34", 40".

SPEEDS

45, 60, 75, 90, 120, and 150 fpm (constant).

CAPACITY

Live Load = 100 lbs./ft. Effective Chain Pull = 250 lbs.

SPUR ANGLE (FUNCTION)

Style 17 - 90° (Diverting); Style 21 - 90° (Merging).

DRIVE UNIT

Model DISDU (Style 17)/Model INDU (Style 21). Carrier rollers set high at 3" centers. All rollers powered and all components are guarded. Extended drive shaft may be located on either side of unit.

POWER UNIT

1/2 to 1-1/2 HP, Totally-Enclosed, Fan-Cooled, C-Face Motor/Reducer; chain drive to extended drive shaft. Underhung (UH) or Side-Mounted (SM).

CURVE SECTION

5” deep x 10 ga. channel rails; bolted/welded cross-members and connecting splice flats. Carrier rollers set high at 2-5/8” centers (at Inside Radius - “IR”). Variable “true-taper” or constant 2’-6” IR frames (all widths). Enclosed Drive Components mounted to “inner” rail. Manual chain take-up (in Style 17, diverting-type ONLY). All components are guarded.

CARRIER ROLLERS - STRAIGHT

No. G196G rollers have galvanized tubes, greased, sealed, removable-type bearings and spring-loaded 7/16” hex axles; 179 fpm maximum speed. Optional bearings available.

CARRIER ROLLERS - TAPERED

No. G254HS rollers have galvanized tubes, greased, sealed, removable-type bearings and spring loaded 7/16” hex axles; 240 fpm maximum speed. Optional bearings available.

DRIVE COMPONENTS

No. DW1 Drive wheels mounted in a fixed position between pairs of carrier rollers. Driven by RC40 side-bow type roller chain that is supported by a UHMW guide profile.

FINISH

Powder coat medium gray.

ASSEMBLY

Right Hand (RH) power units will be furnished unless requested otherwise specified.

Optional Features

SPEEDS

Fixed speeds of 180, 210, and 240 fpm. Non-standard speeds available within 30-240 fpm range.

POWER TAKE-OFF UNIT

Power transfer connection for powering from an adjoining conveyor.

ACCESSORIES

Floor Supports/Hangers, Guard Rail, and Straight Extension Sections.

Curves/Junctions - Support Location Requirements

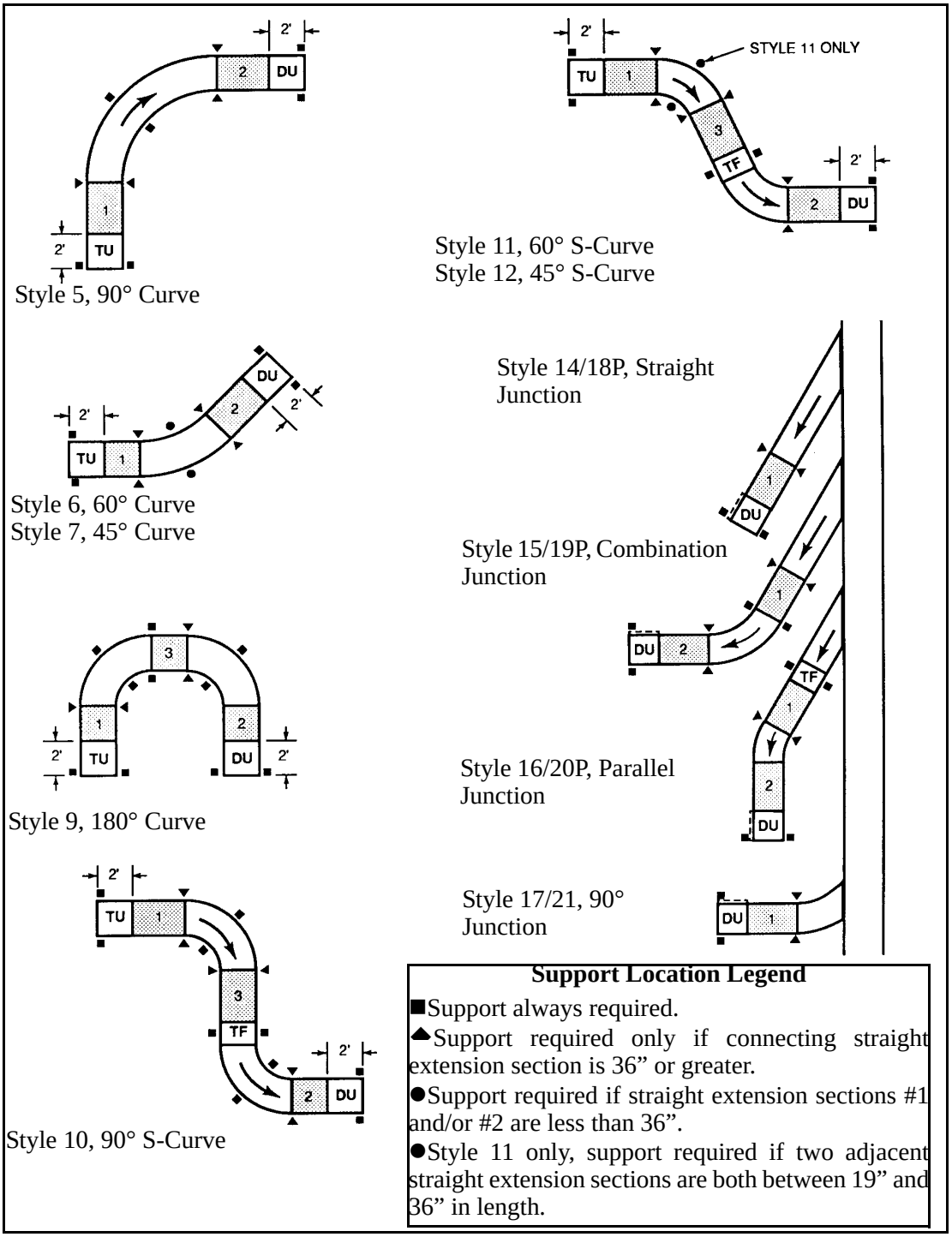
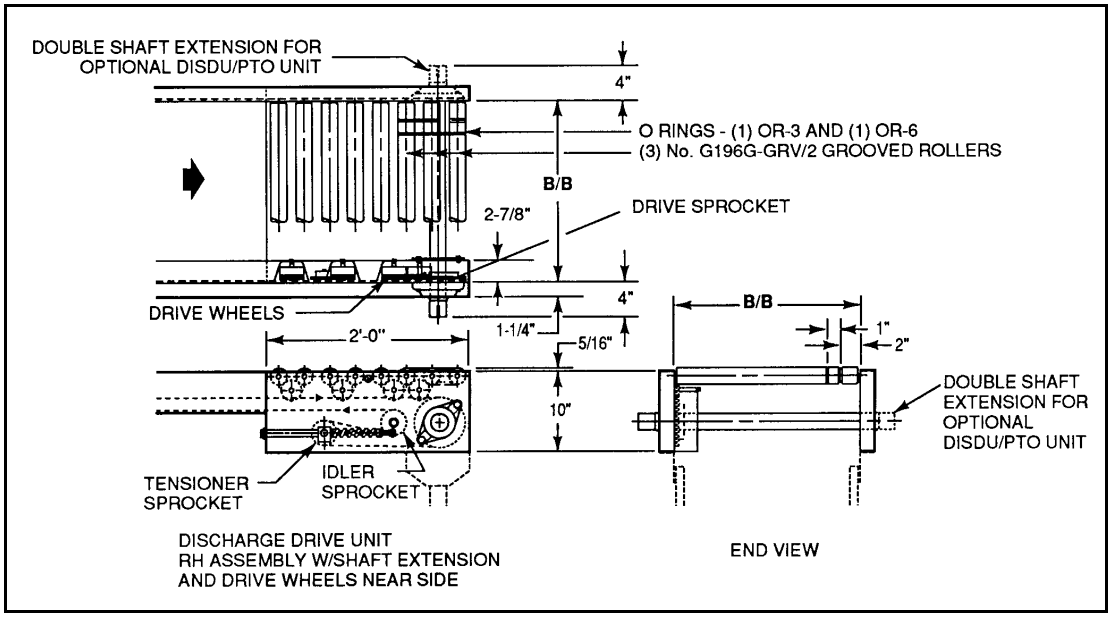


Figure C - 5 – Curves/Junctions Support Locations

DISDU - Discharge Drive Unit and DISDU/PTO - Discharge Drive/PTO Unit



Standard Features

FRAME

10” deep x 10 ga. formed steel side plates, 24” long with bolted cross-members and enclosures. Punched for carrier rollers set high at 3” centers.

FINISH

Powder coat medium gray.

DRIVE SPROCKET

No. H40B35 sprocket with hardened teeth, keyed hub, and 2 set screws; keyed to drive shaft.

DRIVE SHAFT

(DISDU) 1-7/16” dia. CRS, single extension (1” for PTO/Clutch unit). (DISDU/PTO) 1-7/16” dia. CRS, double extension (for powering downstream, “driven” conveyor).

BEARINGS

Grease-Packed, (for life), precision bearings cartridge with 2-bolt flange-type housing; 1” or 1-7/16” bore.

TENSION/IDLER SPROCKETS

No. HB40A17 idler-type sprocket (hardened teeth) with (1) grease-packed, precision bearing; 5/8” dia. bore.

TENSIONER

External mounting/side block; spring-loaded for constant chain tension.

DRIVE WHEELS

No. DW1, mounted on side plate in fixed position between pairs of carrier rollers.

DRIVE CHAIN

RC40; Side bow-type for all curves and junctions.

CHAIN GUIDE

Extruded UHMW profile guides and supports drive and return runs of chain.

CARRIER ROLLERS

(5) No. G196G; (3) No. G196G-GRV/2

O-RINGS

(1) No. OR-3 and (1) No. OR-6; to transmit drive from the 2nd and 3rd rollers to the end roller.

EFFECTIVE PULL CAPACITY

DISDU - Same as rated capacity of conveyor/curve/junction.

DISDU/PTO - Combined Effective Pulls not to exceed capacity of power unit.

TRAVEL

One-way (with drive unit located at discharge end of conveyor).

General Information

A DISDU is the standard drive unit for all Straight Conveyors, Curves, S-Curves and Diverting-type Junctions.

A DISDU/PTO is an optional variation of the DISDU and is used for powering the adjoining “downstream” conveyor via PTO unit.

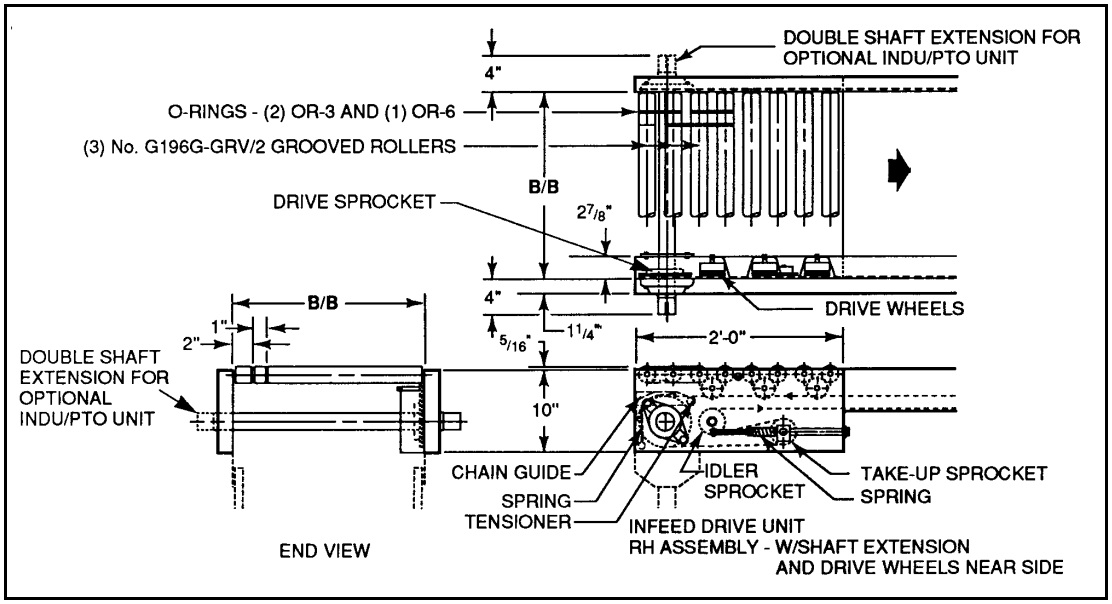
For Straight Conveyors, a DISDU is fully-assembled and shipped as part of a complete conveyor assembly (up to 15’-0” long) or as part of a 6’-0” long Drive Section (for conveyors over 15’-0”).

For Curves (except 180°), a DISDU is fully-assembled and shipped as part of a complete curve assembly. For S-Curves and 180° Curves, a DISDU is assembled to a curve and shipped as part of a drive/curve section.

For Diverting-type Junctions, a DISDU is fully assembled and shipped as part of a complete junction assembly.

The RH/LH assembly designation defines the side of the conveyor for the drive shaft extension and the mounting of the drive wheels/chain, (when looking in the direction of travel).

INDU - Infeed Drive Unit and INDU/PTO - Infeed Drive/PTO Unit



Standard Features

FRAME

10” deep x 10 ga. formed steel side plates, 24” long with bolted cross-members and enclosures. Punched for carrier rollers set high at 3” centers.

FINISH

Powder coat medium gray.

DRIVE SPROCKET

No. H40B35 drive-type sprocket (hardened teeth) with keyed hub and (2) set screws; keyed to drive shaft.

DRIVE SHAFT

(INDU) 1-7/16” dia. CRS, single extension (1” for PTO/Clutch unit). (INDU/PTO) 1-7/16” dia. CRS, double extension (for powering upstream, “driven” conveyor).

BEARINGS

Grease-Packed, (for life), precision bearing cartridge with 2-bolt flange-type housing; 1” or 1-7/16” bore.

TAKE-UP/IDLER SPROCKETS

No. HBB40A25 Idler-type sprocket (hardened teeth) with (2) grease-packed precision bearings; 5/8” dia. bore.

TAKE-UP

External mounting block; threaded for manual chain take-up adjustment.

CHAIN GUIDE/TENSIONER

Fixed UHMW guide maintains positive drive sprocket engagement; spring-loaded tensioner guide prevents bunching.

DRIVE WHEELS

No. DW1, mounted on side plate in fixed position between pairs of carrier rollers.

DRIVE CHAIN

RC40 Side-bow type for all curves and junctions.

CHAIN GUIDE

Extruded UHMW profile guides and supports both runs of chain; machined-fork guide segment strips chain from drive sprocket.

CARRIER ROLLERS

(4) No. G196G; (4) No. G196G-GRV-2

O-RINGS

(2) No. OR-3 and (1) No. OR-6; to transmit drive from the 3rd and 4th rollers to the end rollers.

EFFECTIVE PULL CAPACITY

INDU - Same as rated capacity of conveyor/curve/junction.

INDU/PTO - Combined Effective Pulls not to exceed capacity of power unit.

TRAVEL

Two-way; may be used for reversible operation.

DRIVE UNIT

An INDU is the standard drive unit for merging-type junctions.

An INDU is an option for Straight Conveyors, Curves, and Diverting-type Junctions and may be used when an application requires two-way travel and/or applications where there is not a sufficient power unit clearance at the conveyor's discharge end.

An INDU/PTO is an optional variation of the INDU and is used for powering the adjoining "upstream" conveyor via PTO unit.

For Straight Conveyors, an INDU is fully-assembled and shipped as part of a complete conveyor assembly (up to 15'-0" long) or as part of a 6'-0" long Drive Section (for conveyors over 15'-0").

For Curves (except 180°), an INDU is fully-assembled and shipped as part of a complete curve assembly. for S-Curves and 180° Curves, an INDU is assembled to a curve and shipped as part of a drive/curve section.

For Merging-type Junctions, an INDU is fully-assembled and shipped as part of a complete junction assembly.

The RH/LH assembly designation defines the side of the conveyor for the drive shaft extension and the mounting of the drive wheels/chain (when looking in the direction of travel).

PU/UH - Underhung Power Unit and PU/SM - Side Mounted Power Unit

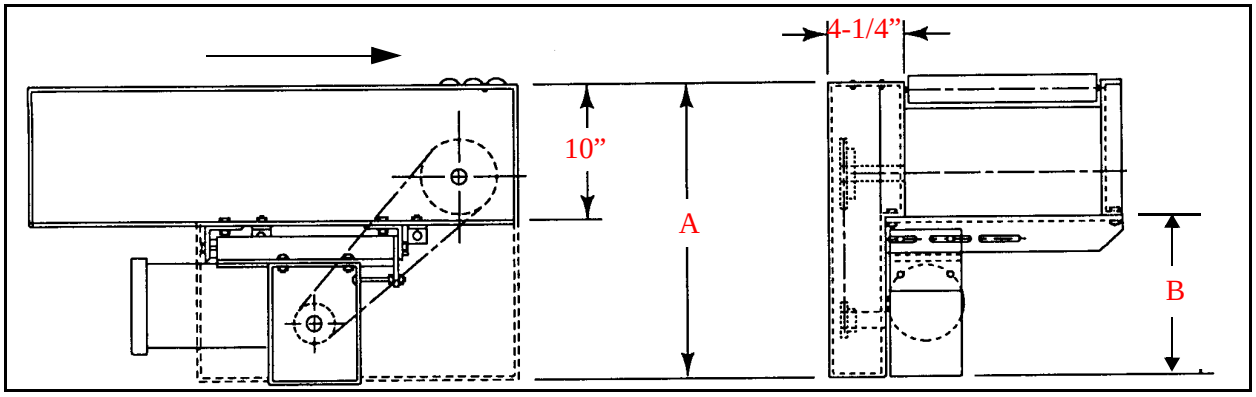


Figure C - 6 – Power Unit - Underhung Mount (UH) RH Assembly Shown

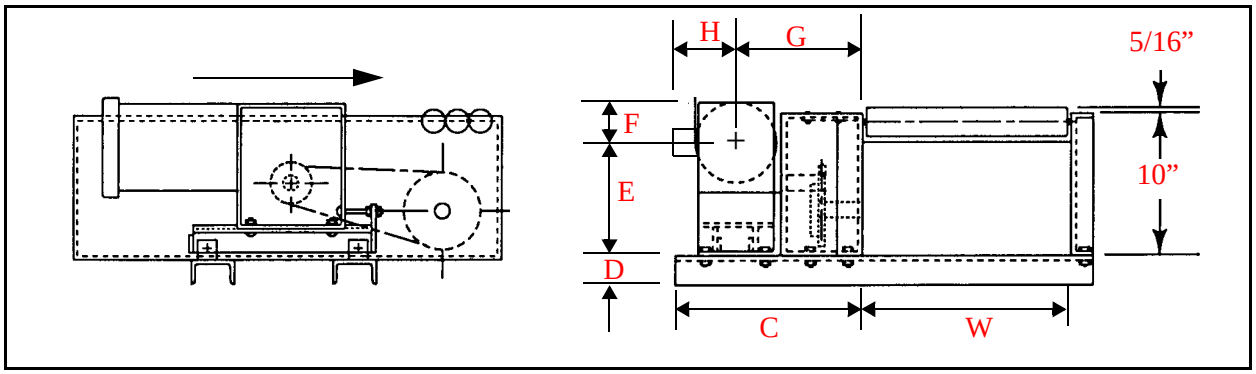


Figure C - 7 – Power Unit - Side Mounted (SM) RH Assembly Shown

Table C.1 – Power Unit Dimensions

Reducer No.	Dimensions (Inches)							
	A	B	C	D	E	F	G	H
Reliance (TiGear) Reducer								
175	24.50	10.88	11.25	1.44	7.13	3.69	7.59	6.00
200	24.50	11.38	11.25	1.44	7.63	3.69	7.78	6.00
262	24.50	12.06	11.25	1.44	9.00	4.81	7.81	7.06
350	26.50	15.88	14.75	1.44	10.50	4.81	9.19	7.06
Hub City Reducer								
454	27.75	16.81	14.75	1.63	10.05	5.63	9.06	8.25

Standard Features

MOTOR

C-Face type, Totally Enclosed (TEFC), 1750 rpm.

HORSEPOWER

1/2, 3/4, 1, 1-1/2, 2, 3, and 5.

POWER SUPPLY

230-460 volts / 3 phase / 60 Hz.

575 / 3 / 60 and Single-Phase available.

REDUCER

C-Face, ventless, right-angle type; (See the table on following page for size, ratio and mounting designation.) Filled (by manufacturer) with synthetic lubricant.

ROLLER CHAIN

See the table on the following page for size.

SPROCKETS

Taper-lock hub; hardened teeth.

SERVICE FACTOR

Chain Drive = 1.4 (min.)

Motor = 1.25

Reducer = 1.25 (min.)

MOUNTING FRAME

Structural angle cross-members with motor frame weldment; manual screw adjustment for chain tension.

CAPACITY

100#/ft. Live Load.

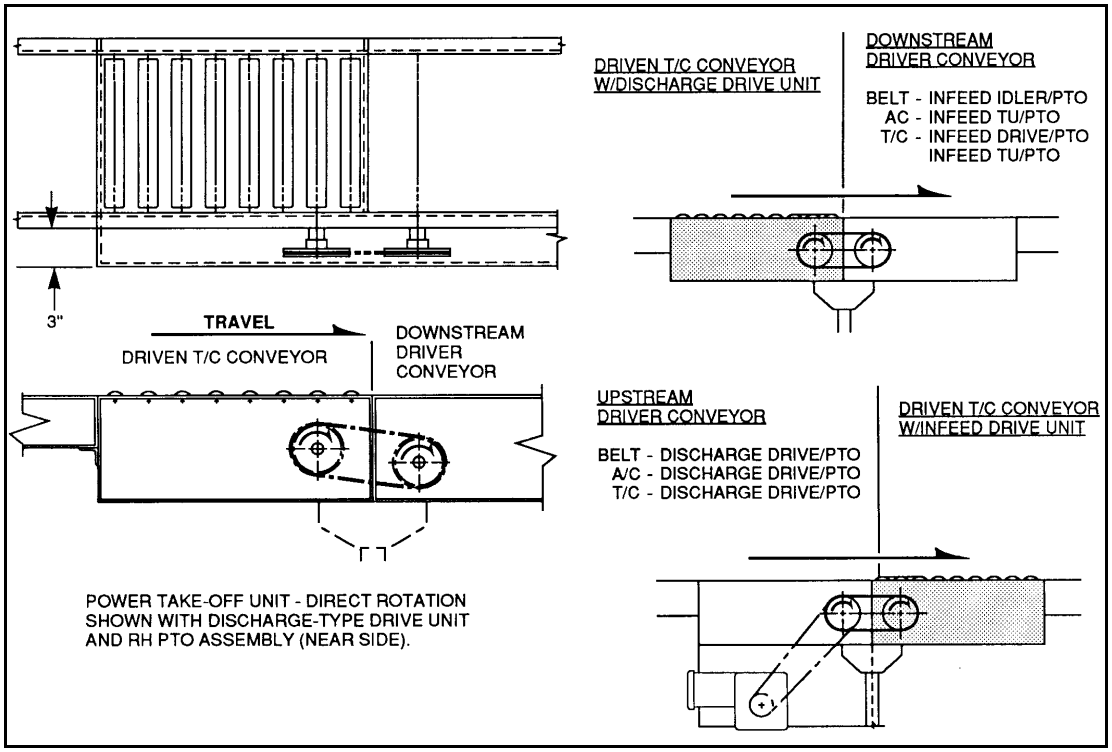
CHAIN GUARD

Removable, fully-enclosed.

DRIVE UNIT / POWER UNIT

A Power Unit is assembled to a drive unit and shipped as a complete drive/power unit assembly.

PTO/DR - Power Take-Off Unit - Direct Rotation



Standard Features

CHAIN

RC-50

DRIVER/DRIVER/SPROCKET

RC-50 taper lock nub; hardened teeth.

CAPACITY

250 lbs. Effective Pull (maximum).

SPEED

Same as “driver” conveyor.

SERVICE FACTOR

Chain Drive = 1.4 (minimum).

CHAIN GUARD

Removable, fully-enclosed, 10” deep x 3” wide.

ASSEMBLY

When attaching to the end idler unit of the “driver” conveyor, a RH assembly will be furnished unless specified otherwise. When attaching to the end drive unit, the appropriate PTO/DR assembly will be furnished to match the power unit assembly.

General Information

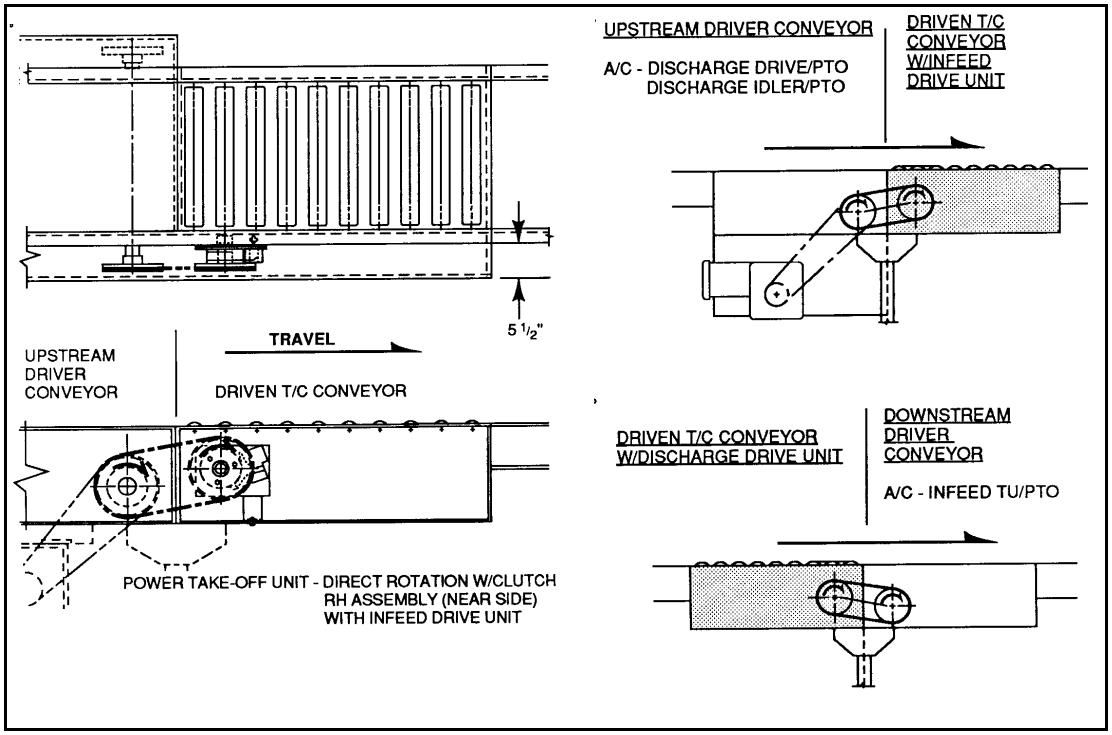
The optional PTO/DR allows a T/C curve/junction to be powered (continuously) by an adjoining A/C, T/C or BCR/S (belt) conveyor.

The adjoining “driver” conveyor may be upstream or downstream of the “driven” T/C curve/junction.

The Effective Pull (EP) of the “driven” T/C curve/junction must be added to that of the “driver” conveyor when determining its power unit requirements.

The “driven” sprocket is factory-assembled to the extended drive shaft of the “driven” curve/junction. The “driver” sprocket is factory-assembled to the appropriate terminal end of the “driver” conveyor. The chain guard and chain are shipped with “HARDWARE” and are attached at the time of installation.

PTO/DRC - Power Take-Off Unit - Direct Rotation With Clutch



Standard Features

CHAIN

RC-50

DRIVEN SPROCKET

RC-50, type “A” plate sprocket (number of teeth dependent on “driver” conveyor type); attached to face of clutch unit. Hardened teeth.

DRIVER SPROCKET

RC-50; taper lock hub with hardened teeth mounted on output shaft of driver conveyor end component.

CLUTCH

Series 7, solenoid-actuated, wrap-spring type with 1” dia. bore; CW or CCW rotation furnish as required for RH/LH assembly and infeed/discharge end drive type.

CONTROL SIGNAL

Maintained 115 volt signal required for “driven” conveyor operation.

CAPACITY

125 lbs. Effective Pull (maximum).

SPEED

Same as “driver” conveyor.

SERVICE FACTOR

Chain Drive = 1.4 (minimum); Clutch = 2.0

CHAIN GUARD

Removable, fully-enclosed, 10” deep x 5-1/2” wide.

ASSEMBLY

When attaching to the end idler unit of the “driver” conveyor, a RH assembly will be furnished unless specified otherwise. When attaching to the end drive unit, the appropriate PTO/DRC assembly will be furnished to match the power unit assembly.

General Information

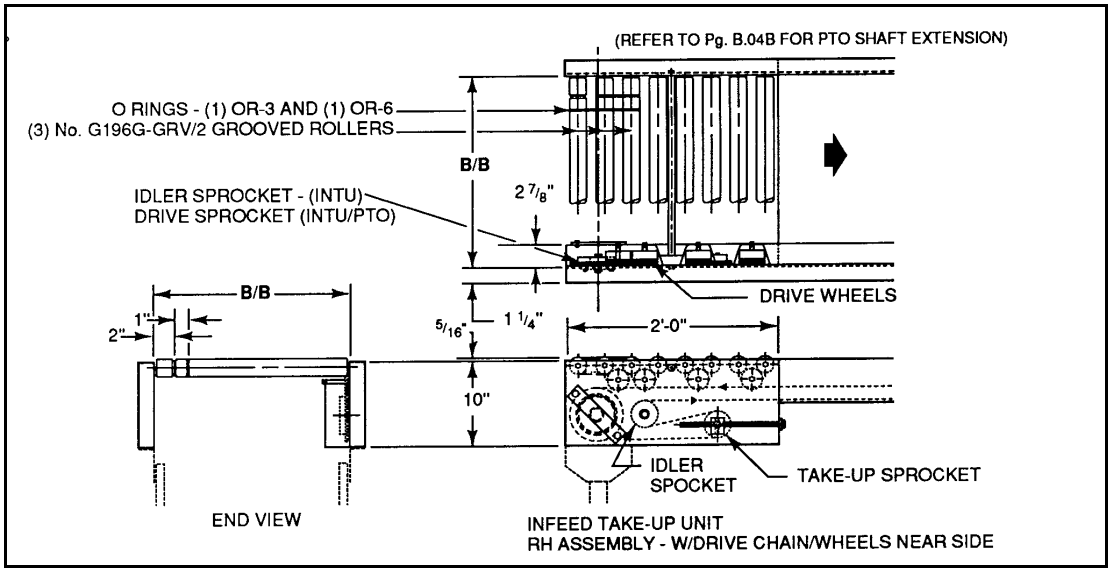
The optional PTO/DRC allows for the controlled operation of a T/C curve/junction that is continuously powered by an adjoining A/C conveyor.

The adjoining “driver” conveyor may be upstream or downstream of the “driven” T/C curve/junction.

The Effective Pull (EP) of the “driven” T/C curve/junction must be added to that of the “driver” conveyor when determining its power unit requirements.

The “driven” clutch/sprocket assembly is factory-assembled to the extended drive shaft of the “driven” curve/junction. The “driver” sprocket is factory-assembled to the appropriate terminal end of the “driver” conveyor. The chain guard and chain are shipped with “HARDWARE” and are attached at the time of installation.

INTU - Infeed Take-Up Unit and INTU/PTO - Infeed Take-Up/PTO Unit



Standard Features

FRAME

10” deep x 10 ga. formed steel side plates, 24” long with bolted cross-members and enclosures. Punched for carrier rollers set high at 3” centers.

FINISH

Powder coat medium gray.

END SPROCKET

(INTU) No. HB40A35 idler-type sprocket (hardened-teeth) with grease-packed precision bearing; mounted on 5/8” dia. stud axle.

(INTU/PTO) No. H40B35 drive-type sprocket (hardened teeth) with keyed hub and (2) set screws; keyed to drive shaft.

DRIVE SHAFT/BEARINGS

(INTU/PTO) 1-7/16” dia. CRS, single extension. Grease-packed (for life), precision bearing cartridges with 2-bolt flange-type housings.

TAKE-UP/IDLER SPROCKETS

No. HB40A17 idler-type sprocket (hardened teeth) with (1) grease-packed precision bearing; 5/8” dia. bore.

TAKE-UP

External mounting block; threaded for manual chain take-up adjustment.

DRIVE WHEELS

No.DW1, mounted on side plate in fixed position between pairs of carrier rollers.

DRIVE CHAIN

RC40 Side-bow type for all curves and junctions.

CHAIN GUIDE

Extruded UHMW profile guides and supports drive and return runs of chain.

CARRIER ROLLERS

(5) No. G196G; (3) No. G196G-GRV/2

O-RINGS

(1) No. OR-3 and (1) No. OR-6; to transmit power from 2nd and 3rd rollers to the end roller.

General Information

An INTU is furnished on Straight Conveyors, Curves and S-Curves that are equipped with the standard discharge Drive Unit.

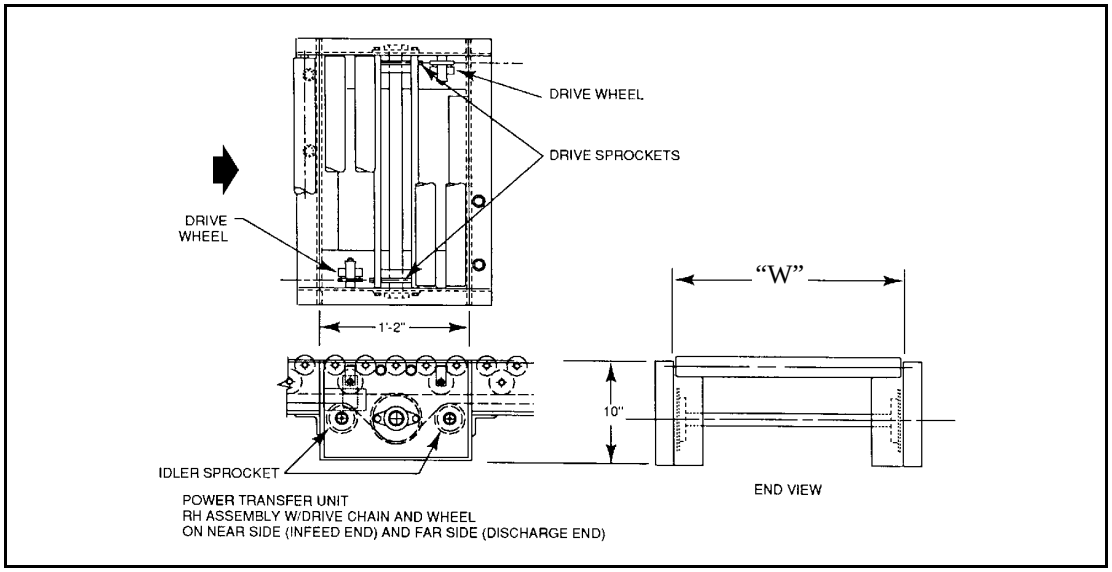
An INTU/PTO is an optional variation of the INTU and is used for powering the adjoining “upstream” conveyor via PTO unit.

For straight conveyors, an INTU is fully-assembled and shipped as part of a complete conveyor assembly (up to 15’-0” long) or as part of a 6’-0” long. Take-up Section (for conveyors over 15’-0”).

For Curves (except 180 degrees), an INTU is fully-assembled and shipped as part of a complete curve assembly. For S-Curves and 180 degree Curves, an INTU is assembled to a curve and shipped as part of a take-up/curve section.

The RH/LH assembly designation defines the side of the conveyor on which the drive wheels/ chain are mounted (when looking in the direction of travel).

PTU - Power Transfer Unit



Standard Features

FRAME

10" deep x 10 ga. formed steel side plates, 14" long with bolted crossmembers and enclosures. Punched for carrier rollers set high at 3" centers.

FINISH

Powder coat medium gray.

DRIVE SPROCKETS

No. H40B30 (2) drive-type sprockets (hardened teeth) with keyed hub and (2) set screws; keyed to drive shaft. 6" dia. CRS.

JACKSHAFT

1-7/16" dia. CRS; no extension(s).

BEARINGS

Grease-packed (for life), precision bearing cartridge with 2-bolt flange-type housing.

IDLER SPROCKETS

No. HB40A17, idler-type sprockets (hardened teeth) with (1) grease-packed precision bearing; 5/8" dia. bore.

DRIVE CHAIN

RC40; side-bow type.

CHAIN GUIDE

Extruded UHMW profiles guide and support drive and return runs of chain.

DRIVE WHEEL

No. DW1; mounted on each side plate in fixed position between pairs of carrier rollers.

CARRIER ROLLERS

(5) No. G196G.

General Information

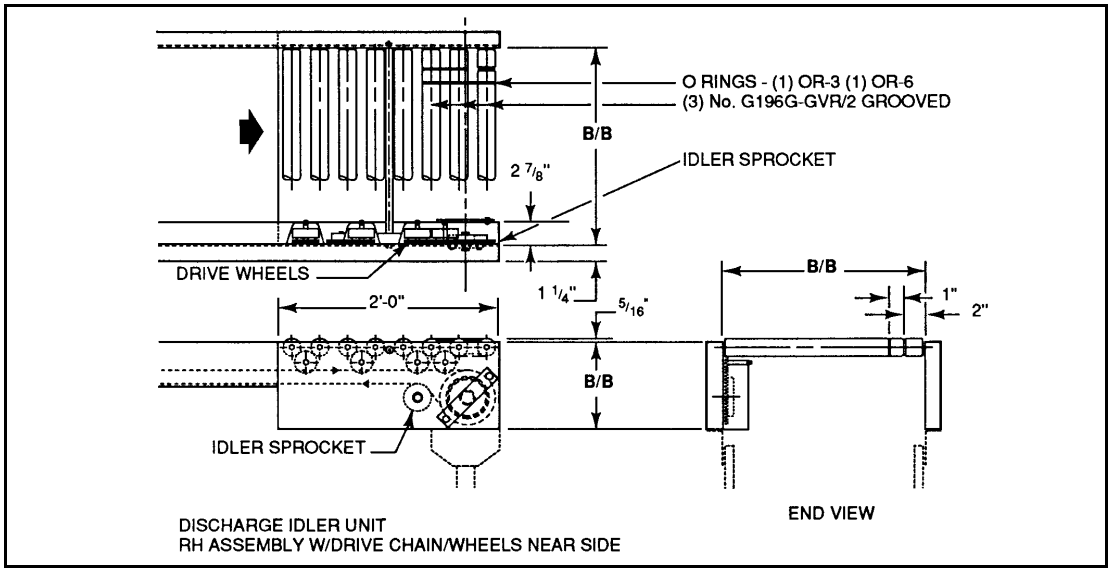
A PTU is furnished on S-Curves and Parallel-type Junctions.

For S-Curves, a PTU is assembled to a curve and shipped as part of either a drive/curve or take-up-curve section.

For parallel-type Junctions, a PTU is fully-assembled and shipped as part of a complete junction assembly.

The RH/LH assembly designation defines the side of the conveyor on which the drive wheels/ chain are mounted upon entering the PTU (when looking in the direction of travel).

DISIU - Discharge Idler Unit



Standard Features

FRAME

10” deep x 10 ga. formed steel side plates, 24” long with bolted cross-members and enclosures. Punched for carrier rollers set high at 3” centers.

FINISH

Medium Gray

END SPROCKET

No. HB40A35 idler-type sprocket (hardened-teeth) with grease-packed precision bearing; mounted on 5/8” dia. stud axle.

IDLER SPROCKETS

No. HBB40A25 idler-type sprocket (hardened teeth) with (2) grease-packed precision bearings; 5/8” dia. bore.

DRIVE WHEELS

No. DW1, mounted on side plate in fixed position between pairs of carrier rollers.

DRIVE CHAIN

RC40; side-bow type.

CHAIN GUIDE

Extruded UHMW profile guides and supports drive and return runs of chain.

CARRIER ROLLERS

(5) No. G196G; (3) No. G196G-GRV/2

O-RINGS

(1) No. OR-3 and (1) No. OR-6; to transmit power from 2nd and 3rd rollers to the end roller.

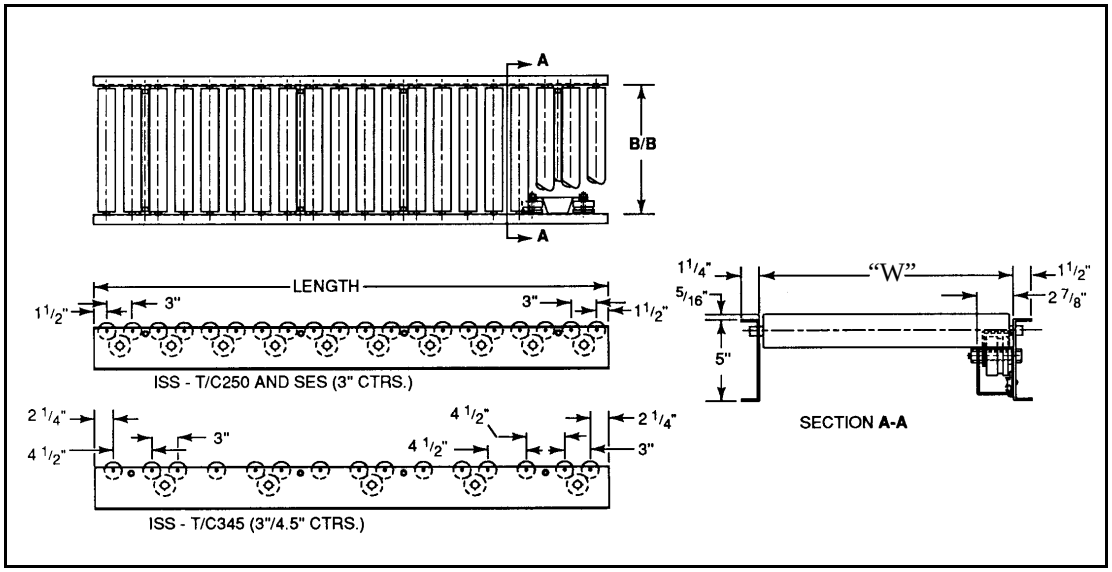
General Information

A DISIU is furnished on curves that are equipped with the optional Infeed Drive Unit.

For Curves (except 180 degrees), a DISIU is fully-assembled and shipped as part of a complete curve assembly. For 180 degree curves, a DISIU is assembled to a curve and shipped as part of a idler/curve section.

The RH/LH assembly designation defines the side of the conveyor on which the drive wheels/ chain are mounted (when looking in the direction of travel).

ISS - Intermediate Section Straight and SES - Straight Extension Section



Standard Features

FRAME

5” deep x 10 ga. formed steel channel rails with bolted cross-members. Punched for carrier rollers set high at 3” centers.

FINISH

Powder coat medium gray.

LENGTHS

1’-0” through 12’-0” in 1’-0” increments.

DRIVE WHEELS

No. DW1, mounted on side rail in fixed position between pairs of carrier rollers.

CHAIN

ISS = RC40; SES = RC40 side-bow type.

CHAIN GUIDE

Extruded UHMW profile guides and supports the drive and return runs of chain.

CHAIN GUARD(S)

Formed segmental guards enclose the chains and drive wheel sprocket.

CARRIER ROLLERS

No. G196G

ROLLER CENTERS

ISS = 3”.

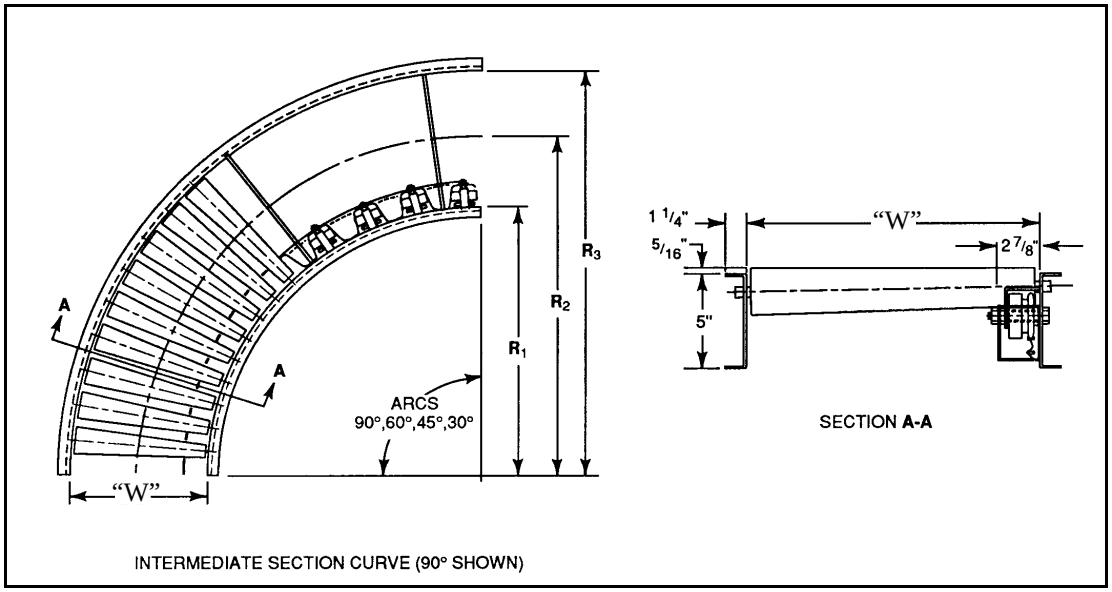
General Information

ISS section(s) are fully assembled and shipped in skid-loads. When installing, they are combined with the drive and take-up sections to form a complete straight conveyor assembly.

Standard 12’-0” sections will be supplied with short sections provided as required to provide specific lengths (1’-0” increments).

SES section(s) are fully assembled and shipped from the factory as separate components. When installing, they are “added” to the curve/junction.

ISC/TTF - Intermediate Section Curve/True-Taper Frame
ISC/26IR - Intermediate Section Curve/2'-6" Inside Radius



INTERMEDIATE SECTION CURVE (90° SHOWN)

Standard Features

FRAME

5" deep x 10 ga. formed steel channel rails with bolted cross-members. Punched for carrier rollers set high

FINISH

Powder coat medium gray.

FRAME RADIUS

See Table on the following page.

ARCS

30°, 45°, 60°, and 90°.

DRIVE WHEELS

No. DW1, mounted to inside frame rail in fixed position between pairs of carrier rollers.

DRIVE CHAIN

RC40; side-bow type.

CHAIN GUIDE

Extruded UHMW profile guides and supports drive and return runs of chain

CHAIN GUARDS

Formed segmental guards enclose the chains and drive wheel sprocket.

CARRIER ROLLERS

No. G254HS.

ROLLER CENTERS

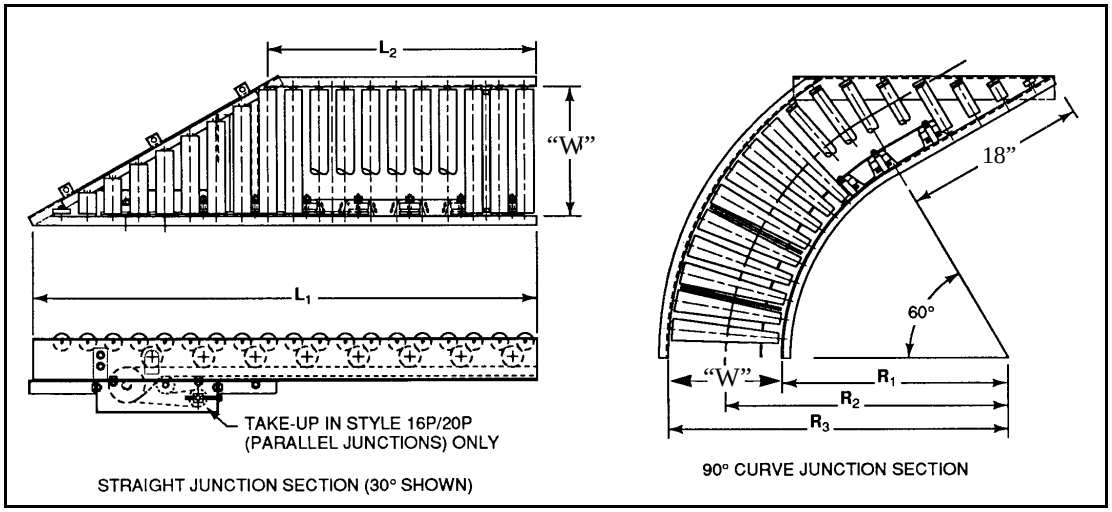
See Table on the following page.

General Information

ISC sections are fully assembled and shipped as part of a complete curve/junction assembly. (Exception - 180° curves and all S-Curves are shipped in two sections.)

Dimensions and No. of Rollers							
"W"	Frame Radius			Rollers Centers @			Number of Rollers (90° Curve)
	R1	R2	R3	R1	R2	R3	
Type 26IR Curve Sections							
16"	--	--	--	--	--	--	--
22"	2'-6"	3'-5"	4'-4"	2-5/8"	3-5/8"	4-1/2"	18
28"	2'-6"	3'-8"	4'-10"	2-5/8"	3-7/8"	5-1/8"	18
34"	2'-6"	3'-11"	5'-4"	2-5/8"	4-1/8"	5-5/8"	18
40"	2'-6"	4'-2"	5'-10"	2-5/8"	4-3/8"	6-1/8"	18
Type TTF Curve Sections							
16"	2'-6"	3'-2"	3'-10"	2-5/8"	3-3/8"	4"	18
22"	3'-4"	4'-3"	5'-2"	2-5/8"	3-3/8"	4-1/8"	24
28"	4'-0"	5'-2"	6'-4"	2-5/8"	3-3/8"	4-3/16"	29
34"	5'-0"	6'-5"	7'10"	2-5/8"	3-3/8"	4-1/8"	36
40"	5'-0"	6'-8"	8'-4"	2-5/8"	3-1/2"	4-3/8"	36

JCT/30° and 45° Straight Junction Sections and JCT/90° Curve Junction Section



Standard Features

FRAME

5" deep x 10 ga. formed steel channel rails with bolted cross-members and welded connector angle with axle clips in tapered end. Roller axle holes punched high in rails.

FINISH

Powder coat medium gray.

LENGTHS

See Table on the following page.

CARRIER ROLLERS

No. G196G, (straight) and No. G254HS (tapered).

ROLLER CENTERS

3" in Straight Junctions and 2-5/8" @ R1 in Curve Junction.

END IDLER SPROCKET

HB40A35 sprocket with hardened teeth, 5/8" BR, and grease-packed precision bearing.

T.U./IDLER SPROCKET

5/8" BR and grease-packed precision bearing.

DRIVE WHEELS

No. DW1, mounted frame rail in fixed position between pairs of carrier rollers.

DRIVE CHAIN

RC40; side-bow type.

CHAIN GUIDE

Extruded UHMW profile guides and supports drive and return runs of chain.

CHAIN GUARDS

Formed segmental guards enclose the chains, drive wheel sprockets, and take-up/idler sprockets.

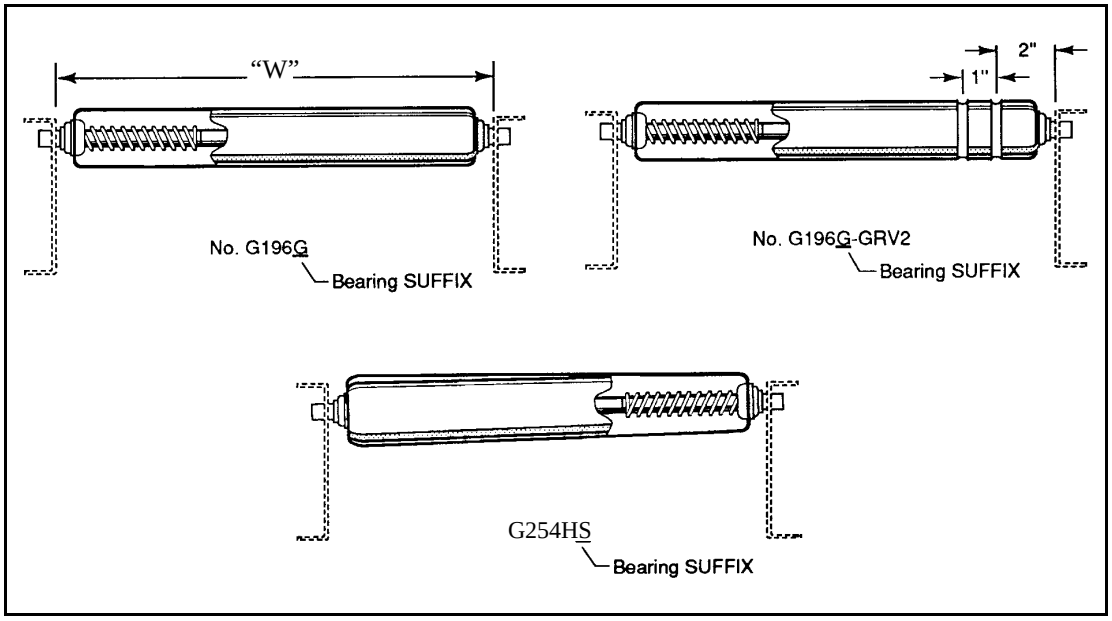
General Information

The Assembly Designation (RH/LH) of a Junction Section is the same as that of the complete conveyor unit.

A Junction Section is fully-assembled and shipped attached to its adjoining curve and/or drive unit. The unit is ready-to-run upon installation.

Frame/Roller Center Dimensions					
Dimensions	**Conveyor Width - "W"**				
	16"	**22"**	**28"**	**34"**	**40"**
30° and 45° Straight Junction Sections					
L1	5'-0"	5'-0"	5'-0"	7'-6"	7'-6"
L2/30°	2'-8-1/8"	1'-9-3/4"	11'-3/8"	2'-6-7/8"	1'-8-5/8"
L2/45°	3'-8-1/4"	3'-2-1/4"	2'-8-1/4"	4'-8-1/4"	4'-2-1/4"
90° Curve Junction Section (Type 26IR)					
Frame R1 Radius R2 @ R3	--- --- ---	2'-6" 3'-5" 4'-4"	2'-6" 3'-8" 4'-10"	2'-6" 3'-11" 5'-4"	2'-6" 4'-2" 5'-10"
Roller R1 Centers R2 @ R3	--- --- ---	2-5/8" 3-5/8" 4-1/2"	2-5/8" 3-7/8" 5-1/8"	2-5/8" 4-1/8" 5-5/8"	2-5/8" 4-3/8" 6-1/8"
90° Curve Junction Section (Type TTF)					
Frame R1 Radius R2 @ R3	2'-6" 3'-2" 3'-10"	3'-4" 4'-3" 5'-2"	4'-0" 5'-2" 6'-4"	5'-0" 6'-5" 7'-10"	5'-0" 6'-8" 8'-4"
Roller R1 Centers R2 @ R3	2-5/8" 3-5/16" 4"	2-5/8" 3-3/8" 4-1/8"	2-5/8" 3-3/8" 4-3/16"	2-5/8" 3-3/8" 4-1/8"	2-5/8" 3-1/2" 4-3/8"

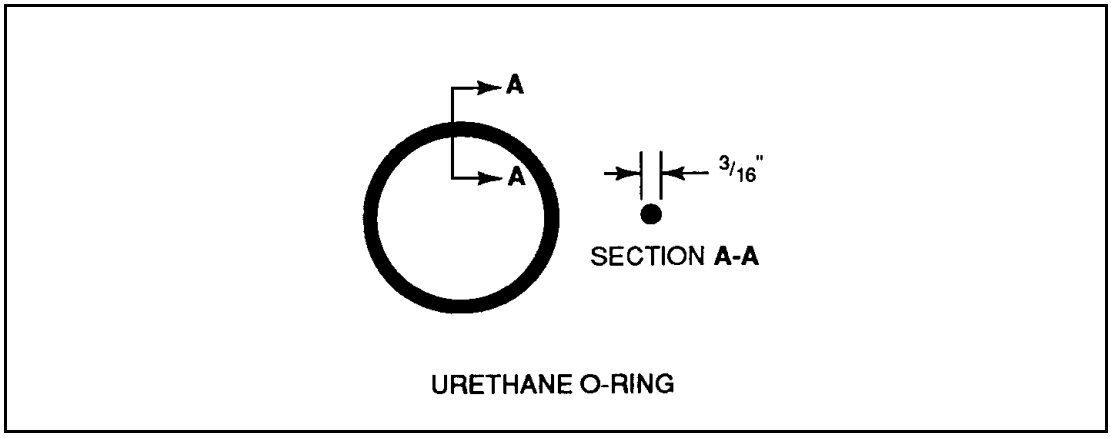
Carrier Rollers



Standard Roller No. (with "G" Grease-Packed Bearings)		
No. G196G	No. G196G-GRV/2	No. G254HS
Capacity at 60 fpm		
290 lbs.	290 lbs.	290 lbs.
Galvanized tube - Diameter / Gage		
1.9"/16	1.9"/16	2.5-1.6"/14
Bearing No./Axle		
3502G (Grease-Packed) / 7/16" HEX (Spring-Retained)		
No. G196 Roller-Suffix/Bearing type		
G	Std) Grease-Packed (GP)	
G/CR	(Opt) GP/Cold Room (with plated axle)	
HS	(Opt) High Speed (with Ball Retainer)	
HS/CR	(Opt) HS/Cold Room (with plated axle)	
FZ	(Opt) Freezer (with low-temp grease)	
P or NP	(Opt) Plain (oiled)	
GT	(Opt) Grease-Packed with Teflon Seals	
AB	(Opt) ABEC 1 Class Precision Bearing*	
No. G254HS Roller-Suffix/Bearing type		
HS	(Std) High-Speed (with Ball Retainer)	
HS/CR	(Opt) HS/Color Room (with plated axle)	
AB	(Opt) ABEC 1 Class Precision Bearing*	

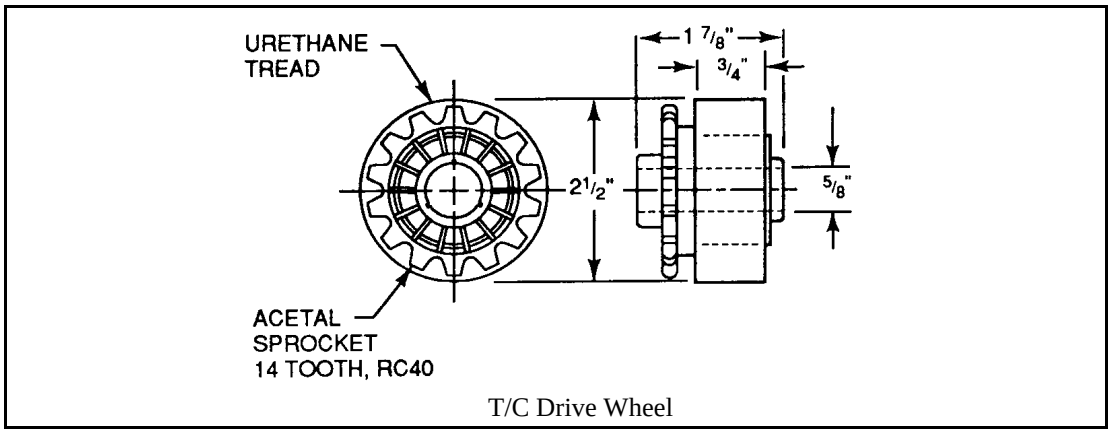
*AB bearing in No. G196 Roller is non-removable.

O-Rings (For No. G196G - GRV/2 Rollers)



O-Ring Number		
No. OR-3	No. OR-6	No. OR-7.5
For Roller Centers		
3”	6”	7-1/2”
Length		
10-1/4”	15-5/8”	18-1/4”

Drive Wheel



T/C Drive Wheel

Drive wheel Designation		
DW1	DW2	DW3
Furnished		
Standard	----	Optional
Temperature Range		
0 to 150° F	----	0 to -20° F
Tread Durometer (Color)		
80d (Amber)	----	60b (Blue)

SECTION D: ENGINEERING DATA

Conveyor Selection

Step 1 - (If required) Determine the Curve Width

Use Table D.1 to determine the required width “W” of the curve based on the selected frame model type (TTF or 26IR) and the maximum length and width dimensions of the products being conveyed (see Figure D - 1).

Note: Dimensions are based on the product conveying within the width of the conveyor “W”.

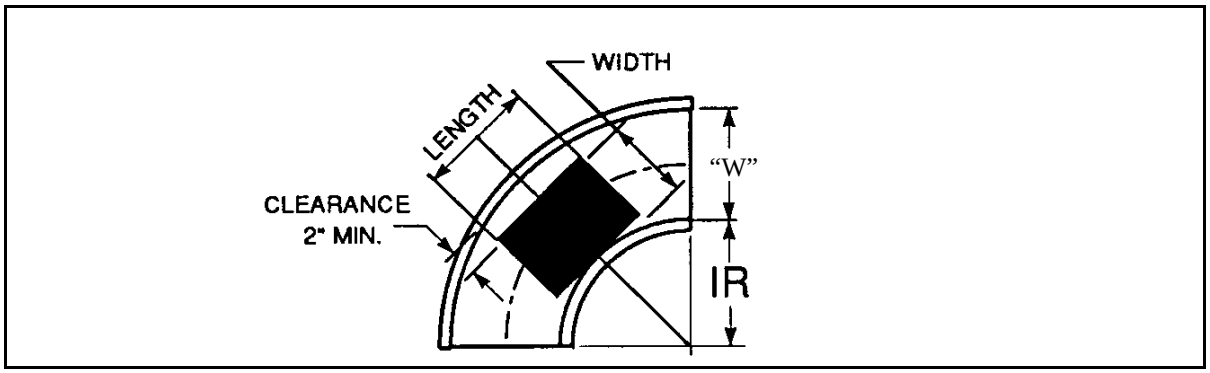


Figure D - 1 Determining the Curve Width

Table D.1 – Curve Width Selection - “W”

Dim	Package Length												
	12”	**16”**	**20”**	**24”**	**28”**	**32”**	**36”**	**40”**	**44”**	**48”**	**52”**	**56”**	**60”**
Model TTF - “True-Taper Frame” Variable I.R.													
6”	16”	16”	16”	16”	16”	16”	16”	16”	16”	16”	22”	22”	22”
8”	16”	16”	16”	16”	16”	16”	16”	16”	16”	22”	22”	22”	22”
10”	16”	16”	16”	16”	16”	16”	16”	16”	22”	22”	22”	22”	22”
12”	16”	16”	16”	16”	22”	22”	22”	22”	22”	22”	22”	22”	28”
14”	22”	22”	22”	22”	22”	22”	22”	22”	22”	22”	28”	28”	28”
16”	22”	22”	22”	22”	22”	22”	22”	28”	28”	28”	28”	28”	28”
18”	22”	22”	22”	28”	28”	28”	28”	28”	28”	28”	28”	28”	28”
20”	28”	28”	28”	28”	28”	28”	28”	28”	28”	28”	28”	34”	34”
22”	28”	28”	28”	28”	28”	28”	28”	28”	34	34”	34”	34”	34”
24”	28”	28”	28”	28”	34”	34”	34”	34”	34”	34”	34”	34”	34”
26”	34”	34”	34”	34”	34”	34”	34”	34”	34”	34”	34”	34”	40”
28”	34”	34”	34”	34”	34”	34”	34”	34”	34”	40”	40”	40”	40”
30”	34”	34”	34”	34”	40”	40”	40”	40”	40”	40”	40”	40”	40”
32”	40”	40”	40”	40”	40”	40”	40”	40”	40”	40”	40”	40”	40”
34”	40”	40”	40”	40”	40”	40”	40”	40”	40”				
36”	40”	40”	40”	40”	40”								

Table D.2Table D.1 – Curve Width Selection - “W” (continued)

Dim	Package Length												
	12”	**16”**	**20”**	**24”**	**28”**	**32”**	**36”**	**40”**	**44”**	**48”**	**52”**	**56”**	**60”**
Model 26IR - 2’-6” IR (All Widths)													
6”	*	*	*	*	*	*	*	*	*	*	22”	22”	22”
8”	*	*	*	*	*	*	*	*	22”	22”	22”	22”	22”
10”	*	*	*	*	*	*	22”	22”	22”	22”	22”	22”	28”
12”	*	*	*	22”	22”	22”	22”	22”	22”	22”	22”	22”	28”
14”	22”	22”	22”	22”	22”	22”	22”	22”	22”	28”	28”	28”	28”
16”	22”	22”	22”	22”	22”	22”	28”	28”	28”	28”	28”	28”	28”
18”	22”	22”	22”	28”	28”	28”	28”	28”	28”	28”	28”	34”	34”
20”	28”	28”	28”	28”	28”	28”	28”	28”	28”	28”	34”	34”	34”
22”	28”	28”	28”	28”	28”	28”	28”	34”	34”	34”	34”	34”	34”
24”	28”	28”	28”	34”	34”	34”	34”	34”	34”	34”	34”	34”	40”
26”	34”	34”	34”	34”	34”	34”	34”	34”	34”	34”	40”	40”	40”
28”	34”	34”	34”	34”	34”	34”	34”	40”	40”	40”	40”	40”	40”
30”	34”	34”	34”	40”	40”	40”	40”	40”	40”	40”	40”	40”	
32”	40”	40”	40”	40”	40”	40”	40”	40”	40”	40”			
34”	40”	40”	40”	40”	40”	40”	40”						
36”	40”	40”	40”										

(*) Refer to Model TTF chart for 16” “W”

Example 1: A Style 10 (TTF), 90° S-Curve conveys cartons 16” wide x 24” long (maximum). Per Table D.1 TTF, a 22” “W” curve is required.

Step 2 - Calculate the Live Load

Use the appropriate formula below to calculate the conveyor's Live Load (LL) required.

A. When Weight and Number of Loads on conveyor are known.

$$LiveLoad(lbs/ft) = \frac{TotalWeightonConveyor(lbs)}{ConveyorLength(ft)}$$

Example 2a: A Style 1, straight conveyor is 55'-0" long and has a total weight of 2200 pounds when fully loaded.

$$LiveLoad = \frac{2200lbs}{55ft} = 40lbs/ft$$

B. When load Weights and Rates are Constant.

$$LiveLoad(lbs/ft) = \frac{ItemWeight(lbs) \times Rate(loads/min)}{ConveyorSpeed(ft/min)}$$

Example 2b: A Style 5, 90° curve conveys 35 beverage cases per minute that weigh 25 pounds each. The curve's speed is 90 fpm.

$$LiveLoad = \frac{25lbs \times 35casespermin}{90fpm} = 9.7lbs/ft$$

C. When load Weights and Rates vary.

$$LiveLoad(lbs/ft) = \frac{MaximumLoad/Rate(lbs/ft)}{ConveyorSpeed(ft/min)}$$

*Maximum Load/Rate = Max. Load (lbs.) X Max. Rate (loads/min.)

Example 2c: A Style 9, 180° curve conveys an assortment of cartons that weigh between 5 and 60 pounds each. The normal rate is 10 cartons per minute. The rate can increase to 40 cartons per minute. The curve's speed is 120 fpm.

$$LiveLoad = \frac{60lbs \times 40cartons}{120fpm} = 20lbs/ft$$

Step 3a - Determine the Effective Pull

For Style 1 and 1P - Straight Conveyors and PRS Skew Conveyors

Based on the conveyor's style/type, live load, and width, use the appropriate table, Table D.3 or Table D.4, to find the "Pull" for one (1) foot of length. Next, multiply the pull by the conveyor's length to find its Effective Pull requirement.

Effective Pull = (Pull x Length)

For Style 1/PRS - Do not exceed 500 lbs. EP, 150 ft. next length.

For Style 1P - do not exceed 250 lbs. EP, (see Step 4a for maximum length limitations).

Table D.3 – Style 1/1P - Pull (lbs./ft.)

Live Load (lbs./ft.)	Conveyor Length - "W"				
	16"	22"	28"	34"	40"
0	1.0	1.2	1.4	1.5	1.7
5	1.5	1.6	1.8	1.9	2.1
10	1.9	2.1	2.2	2.4	2.5
15	2.3	2.5	2.6	2.8	3.0
20	2.8	2.9	3.1	3.2	3.4
25	3.2	3.4	3.5	3.7	3.8
30	3.6	3.8	3.9	4.1	4.3
40	4.5	4.7	4.8	5.0	5.1
50	5.4	5.5	5.7	5.9	6.0
60	6.3	6.4	6.6	6.7	6.9
80	8.0	8.2	8.4	8.5	8.7
100	9.8	10.0	10.2	10.3	10.5

Example 3a: (Ref. Example 2a) a Style 1 Straight Conveyor is 55'-0" long, has a 40 lbs./ft. Live Load and has a width of 22" "W".

Per Table D.5, the "Pull" is 4.7 lbs./ft. Effective Pull = 4.7 lbs. x 55', Table D.3, = 258 lbs.

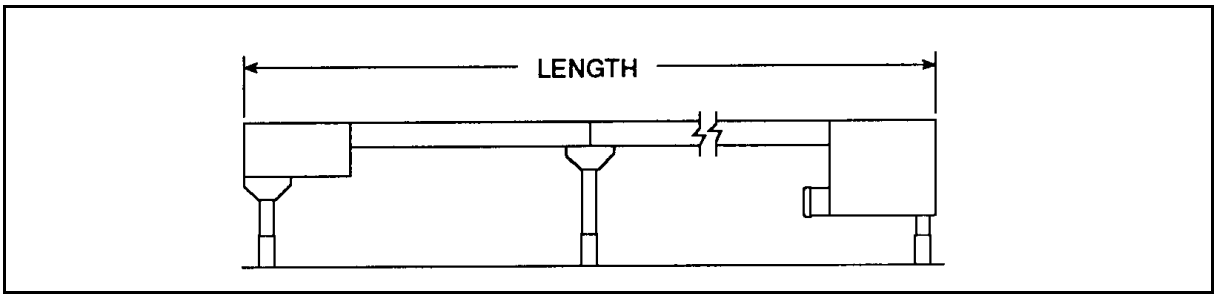


Figure D - 2 – Straight T/C Conveyor Style 1 (shown)

Table D.4 – Model PRS - Pull (lbs./ft.)

Live Load (lbs./ft.)	Conveyor Length - "W"				
	16"	22"	28"	34"	40"
0	1.1	1.3	1.5	1.7	1.9
5	1.7	1.8	2.0	2.1	2.2
10	2.1	2.3	2.4	2.6	2.8
15	2.5	2.8	2.9	3.1	3.3
20	3.1	3.2	3.4	3.5	3.7
25	3.5	3.7	3.9	4.1	4.2
30	4.0	4.2	4.3	4.5	4.7
40	5.0	5.2	5.3	5.5	5.6
50	5.9	6.1	6.3	6.5	6.6
60	6.9	7.0	7.3	7.4	7.6
80	8.8	9.0	9.2	9.4	9.6
100	10.8	11.0	11.2	11.3	11.5

Curve/Junction Style Identification

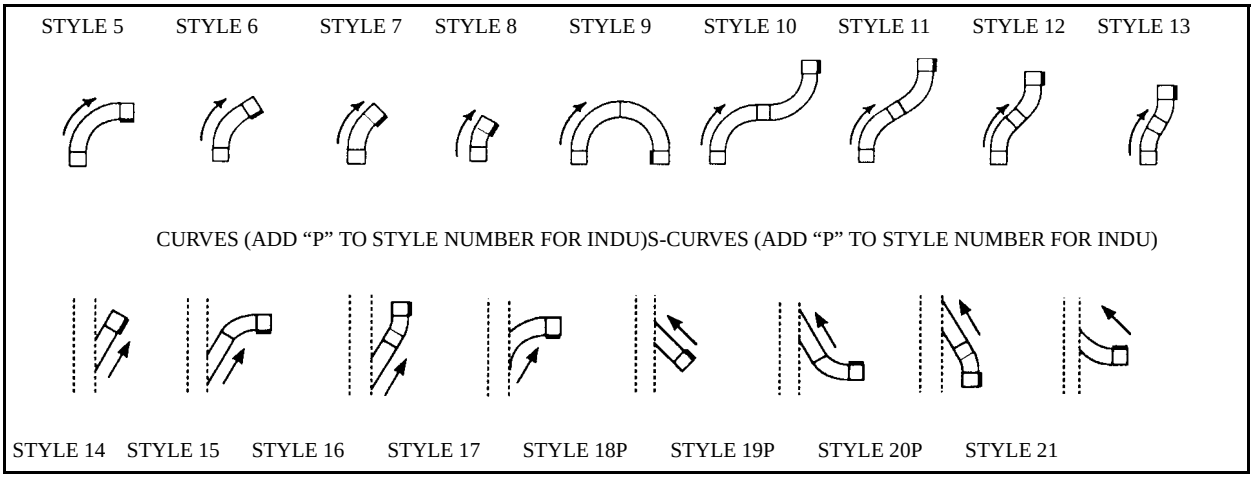


Figure D - 3 – Curve Junction Style Identification

Step 3b - Effective Pull for all Curves/Junctions - 15" "W"

Refer to Table D.8 or Table D.9 for the drive unit to determine the effective pull based on the conveyor's model, style, and live load requirement.

Do not exceed 250 lbs. EP (125 lbs. for PTO/Clutch Unit).

Do not exceed 125 lbs. EP for Style 16P & 20P junctions.

Example 3b: A Style 10P, 90° S-curve (Model TTF) has a 30 lbs./ft. Live load requirement. Per Table D.8 the effective pull is 173 lbs.

Table D.5 – DISDU (Discharge Drive Unit) 16" "W" - Effective Pull (lbs.)

Model	Live Load	Curves					S-Curves				Junctions - 30°				Junctions - 45°			
		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
TTF	0	43	31	25	19	81	83	58	45	33	10	33	24	24	10	28	29	
	5	48	35	28	22	90	92	64	50	37	13	38	28	26	13	32	34	
	10	53	39	32	25	99	101	71	56	42	15	43	32	29	15	36	39	
	15	58	43	35	28	107	111	78	62	46	18	47	36	32	18	40	43	
	20	63	47	38	30	116	120	85	67	51	20	52	40	34	20	44	48	
	25	68	50	42	33	124	129	91	73	55	23	57	44	37	23	49	53	
	30	73	54	45	36	133	138	98	78	60	25	62	48	40	25	53	58	
	40	83	62	52	42	150	157	112	90	69	30	71	57	45	30	61	67	
	50	93	70	59	47	168	175	126	101	78	36	81	65	50	36	70	77	
	60	103	78	66	53	185	194	139	113	87	41	91	74	56	41	78	86	
	80	124	94	79	65	220	231	167	136	105	51	110	91	66	51	96	105	
	100	145‘	110	93	77	258	269	195	159	124	62	130	108	77	62	113	125	
26IR	0 5 10	See Model TTF (above)																
	15 20 25																	
	30 40 50																	
	60 80 100																	

Table D.6INDU (Infeed Drive Unit) 16” “W” - Effective Pull (lbs.)

Model	Live Load	Curves					S-Curves				Junctions - 30°				Junctions - 45°			
		5P	6P	7P	8P	9P	10P	11P	12P	13P	14P	15P	16P		18P	19P	20P	21
TTF	0	51	36	28	21	106	108	71	53	38	10	38	25		10	31	33	27
	5	56	40	32	24	116	119	78	59	42	13	43	30		13	36	38	30
	10	62	44	35	27	126	129	86	65	47	15	48	34		15	40	43	33
	15	67	48	39	30	136	140	93	72	52	18	53	38		18	44	47	36
	20	73	52	42	33	147	151	101	78	57	20	58	43		20	49	52	38
	25	78	56	46	36	157	162	108	84	61	23	63	47		23	53	57	41
	30	84	61	49	39	167	173	116	90	66	25	68	51		25	57	62	44
	40	95	69	56	44	188	195	131	102	76	30	79	60		30	68	72	50
	50	106	77	64	50	209	217	147	115	85	36	89	68		36	75	82	55
	60	117	86	71	56	229	239	162	127	95	41	99	77		41	84	92	61
	80	139	103	89	68	271	284	193	152	114	51	120	95		51	102	112	72
	100	162	120	100	80			225	178	134	62	141	112		62	120		84
26IR	0 5 10	See Model TTF (above)																
	15 20 25																	
	30 40 50																	
	60 80 100																	

Step 3c - Effective Pull for all Curves/Junctions - 22" "W"

Refer to Table D.7 or Table D.8 for the drive unit to determine the effective pull based on the conveyor's model, style, and live load requirement.

Do not exceed 250 lbs. EP (125 lbs. for PTO/Clutch Unit).

Do not exceed 125 lbs. EP for Style 16P & 20P Junctions.

Example 3c: (Refer to Example 2b) A Style 5, 90° curve (Model TTF) has a 9.7 lbs./ft. (say 10) live load requirement.

Per Table D.10, the effective pull is 44 lbs.

Table D.7 – DISDU (Discharge Drive Unit) 22" "W" - Effective Pull (lbs.)

Model	Live Load	Curves					S-Curves				Junctions - 30°				Junctions - 45°			
		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
TTF	0	35	26	22	17	66	68	47	38	28	11	29	22	19	11	25	27	
	5	40	30	25	20	73	75	53	43	32	14	33	26	22	14	29	31	
	10	44	33	28	22	80	83	59	48	36	16	37	30	24	16	33	35	
	15	48	37	31	25	87	91	65	52	40	19	42	34	26	19	36	40	
	20	53	40	34	27	943	98	71	57	44	21	46	38	28	21	40	44	
	25	57	44	37	30	102	106	77	62	48	24	50	41	31	24	44	48	
	30	61	47	40	33	109	114	83	67	52	26	55	45	33	26	48	53	
	40	70	54	46	38	123	130	94	77	60	31	63	53	38	31	56	62	
	50	79	61	52	43	138	1451	106	87	69	36	72	61	42	36	64	70	
	60	88	68	58	49	153	161	118	97	77	42	81	69	47	42	72	79	
	80	106	82	71	59	182	193	142	118	93	52	99	85	56	52	87	97	
	100	124	97	83	70	212	225	167	138	110	62	117	102	66	62	104	116	
26IR	0	44	32	26	20	84	85	59	46	34	11	35	25	24	11	29	31	
	5	49	36	29	23	92	95	66	52	38	14	39	29	27	14	33	35	
	10	54	40	32	26	101	104	73	57	43	16	44	33	30	16	37	40	
	15	59	44	36	28	109	113	80	63	47	19	49	37	32	19	42	45	
	20	64	48	39	31	118	122	86	69	52	21	54	41	35	21	46	49	
	25	69	52	43	34	127	131	93	74	56	24	58	46	37	24	50	54	
	30	74	55	46	37	135	140	100	80	61	26	63	50	40	26	54	59	
	40	84	63	53	43	153	159	114	91	70	31	73	58	45	31	63	68	
	50	94	71	60	48	170	177	127	103	79	36	82	66	51	36	71	78	
	60	105	79	67	54	187	196	141	114	88	42	92	75	56	42	80	88	
	80	125	95	80	66	223	233	169	137	106	52	112	92	67	52	97	107	
	100	146	112	94	77	258	271	197	160	125	62	131	109	78	62	114	126	

Table D.8 – INDU (Infeed Drive Unit) 22" "W" - Effective Pull (lbs.)

Model	Live Load	Curves					S-Curves				Junctions - 30°				Junctions - 45°			
		5P	6P	7P	8P	9P	10P	11P	12P	13P	14P	15P	16P		18P	19P	20P	21
TTF	0	43	31	25	19	87	89	59	46	33	11	33	24		11	28	30	23
	5	48	34	28	22	95	98	66	51	37	14	38	28		14	32	34	25
	10	52	38	31	24	104	107	72	56	41	16	42	32		16	36	39	28
	15	57	42	34	27	112	116	79	62	46	19	47	36		19	40	43	30
	20	62	45	37	30	121	125	85	67	50	21	42	40		21	44	48	32
	25	67	49	41	32	129	135	92	72	54	24	56	44		24	48	53	35
	30	71	53	44	35	138	144	98	78	58	26	61	48		26	52	57	37
	40	81	60	50	41	155	162	112	89	67	31	70	56		31	60	66	42
	50	91	68	57	46	172	181	125	99	75	36	79	65		36	69	76	47
	60	100	75	63	51	190	200	138	110	84	42	88	73		42	77	85	52
	80	120	90	76	62	225	238	165	132	102	52	107	89		52	93	104	62
	100	139	106	89	74	261	276	193	155	119	62	126	106		62	110	123	72
26IR	0	52	37	29	22	108	110	72	55	39	11	39	27		11	32	34	28
	5	58	41	33	25	119	121	80	61	44	14	44	31		14	37	39	31
	10	63	45	36	28	129	132	88	67	48	16	49	35		16	41	44	34
	15	69	49	40	31	139	143	95	73	53	19	55	40		19	46	49	36
	20	74	53	43	34	149	154	103	79	58	21	60	44		21	50	54	39
	25	80	58	47	37	159	165	110	85	63	24	65	48		24	54	59	42
	30	85	62	50	39	170	176	118	92	67	26	70	53		26	59	64	45
	40	96	70	57	45	190	198	133	104	77	31	80	61		31	68	74	50
	50	107	79	65	51	211	220	149	116	87	36	90	70		36	76	84	56
	60	119	87	72	57	232	242	164	129	96	42	100	79		42	85	94	62
	80	141	104	86	69	274	286	195	154	116	52	121	96		52	103	114	73
	100	163	121	101	81			227	179	135	62	142	114		62	122		84

Step 3d - Effective Pull for all Curves/Junctions - 28" "W"

Refer to Table D.9 or Table D.10 for the drive unit to determine the effective pull based on the conveyor's model, style, and live load requirement.

Do not exceed 250 lbs. EP (125 lbs. for PTO/Clutch Unit).

Do not exceed 125 lbs. EP for Style 16P & 20P Junctions.

Example 3d: A style 20p, parallel-type, 45° merging junction (model 26ir) has a 40 lbs./ft. live load requirement.

Per Table D.10, the effective pull is 75lbs.

Table D.9 – DISDU (Discharge Drive Unit) 28" "W" - Effective Pull (lbs.)

Model	Live Load	Curves					S-Curves				Junctions - 30°				Junctions - 45°			
		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
TTF	0	55	39	32	24	105	107	74	58	42	12	42	29	30	12	35	37	
	5	60	43	35	27	114	116	80	63	46	15	46	33	33	15	39	42	
	10	64	47	38	30	122	125	87	68	51	17	51	37	35	17	43	46	
	15	69	50	41	32	130	134	93	74	55	20	56	42	38	20	47	51	
	20	75	54	45	35	138	142	100	79	59	22	60	46	41	22	51	55	
	25	79	58	49	38	146	151	106	85	64	25	65	50	43	25	56	60	
	30	84	62	51	41	155	160	113	90	68	27	70	54	46	27	60	65	
	40	93	70	58	46	171	178	126	101	77	32	79	62	51	32	68	74	
	50	103	77	65	52	188	195	139	112	85	37	88	70	56	37	76	83	
	60	113	85	71	57	204	213	152	123	94	42	98	79	61	42	85	93	
	80	133	101	85	69	238	249	179	145	112	53	117	95	72	53	102	112	
	100	153	116	98	80	272		206	168	130	63	136	112	82	63	119	131	
26IR	0	46	33	27	21	87	89	62	48	36	12	36	26	25	12	30	32	
	5	51	37	30	24	95	98	68	54	40	15	41	30	28	15	35	37	
	10	56	41	34	27	104	107	75	59	44	17	45	35	30	17	39	42	
	15	61	45	37	29	112	116	82	65	49	20	50	39	33	20	43	46	
	20	66	49	40	32	121	125	89	70	53	22	55	43	36	22	47	51	
	25	71	53	44	35	130	134	95	76	58	25	60	47	38	25	51	56	
	30	76	57	47	38	138	144	102	82	62	27	65	51	41	27	56	60	
	40	86	65	54	44	156	162	116	93	71	32	74	59	46	32	64	70	
	50	96	73	61	49	173	181	130	104	80	37	84	68	52	37	73	79	
	60	106	81	68	55	190	199	143	116	90	42	93	76	57	42	81	89	
	80	127	97	81	67	226	237	171	139	108	53	113	93	68	53	98	108	
	100	148	113	95	78	261	274	199	162	126	63	133	111	79	63	116	128	

Table D.10 – INDU (Infeed Drive Unit) 28” “W” - Effective Pull (lbs.)

Model	Live Load	Curves					S-Curves				Junctions - 30°				Junctions - 45°			
		5P	6P	7P	8P	9P	10P	11P	12P	13P	14P	15P	16P		18P	19P	20P	21
TTF	0	64	44	35	26	134	136	88	67	47	12	47	32		12	39	41	34
	5	69	48	39	29	143	146	95	73	52	15	52	36		15	43	45	37
	10	74	52	42	32	153	156	103	79	56	17	57	40		17	47	50	40
	15	80	56	45	35	163	167	110	85	61	20	62	44		20	52	55	42
	20	85	60	49	38	172	177	117	91	66	22	67	48		22	56	60	45
	25	90	64	52	40	182	188	125	97	70	25	71	53		25	60	65	48
	30	95	68	56	43	192	198	132	102	75	27	76	57		27	64	69	50
	40	106	77	63	49	212	219	147	114	84	32	86	65		32	73	79	56
	50	117	85	70	55	231	240	161	126	93	37	96	74		37	82	89	61
	60	128	93	77	61	251	261	176	138	103	42	106	82		42	91	99	67
	80	149	109	91	72			206	163	122	53	127	100		53	108	119	78
	100	171	126	105	84			237	187	141	63	147	117		63	126		89
26IR	0	54	38	30	23	112	114	75	57	41	12	41	28		12	34	36	29
	5	60	42	34	26	122	125	83	63	45	15	46	33		15	38	41	32
	10	65	47	37	29	132	136	90	69	50	17	51	37		17	43	46	35
	15	71	51	41	32	143	147	98	75	55	20	56	41		20	47	51	37
	20	76	55	44	35	153	158	105	81	60	22	61	45		22	51	55	40
	25	82	59	48	38	163	169	113	87	64	25	66	50		25	56	60	43
	30	87	63	51	41	173	180	121	94	69	27	71	54		27	60	65	46
	40	98	72	59	46	194	201	136	106	79	32	81	63		32	69	75	51
	50	109	80	66	52	215	223	151	118	88	37	92	71		37	78	85	57
	60	120	88	73	58	235	246	167	131	98	42	102	80		42	87	95	63
	80	143	106	87	70	277	290	198	156	117	53	123	98		53	105	115	74
	100	165	123	102	82			229	181	137	63	143	115		63	123		85

Step 3e - Effective Pull for all Curves/Junctions - 34" "W"

Refer to Table D.11 or Table D.12 for the drive unit to determine the effective pull based on the conveyor's model, style, and live load requirement.

Do not exceed 250 lbs. EP (125 lbs. for PTO/Clutch Unit).

Do not exceed 125 lbs. EP for Style 16P & 20P Junctions.

Example 3e: (Refer to Example 2c) A Style 9, 180° curve (Model 26IR) has a 20 lbs./ft. live load requirement.

Per Table D.12, the effective pull is 133 lbs.

Table D.11 – DISDU (Discharge Drive Unit) 34" "W" - Effective Pull (lbs.)

Model	Live Load	Curves					S-Curves				Junctions - 30°				Junctions - 45°			
		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
TTF	0	79	55	44	32	155	157	106	82	58	21	66	46	42	21	56	58	
	5	84	60	47	35	164	167	114	88	63	25	72	52	45	25	62	64	
	10	90	64	51	38	174	177	121	94	68	29	79	58	48	29	68	71	
	15	95	68	55	41	183	187	129	100	72	33	86	64	51	33	74	77	
	20	101	72	58	44	193	197	136	106	77	37	93	70	54	37	80	84	
	25	106	77	62	47	203	208	144	113	82	41	100	76	57	41	86	91	
	30	112	81	66	50	213	218	151	119	87	46	107	82	80	46	93	98	
	40	123	90	73	56	232	239	166	131	97	54	121	94	66	54	105	111	
	50	134	98	80	62	252	260	182	144	106	63	135	106	72	63	118	125	
	60	146	107	88	69			197	156	116	71	149	199	78	71	130	138	
	80	168	125	103	81			228	182	136	88	177	143	90	88	156	166	
	100	191	142	118	93			259	207	156	106	206	169	102	106	182	194	
26IR	0	52	38	31	23	99	101	70	55	40	21	48	37	27	21	42	44	
	5	57	42	34	26	107	110	77	60	44	25	54	43	30	25	48	51	
	10	62	45	37	29	116	119	83	66	49	29	61	49	33	29	54	57	
	15	67	49	41	32	124	128	90	72	53	33	67	54	35	33	60	63	
	20	72	53	44	35	133	137	97	77	58	37	74	60	38	37	66	70	
	25	77	57	47	38	142	146	104	83	62	41	80	66	41	41	72	76	
	30	82	61	51	40	150	156	110	88	67	46	87	72	43	46	78	83	
	40	92	69	58	46	168	174	124	100	76	54	100	84	49	54	90	96	
	50	102	77	64	52	185	193	138	111	85	63	113	96	54	63	102	109	
	60	112	85	71	58	202	211	152	123	94	71	127	108	59	71	114	122	
	80	133	101	85	69	238	249	179	146	112	88	153	132	70	88	138	148	
	100	154	117	99	81	273		207	169	131	106	180	156	81	106	163	175	

Table D.12 – INDU (Infeed Drive Unit) 34” “W” - Effective Pull (lbs.)

Model	Live Load	Curves					S-Curves				Junctions - 30°				Junctions - 45°			
		5P	6P	7P	8P	9P	10P	11P	12P	13P	14P	15P	16P		18P	19P	20P	21
TTF	0	90	61	48	35	191	194	125	94	64	21	72	48		21	60	62	47
	5	96	66	52	38	203	206	133	100	69	25	79	55		25	66	69	50
	10	102	70	55	41	214	218	141	107	74	29	87	61		29	73	76	53
	15	108	75	59	44	226	230	150	114	79	33	94	67		33	79	83	56
	20	114	80	63	47	237	242	158	120	85	37	101	73		37	86	90	59
	25	120	84	67	50	249	254	167	127	90	41	108	79		41	92	97	62
	30	126	89	71	53			175	134	95	46	116	86		46	99	104	65
	40	138	98	78	59			192	147	105	54	130	98		54	112	118	72
	50	150	107	86	66			209	161	116	63	145	111		63	125		78
	60	163	116	94	72			226	175	126	71	160	123		71	138		84
	80	188	135	109	85			261	202	147	88	190			88	165		97
	100	213	154	125	98				230	168	106	220			106	192		110
26IR	0	61	43	34	26	126	129	84	64	45	21	53	39		21	46	48	31
	5	66	47	38	29	136	139	92	70	50	25	60	45		25	52	55	34
	10	72	51	41	31	147	150	99	76	55	29	67	51		29	58	62	37
	15	77	55	45	34	157	161	107	82	59	33	74	57		33	65	68	40
	20	83	59	48	37	167	172	115	89	64	37	81	63		37	71	75	43
	25	88	64	52	40	177	183	122	95	69	41	88	69		41	77	82	45
	30	94	68	55	43	188	194	130	101	74	46	95	75		46	83	88	48
	40	105	76	62	49	208	216	145	113	83	54	109	88		54	96	102	54
	50	116	85	69	55	229	238	161	126	93	63	123	100		63	108	116	59
	60	127	93	77	61	250	260	176	138	103	71	137	112		71	121		65
	80	149	110	91	73			207	163	122	88	165			88	146		76 88
	100	172	127	106	85			239	188	142	106	194			106	172		

Step 3f - Effective Pull for all Curves/Junctions - 40" "W"

Refer to Table D.13 or Table D.14 for the drive unit to determine the effective pull based on the conveyor's model, style, and live load requirement.

Do not exceed 250 lbs. EP (125 lbs. for PTO/Clutch Unit).

Do not exceed 125 lbs. EP for Style 16P & 20P junctions.

Example 3f: A style 15, combination-type, 30° diverting junction (Model TTF) has a 25 lbs./ft. live load requirement.

Per Table D.14, the effective pull is 105 lbs.

Table D.13 – DISDU (Discharge Drive Unit) 40" "W" - Effective Pull (lbs.)

Model	Live Load	Curves					S-Curves				Junctions - 30°				Junctions - 45°			
		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
TTF	0	85	60	48	35	168	170	116	89	63	22	71	50	46	22	60	62	
	5	91	64	51	38	178	181	123	95	68	26	78	56	49	26	66	69	
	10	96	69	55	41	187	191	131	101	73	30	85	62	52	30	73	76	
	15	102	73	58	44	197	201	138	107	77	35	92	68	55	35	79	82	
	20	107	77	62	47	207	211	146	114	82	39	99	74	58	39	85	89	
	25	113	81	66	50	217	222	153	120	87	43	105	80	61	43	91	96	
	30	119	86	69	53	226	232	161	126	92	47	112	86	64	47	97	102	
	40	130	94	77	59	246	253	176	138	102	56	126	98	69	56	110	116	
	50	141	103	84	65	266		191	151	111	64	140	110	75	64	122	130	
	60	152	112	91	71			206	163	121	73	154	122	81	73	135	143	
	80	175	129	106	84			237	189	141	90	182	147	94	90	161	171	
	100	198	147	122	96			268	214	161	107	211	172	106	107	186	199	
26IR	0	53	39	32	24	101	104	72	57	41	22	50	39	28	22	44	46	
	5	58	43	35	27	110	113	79	62	46	26	56	45	31	26	50	53	
	10	63	47	38	30	118	122	85	68	50	30	63	51	33	30	56	59	
	15	68	51	42	33	127	131	92	73	55	35	69	56	36	35	62	66	
	20	73	55	45	36	136	140	99	79	59	39	76	62	39	39	68	72	
	25	79	58	48	38	144	149	106	85	64	43	83	68	41	43	74	78	
	30	84	62	52	41	153	158	113	90	68	47	89	74	44	47	80	85	
	40	94	70	59	47	170	177	126	102	77	56	102	86	49	56	92	98	
	50	104	78	65	53	188	195	140	113	86	64	115	98	55	64	104	111	
	60	114	86	72	58	205	214	154	124	95	73	129	110	60	73	116	124	
	80	135	102	86	70	240	251	181	147	114	90	155	134	71	90	140	151	
	100	155	119	100	82	276		209	171	132	107	183	158	82	107	165	177	

Table D.14 – INDU (Infeed Drive Unit) 40” “W” - Effective Pull (lbs.)

Model	Live Load	Curves					S-Curves				Junctions - 30°				Junctions - 45°			
		5P	6P	7P	8P	9P	10P	11P	12P	13P	14P	15P	16P		18P	19P	20P	21
TTF	0	97	67	52	37	208	210	135	101	69	22	78	52		22	65	67	51
	5	103	71	56	41	219	222	144	108	75	26	85	58		26	71	74	54
	10	109	76	59	44	230	234	152	115	80	30	92	65		30	78	81	57
	15	115	80	63	47	242	246	160	121	85	35	100	71		35	84	88	60
	20	121	85	67	50	253	259	169	128	90	39	107	77		39	91	95	63
	25	127	89	71	53			177	135	95	43	114	83		43	97	102	66
	30	133	94	75	56			186	141	100	47	122	89		47	104	109	69
	40	146	103	82	62			203	155	110	56	136	102		56	117	123	75
	50	158	112	90	68			220	169	121	64	151	115		64	130		82
	60	170	121	98	75			237	182	131	73	166			73	143		88
	80	195	140	113	87			272	210	152	90	196			90	170		101
	100	220	159	129	100				238	174	107	226			107	197		113
26IR	0	63	44	35	27	129	132	87	66	47	22	56	41		22	48	50	32
	5	68	48	39	29	140	143	94	72	52	26	63	47		26	54	57	35
	10	74	52	42	32	150	154	102	78	56	30	69	53		30	61	64	38
	15	79	57	46	35	160	164	109	84	61	35	76	59		35	67	70	41
	20	85	61	49	38	170	175	117	91	66	39	83	65		39	73	77	43
	25	90	65	53	41	181	186	125	97	70	43	90	71		43	79	84	46
	30	96	69	56	44	191	197	132	103	75	47	97	77		47	85	91	49
	40	107	77	63	50	211	219	148	115	85	56	111	90		56	98	104	54
	50	118	86	71	56	232	241	163	128	94	64	125	102		64	110	118	60
	60	129	94	78	62	253	263	178	140	104	73	139	114		73	123		66
	80	151	111	92	74			210	165	123	90	167			90	149		77
	100	174	129	107	86			241	190	143	107	196			107	174		89

Step 4a - (If Required) Calculate the Effective Pull for Extension Sections

If a T/C curve or junction is to be equipped with a straight extension section, the Effective Pull requirement for each extension must be calculated and added to that of the base T/C unit (Step 3a through Step 3f). If a unit does not have an extension, proceed to Step 5.

Each extension's effective pull requirement is calculated using the following formula.

$$EP^* = CF (P \times L)$$

EP* = Effective Pull (Extension Section)
P = Pull - per foot (Table D.15)
L = Length of extension (ft.)
CF = Curve Factor (Table D.16, Table D.18Table D.17, and Table D.19)

Do not combine multiple extension lengths and calculate as single extension. Each extension's EP* requirement must be calculated separately.

Do not exceed 250 lbs. EP (125 lbs. for PTO/Clutch Unit).

See Table D.15 to determine the "Pull" for one foot of extension length based on the conveyor/junction's width and live load requirement.

Table D.15 – Pull (lbs./ft.)

Live Load (lbs./ft.)	**Conveyor Width - "W"**				
	16"	**22"**	**28"**	**34"**	**40"**
0 5 10	1.0 1.5 1.9	1.2 1.6 2.1	1.4 1.8 2.2	1.5 1.9 2.4	1.7 2.1 2.5
15 20 25	2.3 2.8 3.2	2.5 2.9 3.4	2.6 3.1 3.5	2.8 3.2 3.7	3.0 3.4 3.8
30 40 50	3.6 4.5 5.4	3.8 4.7 5.5	3.9 4.8 5.7	4.1 5.0 5.9	4.3 5.1 6.0
60 80 100	6.3 8.0 9.8	6.4 8.2 10.0	6.6 8.4 10.2	6.7 8.5 10.3	6.9 8.7 10.5

Example 4a: (Refer to Example 3b) the Style 10P, 90° S-Curve (16" "W", 30 lbs./ft. live load, 173 lbs. EP) has three extension sections: Ext. #1 (at infeed end) is 4' long; Ext. #2 (at discharge end) is 1" long; Ext. #3 (in center) is 3' long.

Per Table D.17, the "Pull" for 16" "W" and 30 lbs. Live load is 3.6 lbs./ft.

Per Table D.15, the curve factor(s) for a Style 10P, 90° S-curve are:

Ext. 1 = 1.413; Ext. 2 = 1.189; Ext. 3 = 1.138

EP* = CF (P x L)

Ext. 1 = 1.413 (3.6 lbs./ft. x 4') = 20.35 lbs.
Ext. 2 = 1.189 (3.6 lbs./ft. x 1') = 4.28 lbs.
Ext. 3 = 1.138 (3.6 lbs./ft. x 3') = 12.29 lbs.
Effective Pull for Extensions = 36.92 lbs.
Total Effective Pull = 173 lbs. + 37 lbs. = 210 lbs.

Table D.16 – Curve Factor

Drive Type	Style	Extension		
		1	2	3
For Curves				
DISDU	5 - 90° Curve 6 - 60° Curve 7 - 45° Curve 8 - 30° Curve 9 - 180° Curve	1.090 1.059 1.044 1.029 1.189	1.000 1.000 1.000 1.000 1.000	NA NA NA NA 1.090
INDU	5P = 90° Curve 6P - 60° Curve 7P - 45° Curve 8P - 30° Curve 9P - 180° Curve	1.189 1.122 1.090 1.059 1.413	1.090 1.059 1.044 1.029 1.189	NA NA NA NA 1.138
For S-Curves				
DISDU	10 - 90° S-Curve 11 - 60° S-Curve 12 - 45° S-Curve 13 - 30° S-Curve	1.189 1.122 1.090 1.059	1.000 1.000 1.000 1.000	1.090 1.059 1.044 1.029
INDU	10P - 90° S-Curve 11P - 60° S-Curve 12P - 45° S-Curve 13P - 30° S-Curve	1.413 1.259 1.189 1.122	1.189 1.122 1.090 1.059	1.138 1.090 1.067 1.044

Table D.17Table D.15 – Curve Factor (continued)

Drive Type	Style	Extension		
		1	2	3
For 30°/45° Straight Junctions				
DISDU	14 - 30° Straight Junction 18 - 45° Straight Junction	1.000 1.000	NA NA	NA NA
INDU	14P - 30° Straight Junction 18P - 45° Straight Junction	1.000 1.000	NA NA	NA NA
For 90° Curve Junctions				
DISDU	17 - 90° Curve Junction	1.000	NA	NA
INDU	21 - 90° Curve Junction	1.101	NA	NA
For 30°/45° Combination Junctions				
DISDU	15 - 30° Combination Junction 19 - 45° Combination Junction	1.059 1.044	1.000 1.000	NA NA
INDU	15P - 30° Combination Junction 19P - 45° Combination Junction	1.122 1.090	1.059 1.044	NA NA

Table D.15 – Curve Factor (continued)

Drive Type	Style	Extension		
		1	2	3
For 30°/45° Parallel Junctions				
DISDU	16- 30° Parallel Junction 20- 45° Parallel Junction	1.029 1.044	1.000 1.000	NA NA
INDU	16P - 30° Parallel Junction 20P - 45° Parallel Junction	1.059 1.090	1.029 1.044	NA NA

Step 4b - Check the CP/L Factor for Extension and Length Limitations

(Required for INDU Curves/Junctions and Style 1P conveyors only)

The CP/L factor accounts for the chain's "elastic elongation". The length and effective pull are kept within the tensioner's ability to compensate for the inherent stretch that occurs at start-up and under heavy loads.

$$CP/L = EP \times CL$$

EP = Effective Pull of Style 1P Conveyor (Step 3) or Curve/Junction with extensions (Step 4A).

CL = Chain Length of Base Unit (Table D.18) Plus 2X Total Extension Length (ft.)

For Style 1P Conveyors, CL equals 2X the conveyor length plus 2'-0".

Do not exceed 10,000 CP/L factor.

From Table D.18, find the appropriate "curve factor" for the required extension(s).

Table D.18 – Chain Length of Base Curves/Junctions (ft.)

Style	Conveyor Width - "W"				
	16"*	22"	28"	34"	40"
5P 6P 7P	17.9' 15.3' 13.9'	20.5' 17.0' 15.2'	22.6' 18.4' 16.3'	25.7' 20.5' 17.9'	25.7' 20.5' 17.9'
8P 9P 10P	12.6' 25.7' 28.1'	13.5' 30.9' 33.3'	14.2' 35.1' 37.5'	15.2' 41.4' 43.8'	15.2' 41.4' 43.8'
11P 12P 13P	22.8' 20.2' 17.6'	26.3' 22.8' 19.3'	29.1' 24.9' 20.7'	33.3' 28.1' 22.8'	33.3' 28.1' 22.8'
14P/18P 15P 16P	13.7' 18.9' 18.6'	13.7' 20.7' 19.5'	13.7' 22.1' 20.2'	21.3' 31.8' 28.9'	21.3' 31.8' 28.9'
19P 20P 21	17.6' 20.0' 10.4'	18.9' 21.2' 11.8'	20.0' 22.3' 13.0'	29.2' 31.5' 14.7'	29.2' 31.5' 14.7'

*For Model 26IR Chain Lengths, use the lengths shown above for Model TTF, 16" "W".

Example 4b: (Refer to Example 4a) The Style 10P, 90° S-Curve (TTF), 16" "W", 210 lbs. EP has a total extension length of 8 ft. (16 ft. Chain Length).

Per Table D.18, the Chain Length of the base S-Curve is 28.1 ft.
Total Chain Length = 28.1' + 16' = 44.1'
CP/L = 210 x 44.1' = 9,261
OK to supply. CP/L is less than 10,000

Step 5 - (if Applicable) Factor the Effective Pull for All Freezer-type Applications

The effective pull of all conveyors operating in either a freezer (0° to +20° F); or a sub-zero freezer (-20° to 0° F) must be multiplied by a 1.25 service factor.

Example 5: (Refer to Example 3e) The Style 9, 180° Curve has a 133 lbs. Effective pull and is to operate in a Freezer.

133 lbs. (EP) x 1.25 (Factor) = 166 lbs.

Step 5a - (if applicable) Calculate the Additional Effective Pull Required for "Inclined" Travel

Step 6 - Determine the Horsepower

Based on the conveyor's effective pull and speed requirements, use Table D.19 to determine the power unit's Horsepower requirement.

Table D.19 – Power Unit Capacity - Effective Pull (lbs.)

HP	Conveyor Speed (fpm)								
	45	**60**	**75**	**90**	**120**	**150**	**180**	**210**	**240**
1/2	246	198	167	149	114	96	78	69	59
3/4	387	339	285	232	170	144	117	104	89
1	507	452	380	309	227	192	156	139	119
1-1/2	750	653	488	458	351	292	237	211	178
2			659	610	474	398	323	288	246
3					602	599	502	466	382
5								642	612

Example 6: (Refer to Example 4) The Style 10P, 90° S-Curve has a 210 lbs. effective pull and is to operate at a speed of 120 fpm.

Per Table D.19, a 1 HP Power Unit is required for a conveyor with a 210 lbs. EP and running at a speed of 120 fpm.

Note: Some of the capacities shown in Table D.19 exceed the EP capacity ratings of individual T/C conveyors (500 lbs.) and T/C Curves/Junctions (250 lbs.)

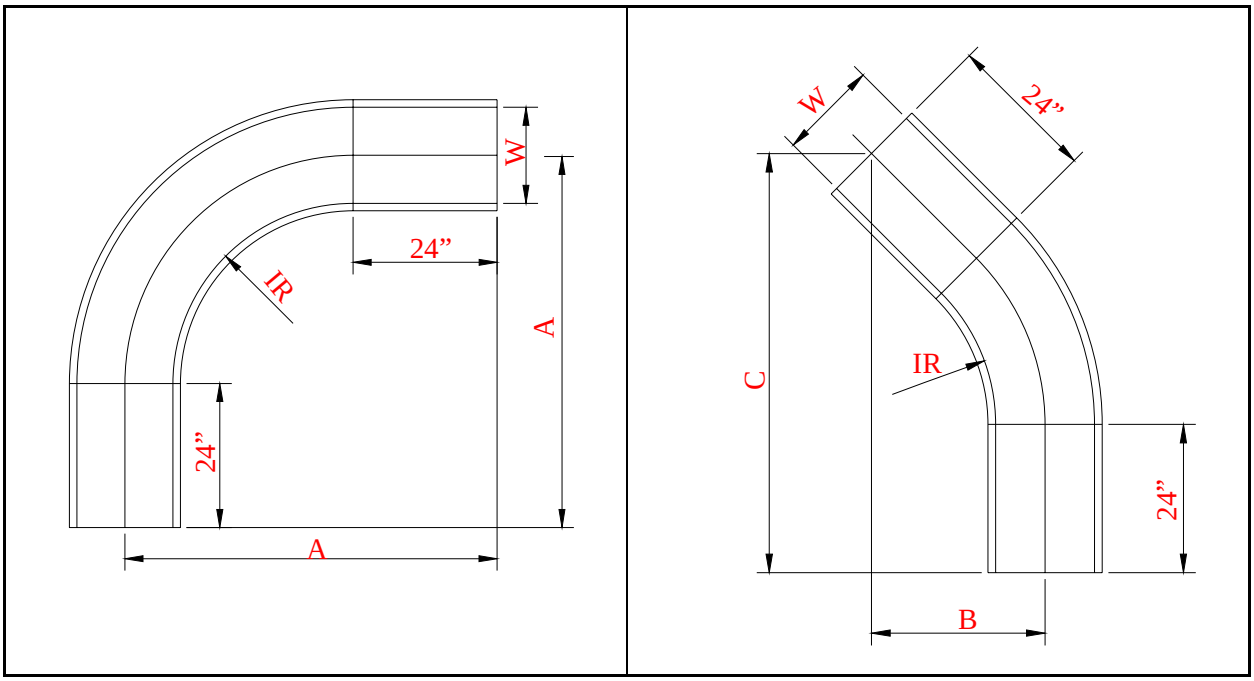
Do not exceed a T/C conveyor's EP capacity rating.

The full capacity rating of a power unit may be used when a T/C conveyor powers another conveyor via an End Drive/PTO unit and the continued EP's of the two conveyors is within the capacity of the power unit.

SECTION E: LAYOUT DIMENSIONS

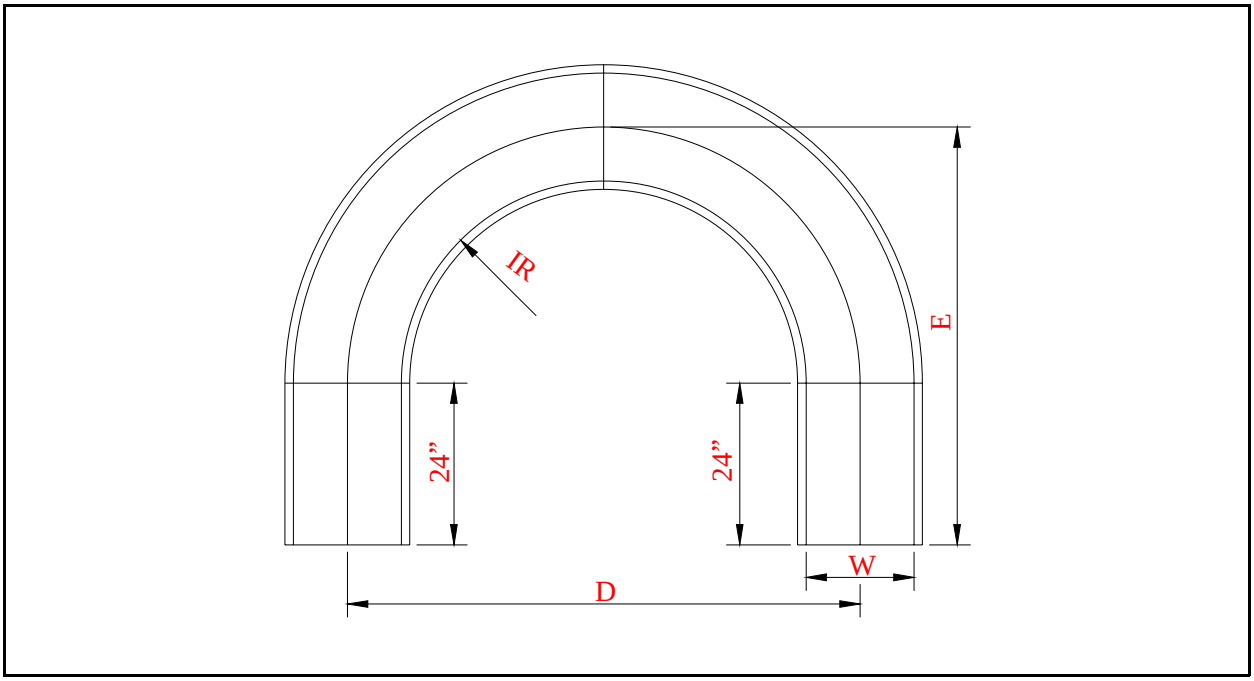
Use the following information for designing the layout of the CS T/C Chain Powered Roller Conveyor. All dimensions are in inches.

Style 5/6/7/8 - 90°/60°/45°/30° Curve



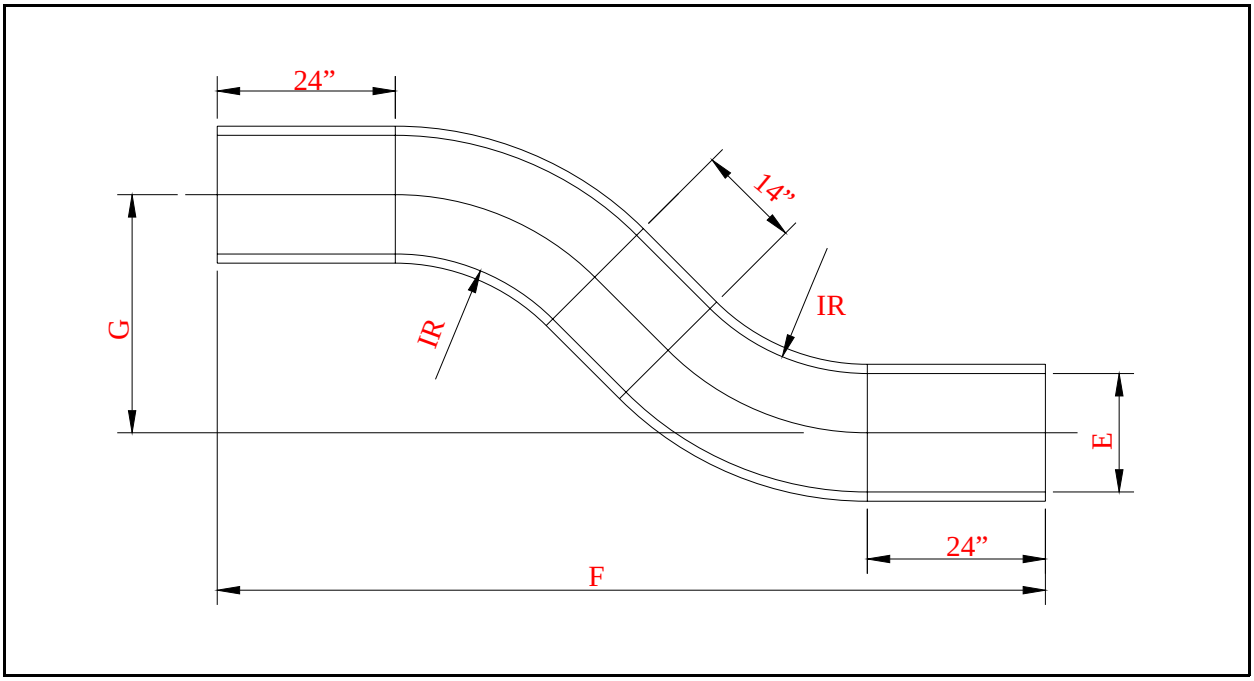
FRAME TYPE 26IR					DIM	FRAME TYPE TTF				
16	**22**	**28**	**34**	**40**	**“W”**	**16**	**22**	**28**	**34**	**40**
30	30	30	30	30	IR	30	40	48	60	60
STYLE 5 - 90° CURVE										
62	65	68	71	74	A	62	75	86	101	104
STYLE 6 - 60° CURVE										
39-13/16	41-5/16	42-13/16	44-5/16	45-13/16	B	39-13/16	46-5/16	51-13/16	59-5/16	60-13/16
68-15/16	72-1/2	74-1/8	76-11/16	79-5/16	C	68-15/16	80-3/16	89-11/16	102-11/16	105-5/16
STYLE 7 - 45° CURVE										
28-1/8	29	29-7/8	30-3/4	31-5/8	B	28-1/8	31-15/16	35-1/8	39-1/2	40-3/8
67-13/16	69-15/16	72-1/16	74-3/16	76-5/16	C	67-13/16	77-1/16	84-13/16	95-7/16	97-9/16
STYLE 8 - 30° CURVE										
17-1/16	17-1/2	17-7/8	18-5/16	18-11/16	B	17-1/16	18-13/16	20-5/16	22-5/16	22-11/16
63-13/16	65-5/16	66-13/16	68-5/16	69-13/16	C	63-13/16	70-5/16	75-13/16	83-5/16	84-13/16

Style 9 - 180° Curve



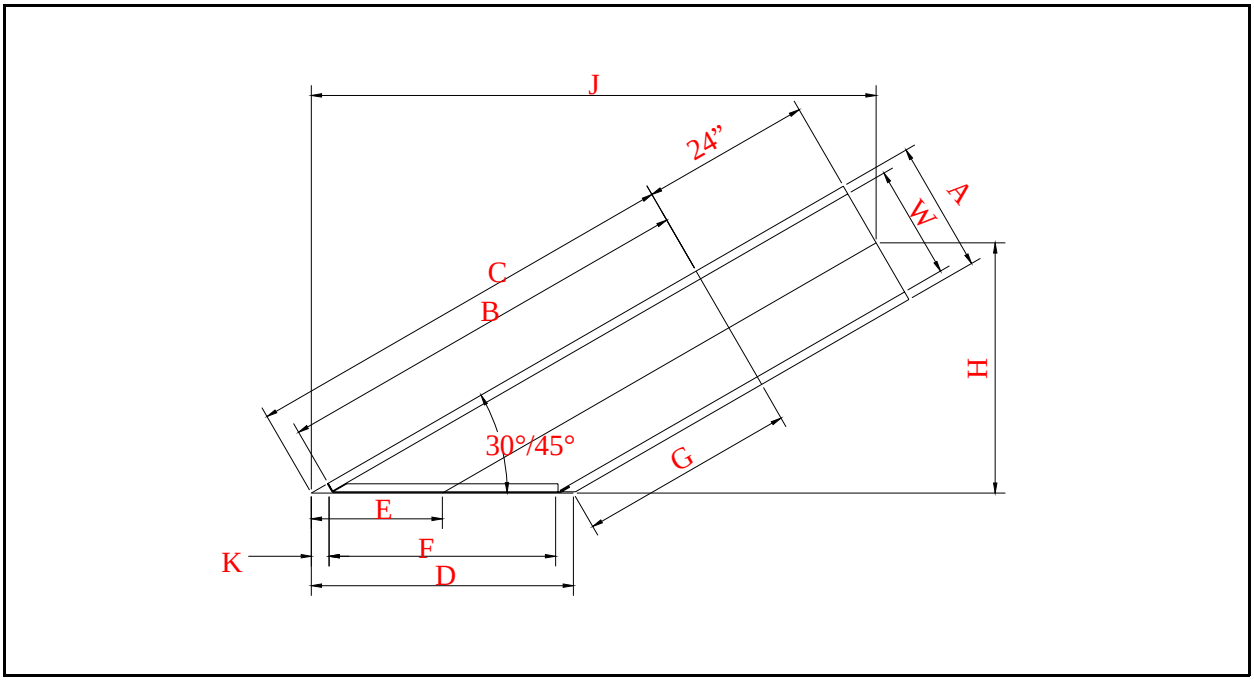
FRAME TYPE 26IR					DIM	FRAME TYPE TTF				
16	**22**	**28**	**34**	**40**	**“W”**	**16**	**22**	**28**	**34**	**40**
30	30	30	30	30	IR	30	40	48	60	60
STYLE 9 - 180° CURVE										
76	82	88	94	100	D	76	102	124	154	160
62	65	68	71	74	E	62	75	86	101	104

Style 10/11/12/13 - 90°/60°/45°/30° S-Curve



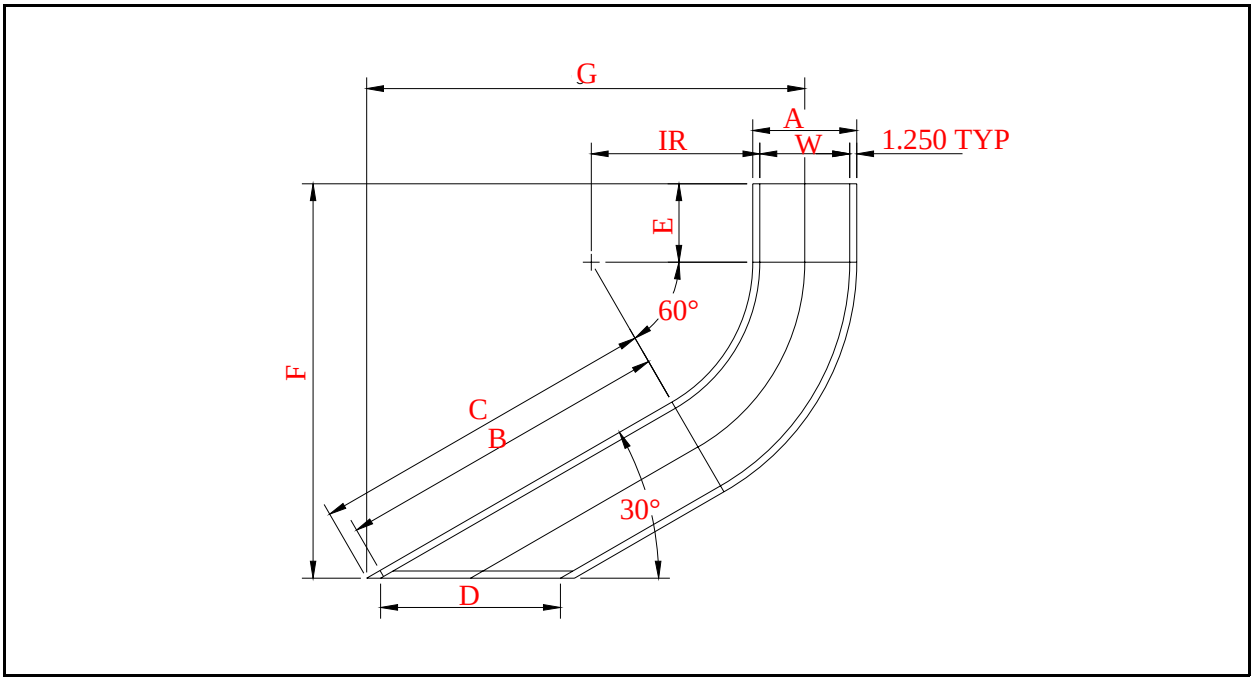
FRAME TYPE 26IR					DIM	FRAME TYPE TTF				
16	**22**	**28**	**34**	**40**	**“W”**	**16**	**22**	**28**	**34**	**40**
30	30	30	30	30	IR	30	40	48	60	60
STYLE 10 - 90° S-CURVE										
124	130	136	142	148	F	124	150	172	202	208
90	96	102	108	114	G	90	116	138	168	174
STYLE 11 - 60° S-CURVE										
120-13/16	126	131-1/4	136-7/16	141-5/8	F	120-13/16	143-5/16	162-3/8	188-3/8	193-9/16
50-1/8	53-1/8	56-1/8	59-1/8	62-1/8	G	50-1/8	63-1/8	74-1/8	89-1/8	92-1/8
STYLE 12 - 45° S-CURVE										
111-5/8	115-3/8	120-1/8	124-3/8	128-5/8	F	111-5/8	130	145-9/16	166-13/16	171-1/16
32-3/16	33-15/16	35-11/16	37-7/16	39-3/16	G	32-3/16	39-3/4	46-1/4	55	56-3/4
STYLE 13 - 30° S-CURVE										
98-1/8	101-1/8	104-1/8	107-1/8	110-1/8	F	98-1/8	111-1/8	122-1/8	137-1/8	140-1/8
17-3/16	17-15/16	18-11/16	19-9/16	20-3/8	G	17-3/16	20-5/8	23-5/8	27-5/8	28-7/16

Style 14/18 - 30°/45° Straight Junction



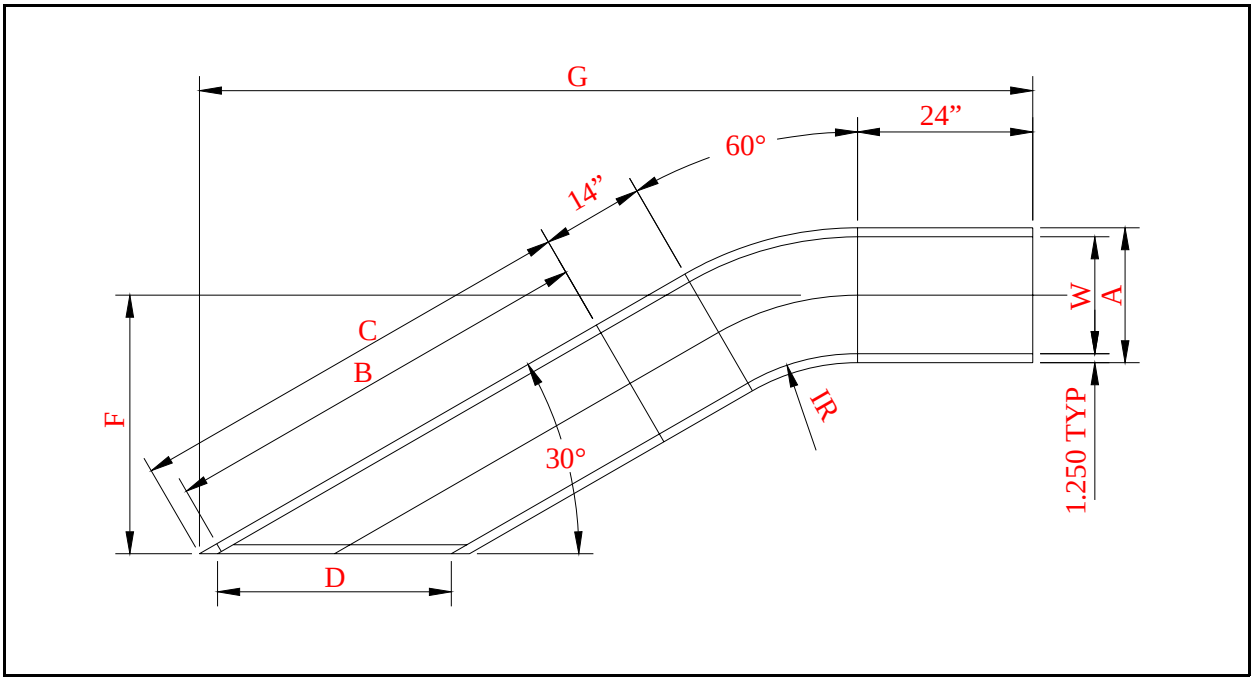
STYLE 14 - 30° STRAIGHT JUNCTION					DIM	STYLE 18 - 45° STRAIGHT JUNCITON				
16	**22**	**28**	**34**	**40**	**"W"**	**16**	**22**	**28**	**34**	**40**
18-1/2	24-1/2	30-1/2	36-1/2	42-1/2	A	18-1/2	24-1/2	30-1/2	36-1/2	42-1/2
60	60	60	90	90	B	60	60	60	90	90
62-3/4	62-3/4	62-3/4	92-3/4	92-3/4	C	62	62	62	92	92
37	49	61	73	85	D	26-3/16	34-5/8	43-1/8	51-5/8	60-1/8
18-1/2	24-1/2	30-1/2	36-1/2	42-1/2	E	13-1/16	17-5/16	21-9/16	25-7/8	30-1/16
32	44	56	68	80	F	22-5/8	31-1/8	39-9/16	48-1/16	56-9/16
30-11/16	20-5/16	9-15/16	29-9/16	19-1/8	G	43-1/2	37-1/2	31-1/2	55-1/2	49-1/2
35-3/8	32-3/4	30-3/16	42-9/16	39-15/16	H	54-1/4	52-1/8	50	69-1/8	67
79-3/4	81-3/4	82-3/4	110-3/4	111-3/4	J	67-3/8	69-7/16	71-9/16	94-15/16	97-1/16
2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	K	1-3/4	1-3/4	1-3/4	1-3/4	1-3/4

Style 15 - 30° Combination Junction (30° Spur with 60° Curve)



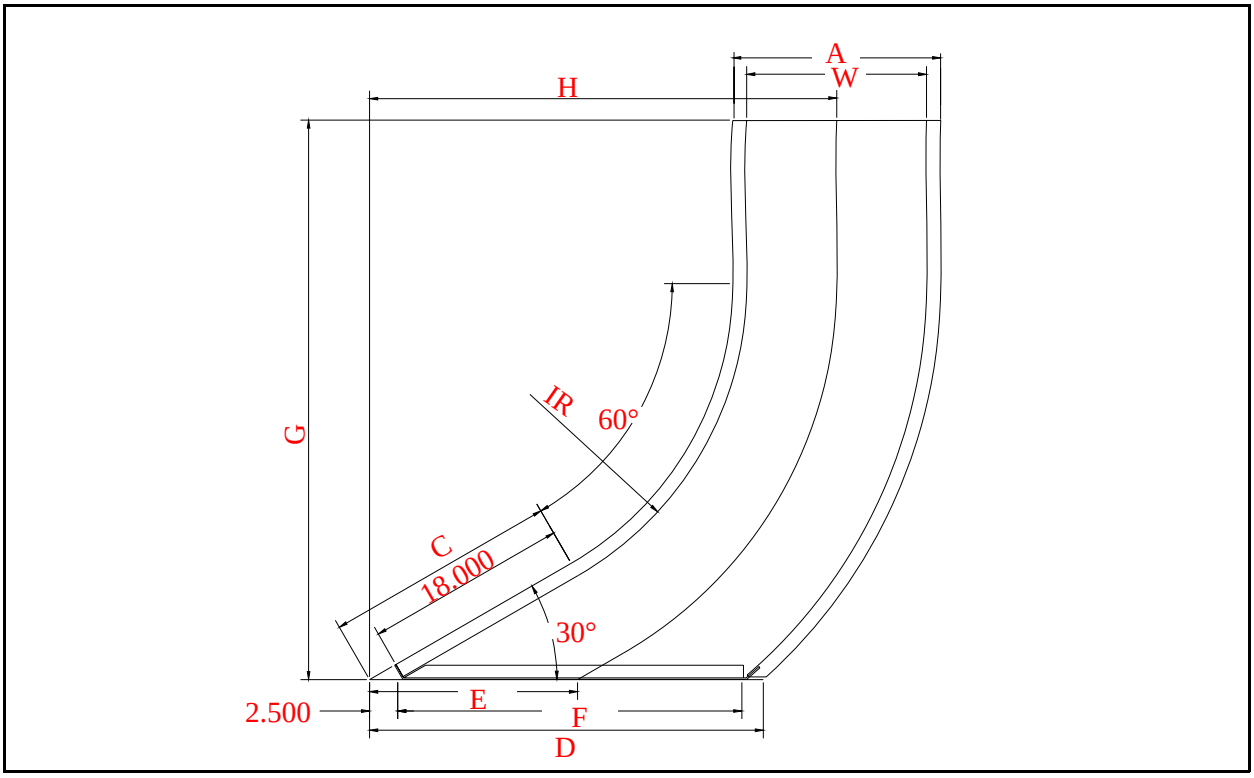
FRAME TYPE 26IR					DIM	FRAME TYPE TTF				
16	**22**	**28**	**34**	**40**	**"W"**	**16**	**22**	**28**	**34**	**40**
30	30	30	30	30	IR	30	40	48	60	60
STYLE 15 - 30° COMBINATION JUNCTION										
18-1/2	24-1/2	30-1/2	36-1/2	42-1/2	A	18-1/2	24-1/2	30-1/2	36-1/2	42-1/2
60	60	60	90	90	B	60	60	60	90	90
62-3/4	62-3/4	62-3/4	92-3/4	92-3/4	C	62-3/4	62-3/4	62-3/4	92-3/4	92-3/4
32	44	56	68	80	D	32	44	56	68	80
24	24	24	24	24	3	24	24	24	24	24
80-3/4	80-3/4	80-3/4	95-3/4	95-3/4	F	80-3/4	88-15.16	95-7/8	121-1/4	121-1/4
78	81	84	113	116	G	78	86	93	128	131

Style 16 - Parallel Junction (30° Spur with 60° Curve)



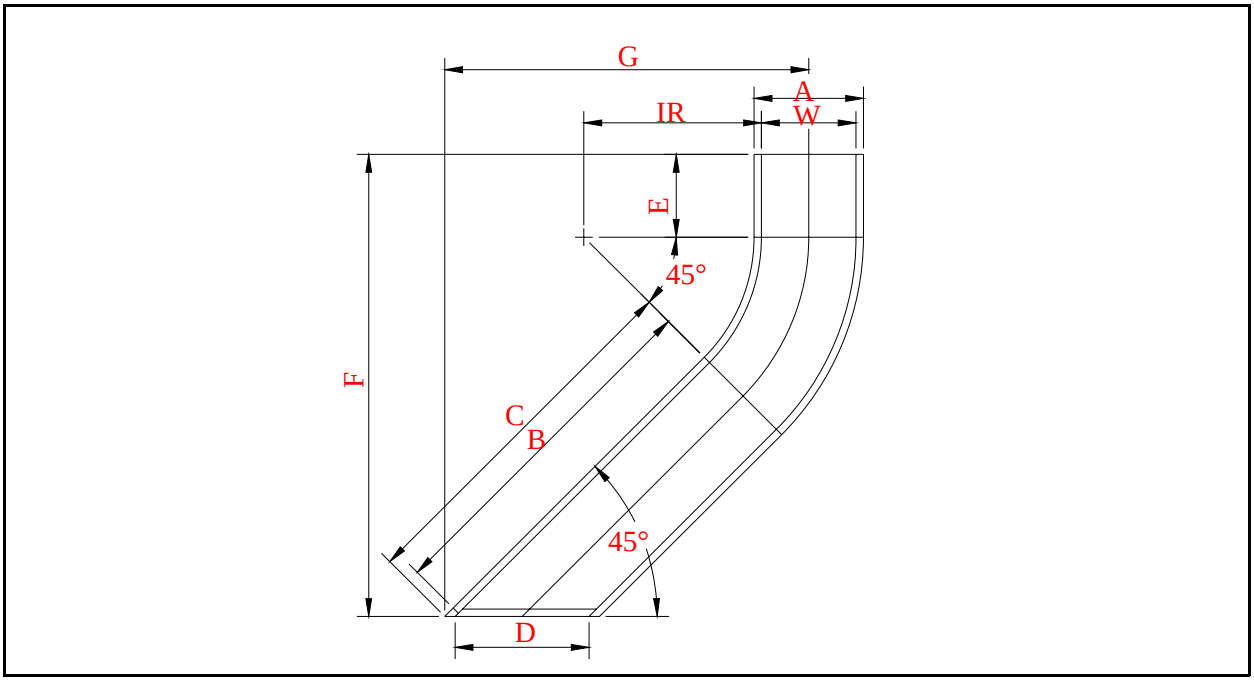
FRAME TYPE 26IR					DIM	FRAME TYPE TTF				
16	**22**	**28**	**34**	**40**	**“W”**	**16**	**22**	**28**	**34**	**40**
30	30	30	30	30	IR	30	40	48	60	60
STYLE 16 - 30° PARALLEL JUNCTION										
18-1/2	24-1/2	30-1/2	36-1/2	42-1/2	A	18-1/2	24-1/2	30-1/2	36-1/2	42-1/2
60	60	60	90	90	B	60	60	60	90	90
62-3/4	62-3/4	62-3/4	92-3/4	92-3/4	C	62-3/4	62-3/4	62-3/4	92-3/4	92-3/4
32	44	56	68	80	D	32	44	56	68	80
24	24	24	24	24	E	24	24	24	24	24
35-7/16	33-1/4	31-1/16	43-7/8	41-11/16	F	35-7/16	34-9/16	33-1/2	47-15/16	45-11/16
114-1/16	117-1/16	120-1/16	149-1/16	152-1/16	G	114-1/16	122-1/16	129-1/16	164-1/16	167-1/16

Style 17/21 - 90° Curve Junction



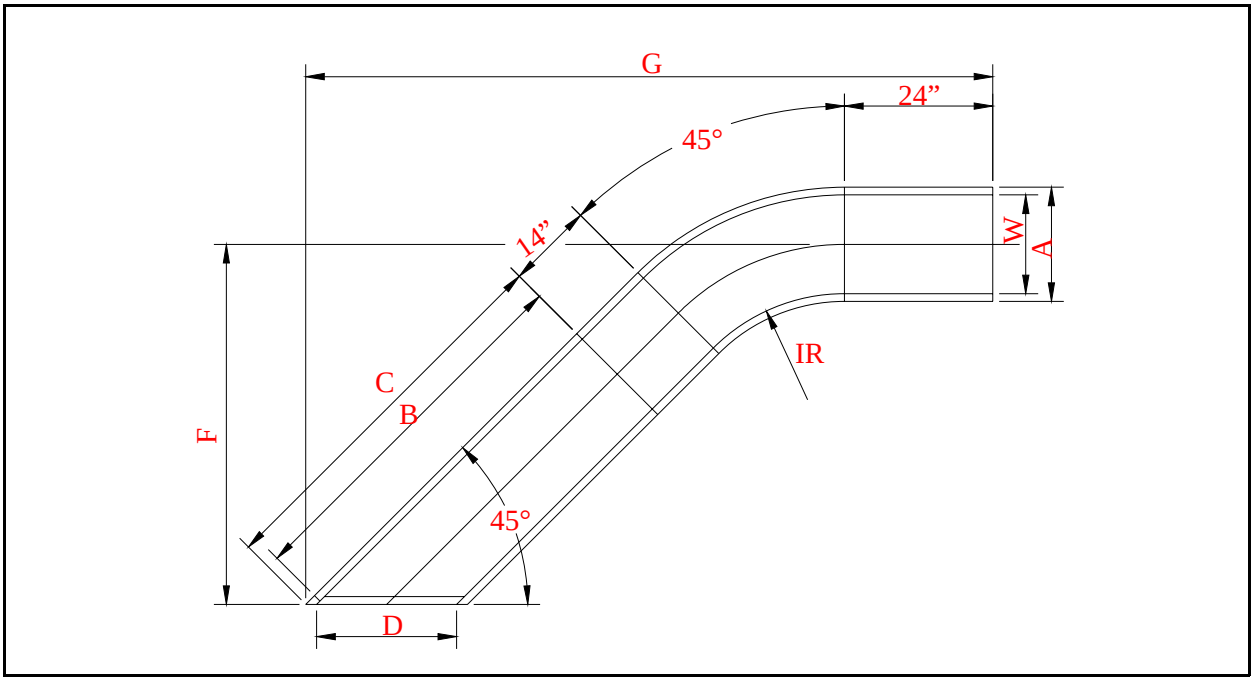
FRAME TYPE 26IR					DIM	FRAME TYPE TTF				
16	**22**	**28**	**34**	**40**	**"W"**	**16**	**22**	**28**	**34**	**40**
30	30	30	30	30	IR	30	40	48	60	60
STYLE 17/21 - 90° CURVE JUNCTION										
18-1/2	24-1/2	30-1/2	36-1/2	42-1/2	A	18-1/2	24-1/2	30-1/2	36-1/2	42-1/2
20-11/16	20-11/16	20-11/16	20-11/16	20-11/16	C	20-11/16	20-3/4	20-5/8	20-3/4	20-3/4
35	43-7/16	51-3/16	58-7/16	65-1/2	D	35	44-1/8	52-11/16	61-9/16	69-3/16
18-1/2	24-1/2	29-7/8	34-5/8	39	E	18-1/2	24-1/2	30-1/16	35-1/4	40-1/16
30-5/8	39-5/16	47-1/8	54-1/2	61-9/16	F	30-5/8	39-7/8	48-1/2	57-3/8	65-1/8
59-1/4	59-1/4	59-1/4	59-1/4	59-1/4	G	59-1/4	67-15/16	74-7/8	85-1/4	85-1/4
41-9/16	44-9/16	47-9/16	50-9/16	53-9/16	H	41-9/16	49-5/8	56-1/2	65-9/16	68-9/16

Style 19 - 45° Combination Junction (45° Spur with 45° Curve)



FRAME TYPE 26IR					DIM	FRAME TYPE TTF				
16	**22**	**28**	**34**	**40**	**"W"**	**16**	**22**	**28**	**34**	**40**
30	30	30	30	30	IR	30	40	48	60	60
STYLE 19 - 45° COMBINATION JUNCTION										
18-1/2	24-1/2	30-1/2	36-12	42-1/2	A	18-1/2	24-1/2	30-1/2	36-1/2	42-1/2
60	60	60	90	90	B	60	60	60	90	90
62	62	62	92	92	C	62	62	62	92	92
22-5/8	31-1/8	39-9/16	48-1/16	56-9/16	D	22-5/8	31-1/8	39-9/16	48-1/16	56-9/16
24	24	24	24	24	E	24	24	24	24	24
88-3/16	88-3/16	88-3/16	109-3/8	109-3/8	F	88-3/16	88-3/16	88-3/16	109-3/8	109-3/8
61-1/2	64-1/2	67-1/2	91-3/4	94-3/4	G	61-1/2	67-7/16	72-3/4	100-1/2	103-1/2

Style 20 - 45° Parallel Junction (45° Spur With 45° Curve)



FRAME TYPE 26IR					DIM	FRAME TYPE TTF				
16	**22**	**28**	**34**	**40**	**“W”**	**16**	**22**	**28**	**34**	**40**
30	30	30	30	30	IR	30	40	48	60	60
STYLE 20 - 45° PARALLEL JUNCTION										
18-1/2	24-1/2	30-1/2	36-1/2	42-1/2	A	18-1/2	24-1/2	30-1/2	36-1/2	42-1/2
60	60	60	90	90	B	60	60	60	90	90
62	62	62	92	92	C	62	62	62	92	92
22-5/8	31-1/8	39-9/16	48-1/16	56-9/16	D	22-5/8	31-1/8	39-9/16	48-1/16	56-9/16
24	24	24	24	24	E	24	24	24	24	24
58-5/16	57-1/16	55-7/8	75-7/8	74-9/16	F	58-5/16	60	61-1/8	84-5/8	83-3/8
111-1/8	115-3/8	119-5/8	145-1/16	149-5/16	G	111-1/8	122-7/16	132-3/8	166-5/16	170-9/16

Assembly Designations

The arrangement of a conveyor's components and the power unit location is described by the use of "right-hand" (RH) or "left-hand" (LH) assembly designations.

For a "curve" or "S-curve", the assembly designation is based n the direction it turns (when looking in the direction of travel).

For a "merging" or "diverting" junction, it is based on the side of the main-line conveyor to which the junction is mounted (when looking in the direction of travel.

For power units, the assembly designation identifies the side of the drive unit on which the chain drive and guard are located (when looking in the direction travel.

Table E.1 – Curve/Junction Assembly

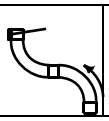
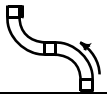
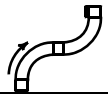
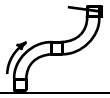
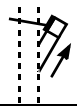
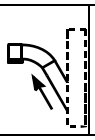
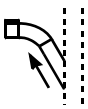
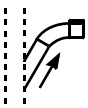
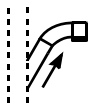
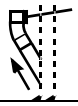
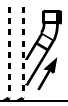
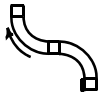
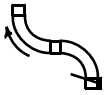
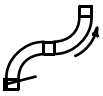
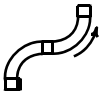
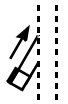
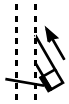
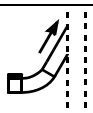
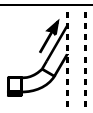
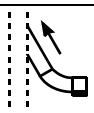
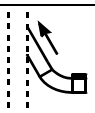
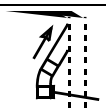
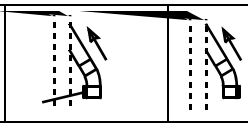
Curve/Junction Assembly			
Power-Unit Assembly			
LH	**RH**	**LH**	**RH**
Style 5 - 9 (30° - 180°) Curve - DISDU (Style 5 shown)			
			
Style 10 - 13 (30° - 90°) S-Curve - DISDU (Style 10 shown)			
			
Style 14 - 18 Straight Junctions - DISDU			
			
Style 15 - 19 Combination Junctions - DISDU			
			
Style 16 - 20 Parallel Junctions - DISDU			
			
Style 17 (90°) Curve Junctions - DISDU			
			

Table E.1 – Curve/Junction Assembly (continued)

Curve/Junction Assembly			
Power-Unit Assembly			
LH	**RH**	**LH**	**RH**
Style 5P - 9P (30° - 180°) Curve - INDU (Style 5P shown)			
			
Style 10P- 13P (30° - 90°) S-Curve - INDU (Style 10P shown)			
			
Style 14P - 18P Straight Junctions - INDU			
			
Style 15P - 19P Combination Junctions - INDU			
			
Style 16P - 20P Parallel Junctions - INDU			
			
Style 21 (90°) Curve Junctions - INDU			
			

SECTION F: ACCESSORIES

Side Guides

Adjustable Side Guides - Straight

The standard 20’ lengths of channel-type (1-5/8” deep) guide rail(s) are strapped and shipped in bundles. Mounting components and fasteners are packed in “hardware” cartons.

The mounting arm length requirements are identified in Table F.1 based on:

- Side guide type.
- Type of components to which the arm(s) are attached.
- Nominal 6’ Centers on mounting brackets.

Table F.1 – Mounting Arm Length Requirements

	H	Dimensions		
		Side Guide Type		
		DE	DF	EE
Arm Dimension		“A”	“B”	“C”
Intermediate Section	5”	20-1/4”	27-1/4”	7”
Terminal Ends	10”	22-3/4”	29-3/4”	11-1/2”
Width Between Side Guides (“W_{SG}” Plus or Minus)				
Dimensions “W”	Maximum	+8”	+8”	-1 1/2”
	Minimum	-1”	-1”	-9 1/2”

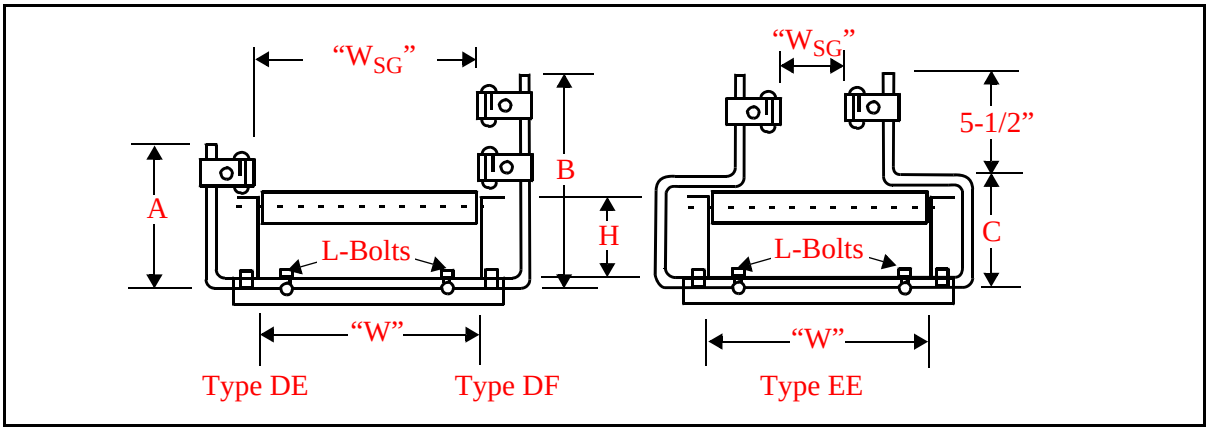


Figure F - 1 Adjustable Side Guide Types

Attach mounting angle to bottom flanges of the conveyor frame (see Figure F - 2).

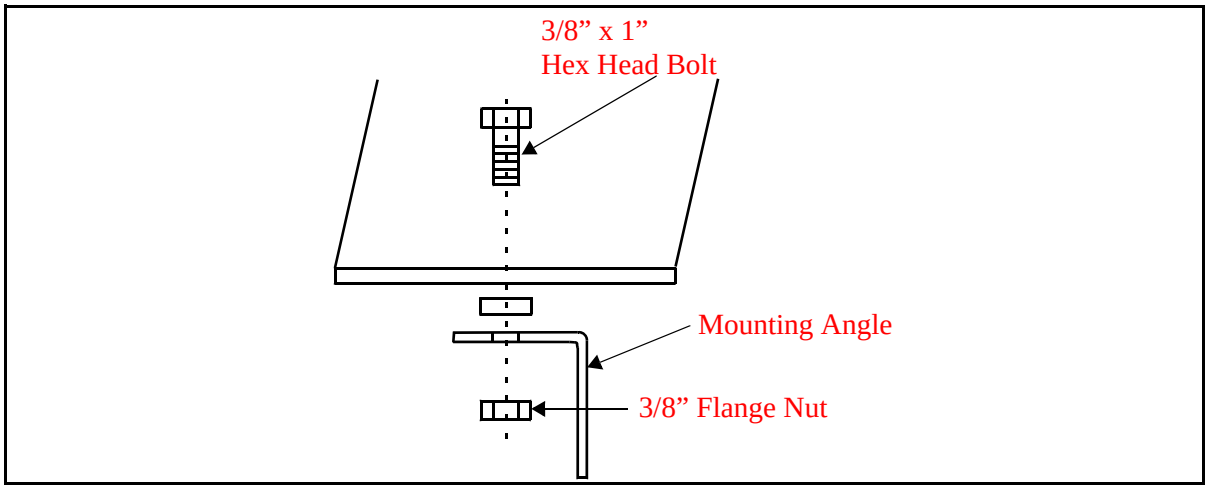


Figure F - 2 Attach Mounting Angle to Bottom Flanges

Assemble and secure the rod to mounting angle at the required width (see Figure F - 3). Slip clamp over the support rod and tighten bolt (a) at required height. Assemble the guide rail to clamp and tighten bolt (b) as shown in Figure F - 3.

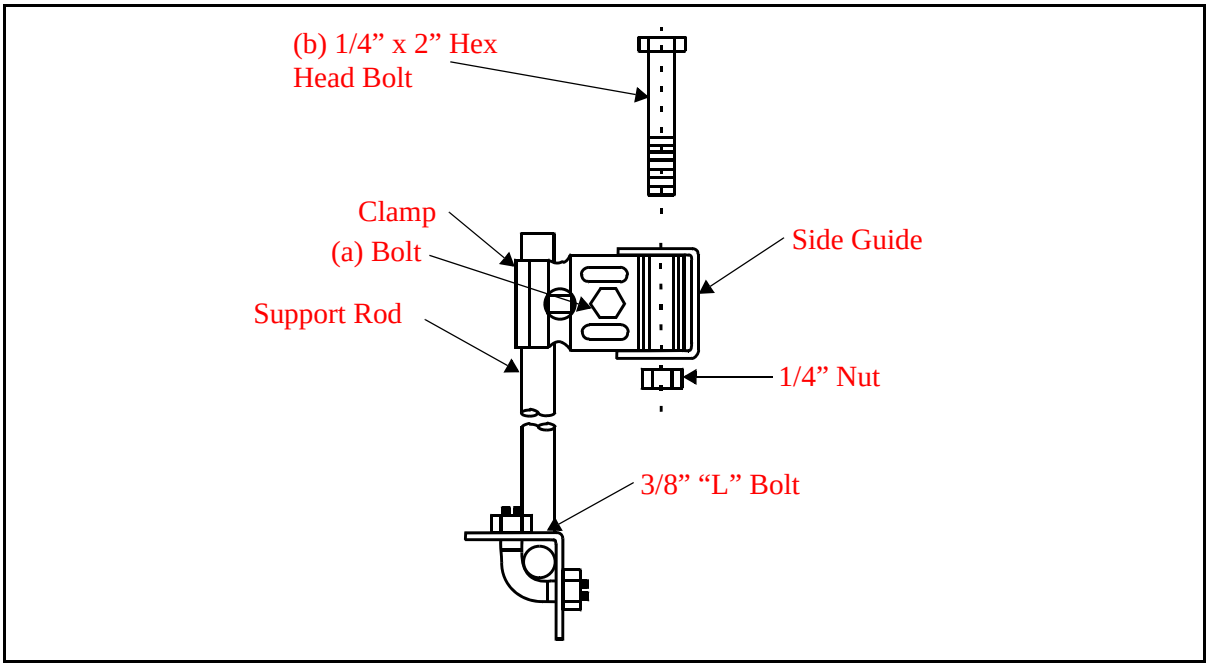


Figure F - 3 Secure Rod to Mounting Angle and Slip Clamp Over Support Rod and Tighten Bolt

Splice the adjoining side guides and check for proper assembly and overlap of the end tabs (see Figure F - 4).

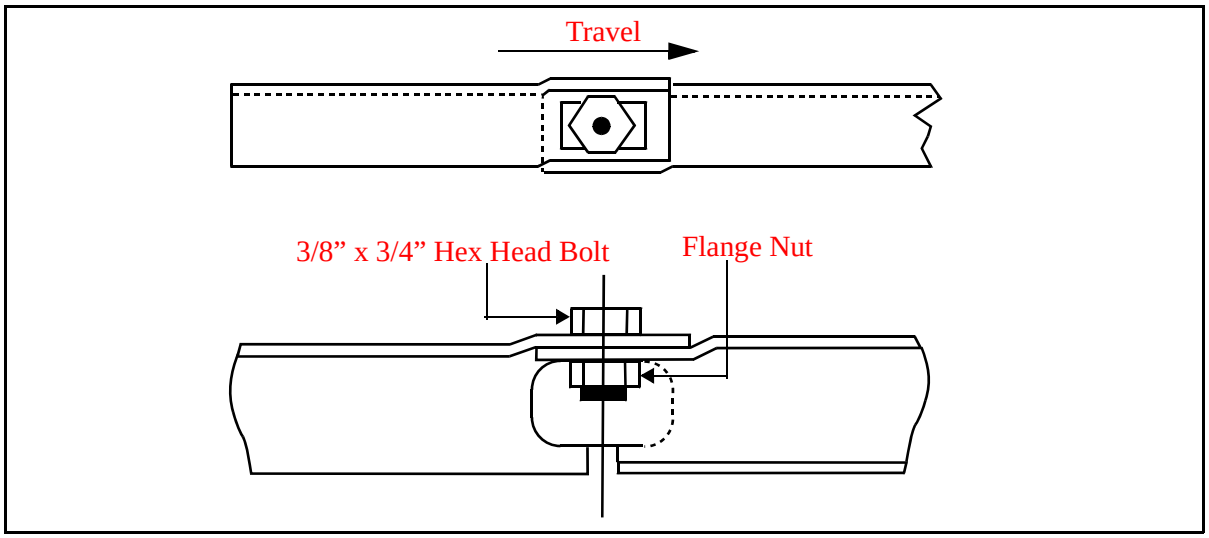


Figure F - 4 Splicing Side Guides

Fixed Side Guides - Straight

The standard 12’ lengths of angle or channel-type side guides are strapped in bundles. The mounting components and fasteners are packed in hardware cartons.

The fastener requirements (per 12’ side guide length) are identified in Table F.2 based on:

- mounting types (see Figure F - 5).
- side guide (see Figure F - 6).

Table F.2 – Mounting Fastener Requirements (per side - 12’ length)

Key No.	Item	Mounting Type											
		A				B				C			
		Guide Rail Type											
1	3/8” x 3/4” lg. Hex Hd. Bolt w/Flange Nut	4	5	5	5	2	3	3	3	2	3	3	2
2	3/8” x 1-3/4” lg. Hex Hd. Bolt w/Flange Nut	0	0	0	0	4	4	4	4	4	4	4	4
3	3/8” x 3/4” lg. Flt. Hd. Bolt w/Flange Nut	0	0	0	0	0	0	0	0	4	4	4	4
4	1/2” x 11/16” lg. Hex. Nut Spacer	0	0	0	0	4	4	4	4	4	4	4	4
5	Offset Bracket	0	0	0	0	0	0	0	0	4	4	4	4
6	Strap Coupling	0	0	0	0	1	1	1	1	1	1	1	1

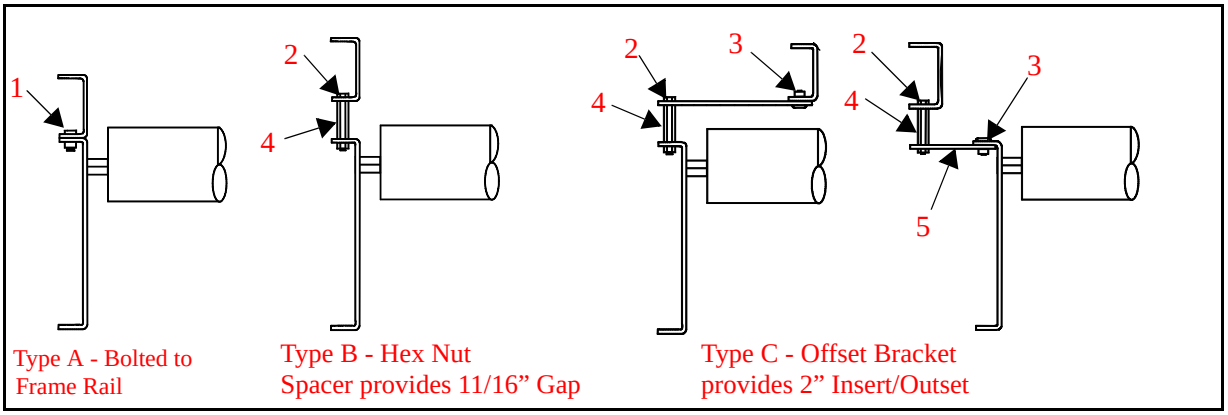


Figure F - 5 Types of Mountings

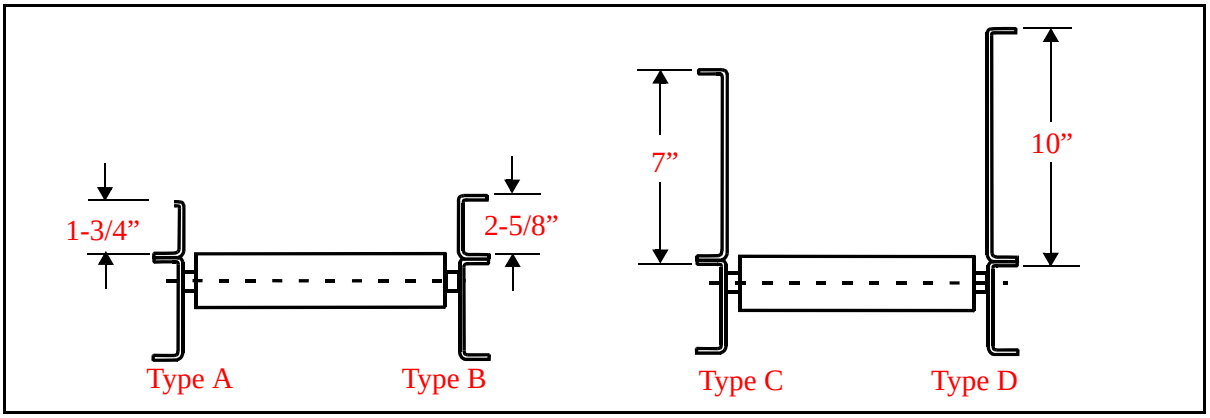


Figure F - 6 Types of Side Guides

Knee Braces

Longitudinal stability is achieved with knee braces. The knee brace eliminates stress caused by flow direction, stops, and starts (see Figure F - 7).

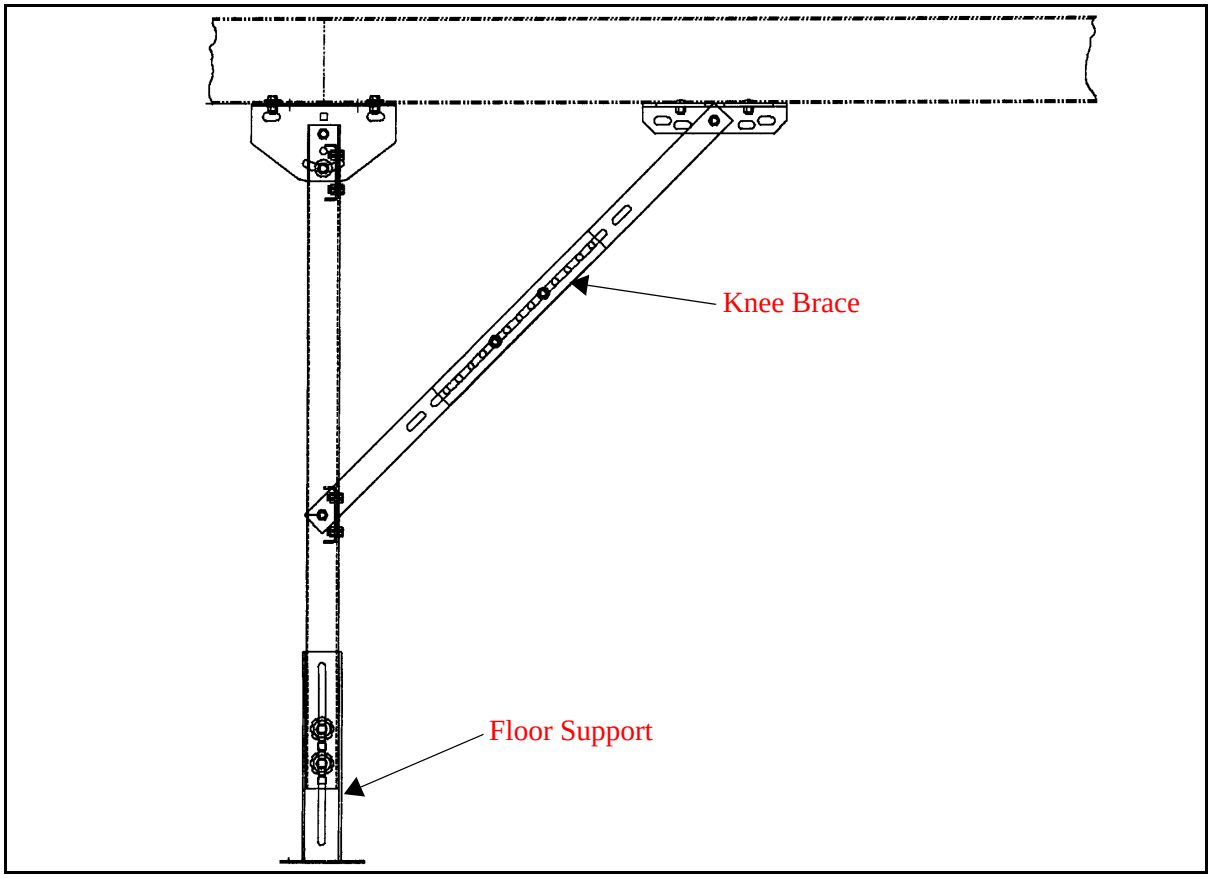


Figure F - 7 Knee Brace

Every support does not require bracing. Knee braces should be used:

- at the ends of straight runs.
- before case stops.
- near the drive
- approximately every 50 feet on a long straight run.

Normally, the knee braces must be located on the “downstream” side of the supports, putting them in tension.

However, the starting of the conveyor puts opposite stresses on the legs to that of stopping. Stresses are resisted by installing braces near the drive, back toward the receiving end “upstream”.

For the best results, the strap to frame angle should not exceed 45° or be less than 30°. On short supports where a small angle results, the brace strap may be shortened.

Ceiling Mounting Arrangements

Ceiling hangers are used for the support of powered conveyors from the ceiling (see Figure F - 8). The ceiling hangers are required at the joints of intermediate conveyor sections having over 113” from top of roller dimensions.

CAUTION: Consult the building architect or a structural engineer regarding ceiling loading or structural limitations of the building and for sizing header steel.

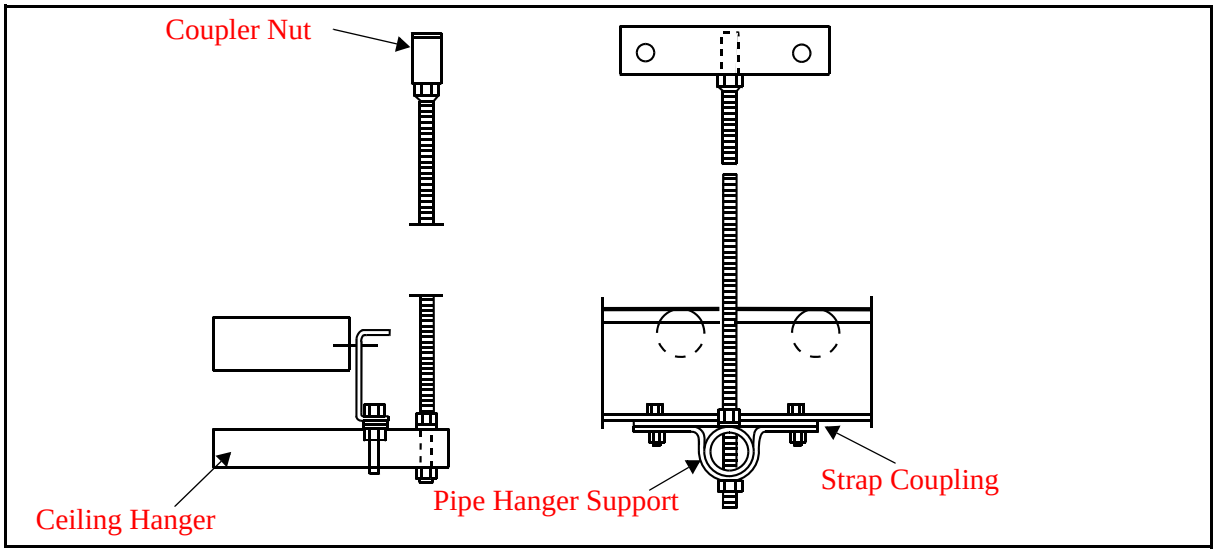


Figure F - 8 Ceiling Mounting Arrangement

Traffic Controller

The traffic controllers (see Figure F - 9) are frequently used instead of electrical control methods to provide orderly merging of products from a side line into the product flow on a main or collecting line. Since only one arm can be moved at a time, traffic “cops” perform on a first-come-first-served basis without being able to anticipate the effects of their flow control actions.

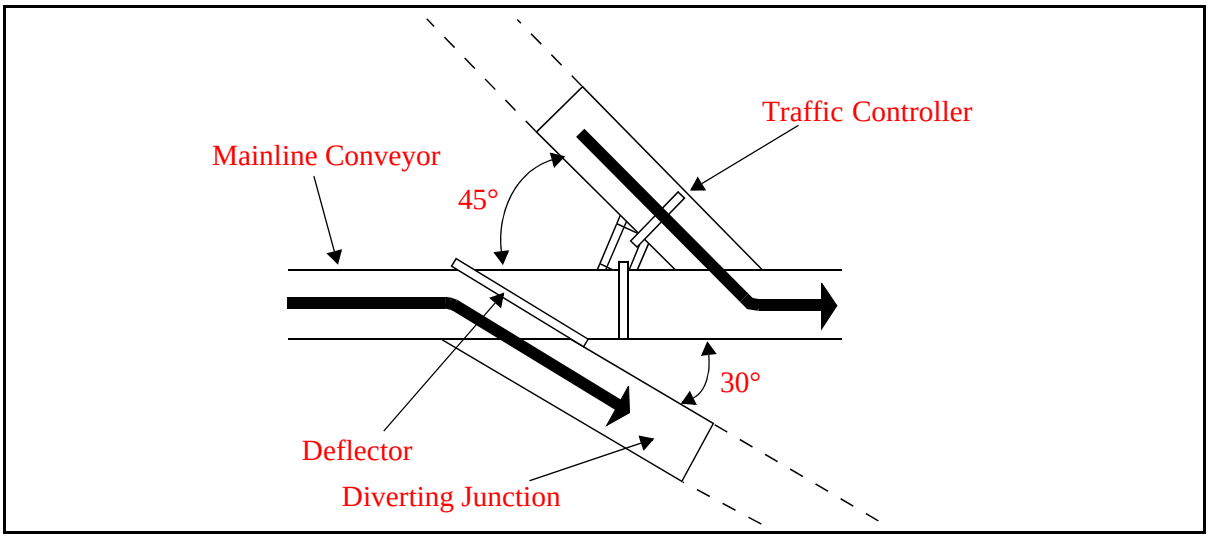


Figure F - 9 Traffic Controller and Case Deflector

SECTION G: INSTALLATION PROCEDURES

Introduction

Accepting Shipment

Immediately upon delivery, check that all equipment received agrees with 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 Customer Service in writing within ten (10) days after receipt of shipment.

Note: It is very important that you compare the Order Acknowledgment against the actual material received when you receive the shipment so you have enough lead time to order any missing parts. If you find that a part is missing during assembly, you may have to discontinue assembly while you wait for the part to arrive.

Lost or Damaged Shipment

Report lost shipments to our Shipping Department.

If shipping damage is evident upon receipt of the conveyor, 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 by the seller, 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 our 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 Seller. Notification of return must be made to the Customer Service Department, and if approved, a "Return Authorization Tag" will be sent to the Purchaser (user). The return tag, sealed in the "Return Authorization Envelope" should be securely affixed to the exterior surface on any side of the shipping carton (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 initial shipment is refused, the Purchaser (User) shall be liable for all freight charges, extra cost of handling, and other incidental expenses.

Codes and Standards

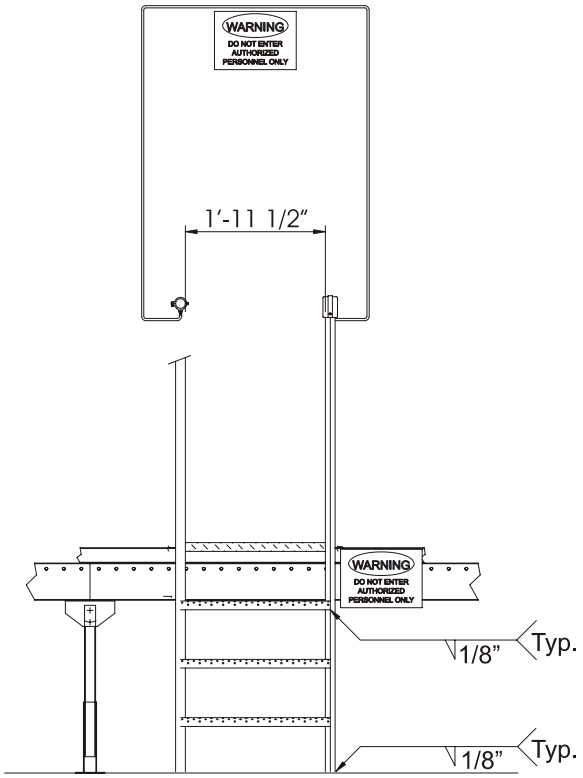
The conveyor equipment is designed and manufactured to comply with the American National Standard Institute's "SAFETY STANDARDS FOR CONVEYORS AND RELATED EQUIPMENT" (ANSI B20.1) and with the National Electrical Code (ANSI/ NFPA70).

The Purchaser/User shall be familiar with, and responsible for, compliance with all codes and regulations having jurisdiction regarding the installation, use, and maintenance of this equipment.

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 or bills-of-materials for replacement part numbers.

WARNING: For conveyors installed at floor level in an **"Authorized Personnel Access Area Only"**, fixed rollers (3" centers) may be used in conjunction with an emergency pull cord. The area must be apart from normal working areas and access must be marked with a sign, **"Warning - Do Not Enter - Authorized Personnel Only".**
Part Number for ordering Warning Sign is 957305.
The illustration below shows the location for installation of the sign.



TO ORDER LADDER SUPPORTS PER CROSSOVER:		
QNTY:	PART DESCRIPTION:	PART DESCRIPTION:
1	957173	X-OVER SIGN FRAME
2	957174	3/8" DIA NYLON LOOP CLAMP (TO ATTACH SIGN TO FRAME)
4	957175	1 1/4" DIA PIPE RING W/BOLT (TO ATTACH SIGN TO LADDERS)
4	957305	SIGN,WARN BY-WS10 SETON M2540

Safety Precautions

Accidents causing personal injury can usually be traced to unsafe work practices by either operating or maintenance personnel. Many accidents occur because the personnel concerned do not realize the danger of improper practices; or the proper practice is known, but ignored because the employee is in a hurry or is careless.

Safety Precautions for Personnel Operating the Conveyor

- Make sure only authorized, trained personnel operate the conveyor.
- Stop the conveyor before clearing jams or removing foreign objects.
- Make sure all personnel are clear of moving parts before starting the conveyor.
- Avoid distractions when operating the conveyor.
- The conveyor is designed and manufactured to comply with the American National Standard Institute's "Safety Standards for Conveyors and Related Equipment" (ANSI B20.1).
- Keep conveyor fully-retracted (and belt turned off) when not in use.

Maintenance personnel can contribute greatly to the success of a safety program. They are familiar with the equipment and know the dangers inherent in such equipment. In addition, they realize the hazards resulting from incorrect use of the equipment.

Maintenance personnel should be trained to recognize and to promptly report unsafe practices in the operation of this conveyor, as well as any dangerous condition in the conveyor itself.

Safety Precautions for Maintenance Personnel

The following precautions must be observed:

- Do Not perform maintenance while the conveyor is operating. Lock-out the circuit breaker disconnect switch with padlocks before performing maintenance.

Note: Single-key locks must be used by qualified electricians or maintenance mechanics. When possible, an additional power lock-out at the power source is recommended.

- Before restarting the conveyor, make sure all personnel are clear of moving parts.
- Maintain good housekeeping in the vicinity of the conveyor at all time. Clean up spilled materials or lubricants promptly.
- Always replace the protective devices before putting the conveyor back into service.
- Maintenance personnel should be alert for hazardous conditions at all times. Remove sharp edges and protruding objects, and replace broken or worn parts promptly.
- Use the proper tool for each job. Carry tools in a pouch or a tool box. never carry tools in a pocket.
- Report all accidents resulting in personal injury or damage to equipment, and all irregularities in equipment operation promptly to the proper authority.

Parts Replacement

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

Factory Assistance

Contact Field Service for installation, operation, or maintenance assistance, or Customer Service and Support for replacement parts.

Assembling the Conveyor

The following instructions provide general installation procedures for the CS T/C Chain Powered Roller conveyor.

Style 1 Conveyor Assembly

The Style 1, T/C Straight Conveyor has a “discharge-end” drive unit (DISDU). If equipped with an optional “infeed-end” drive unit (INDU), a “P” is added to the style number (Style 1P).

Conveyors up to 15’ in length are shipped from the factory as fully-assembled conveyor units.

For conveyors over 15’ in length, the end drive and take-up sections, intermediate section(s), supports, etc. are pre-assembled and shipped as individual components.

Note: If it becomes necessary to “shorten” a standard intermediate section to provide a specific conveyor length, refer to “Cutting Special Length” subsection for specific cutting instructions.

When installing, use the following steps to ensure that all necessary steps are taken.

Note: Check drive-type and required location before installing.

Step 1. Mount the floor supports (or ceiling hangers) to the drive and take-up sections. For additional information, see Figure G.2 and Figure G.3.

Step 2. Working from one end of the conveyor, progressively position, align, splice (see Figure G.4, Figure G.5 and Figure G.20), anchor, etc., all of the required components. See the “Style 1 Assembly/Support Location Requirements” section.

Step 3. Connect the drive chains. For additional information, see the “Chain Connection/Splicing” subsection.

Step 4. Install accessory items.

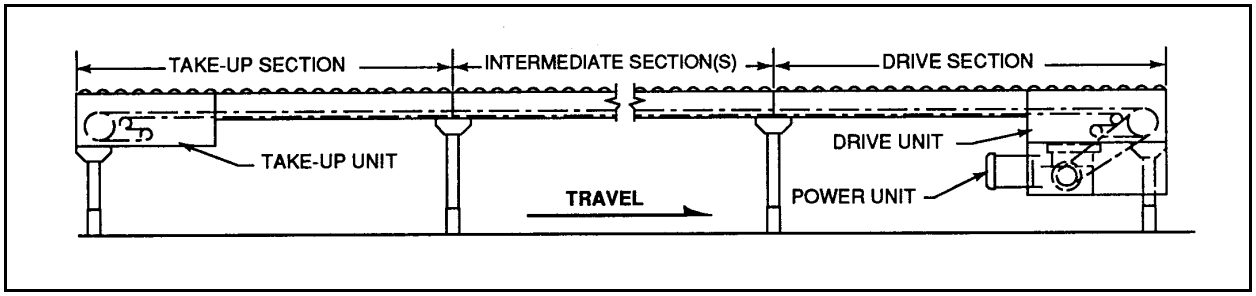


Figure G.1 – Style 1, T/C Conveyor with Discharge End Drive Unit

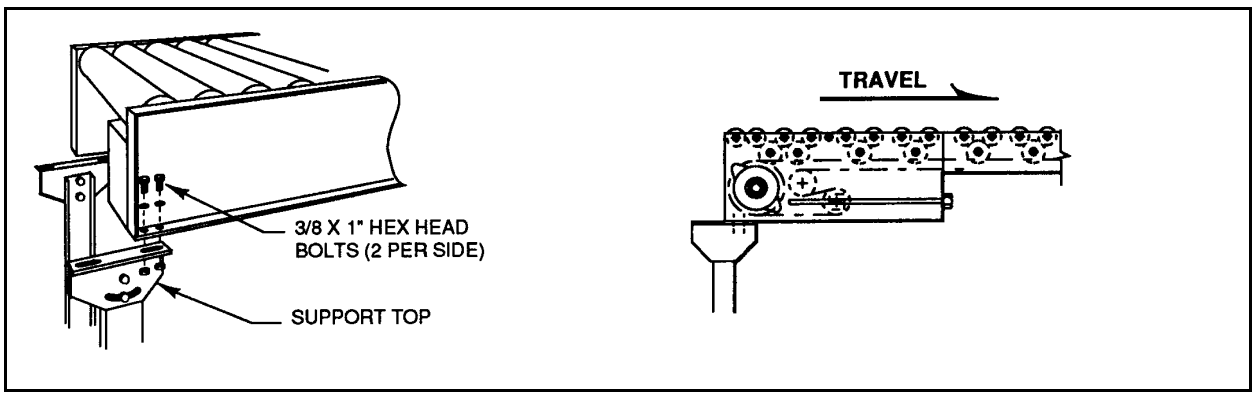


Figure G.2 – Installing Supports

Figure G.3 – Style 1P (Optional) Infeed-End Drive Unit

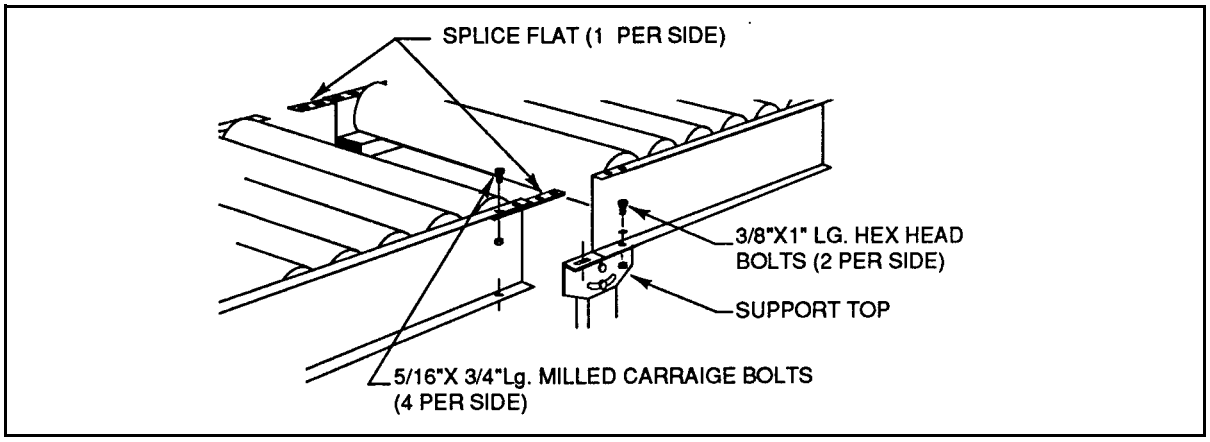


Figure G.4 – Splice Intermediate Sections Together

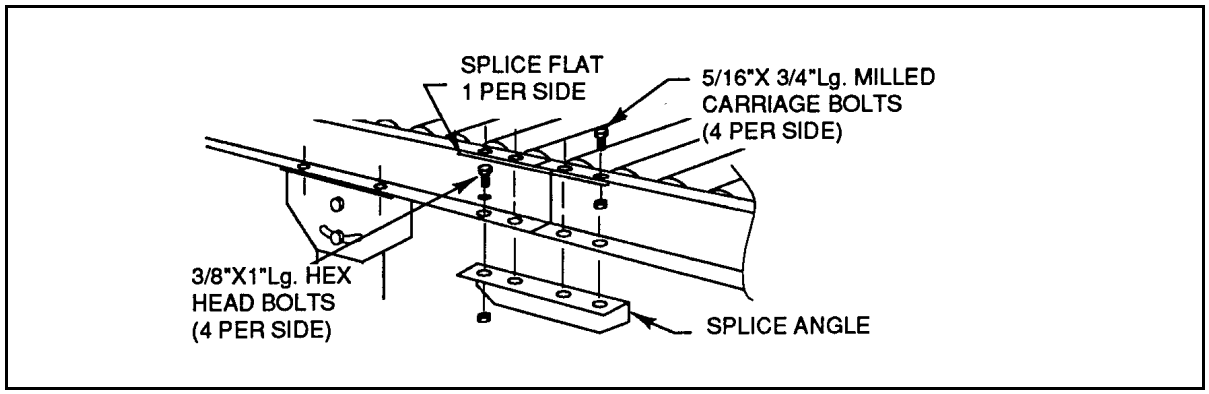


Figure G.5 – Use Splice Angle Assembly at Splice Point When Floor Support or Ceiling Hanger Must Be Offset

Style 1 Assembly/Support Location Requirements

The following illustrations show the required support/ceiling hanger assembly locations for Style 1 T/C Conveyor.

Standard Style 1 T/C Conveyor, up to 15'-0" OAL, are shipped as a fully-assembled conveyor unit, see Figure G.6, Figure G.7, and Figure G.8.

For conveyors 16'-0" OAL and longer, the end-drive, and end take-up sections (6'-0" long), intermediate section(s), etc., are shipped as separate components and assembled together at installation, see Figure G.9, Figure G.10, Figure G.11 and Figure G.12.

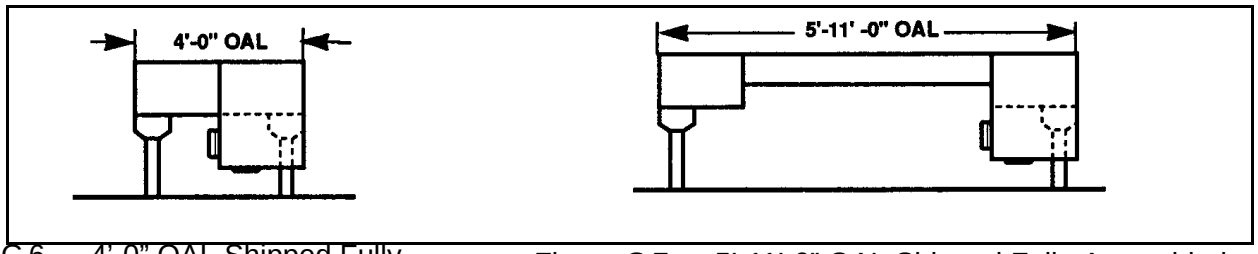


Figure G.6 – 4'-0" OAL Shipped Fully-Assembled Attach Two Supports

Figure G.7 – 5'-11'-0" OAL Shipped Fully-Assembled Attach Two Supports

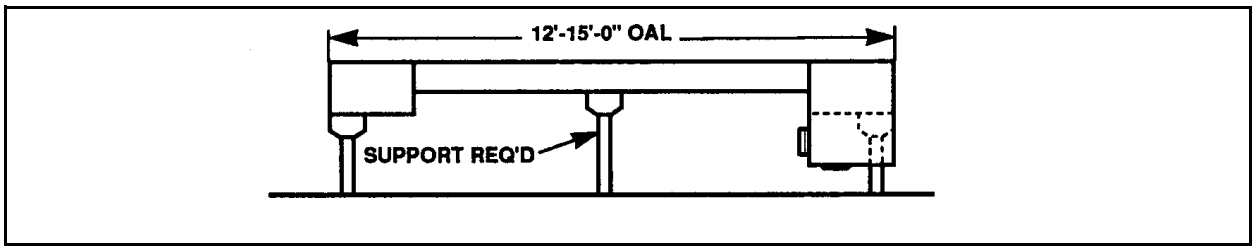


Figure G.8 – 12'-15'-0" OAL Shipped Fully-Assembled Attach Three Supports

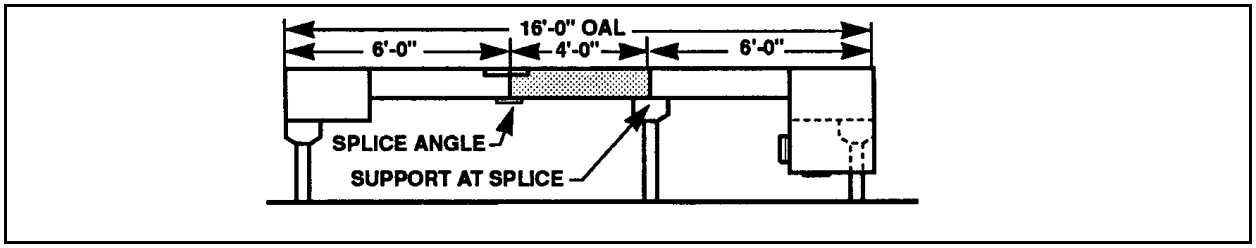


Figure G.9 – 16'-0" OAL Shipped as Components Attach Three Supports and One Splice Angle

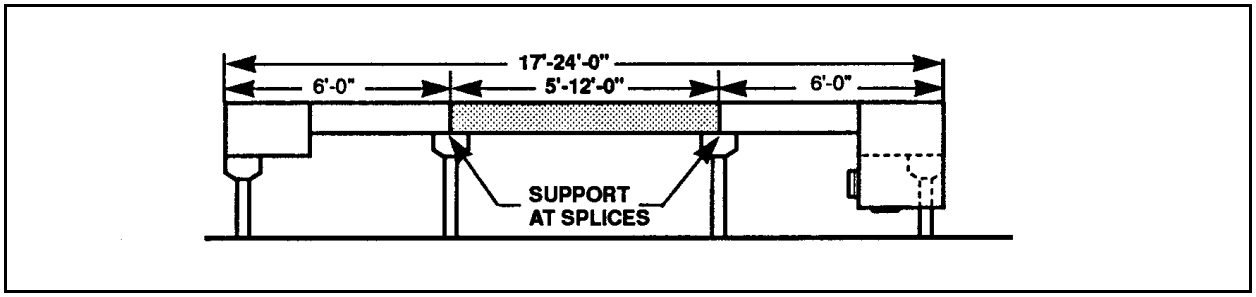


Figure G.10 – 17' - 24'-0" OAL (see Note below)

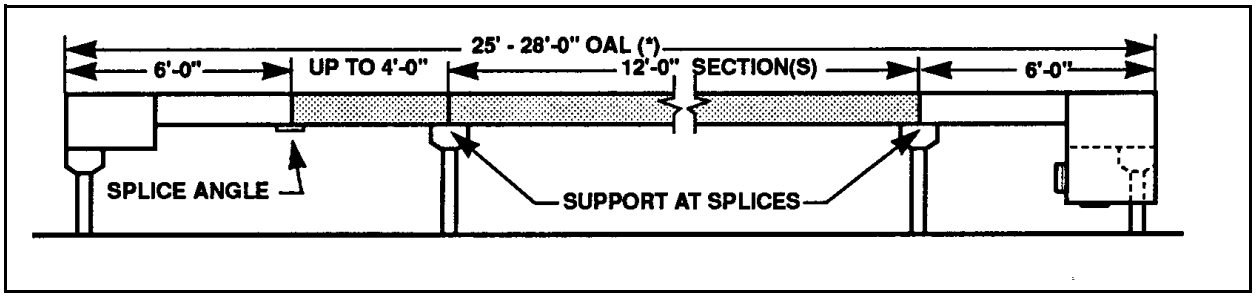


Figure G.11 – 25’ - 28’-0” OAL (see Note below)

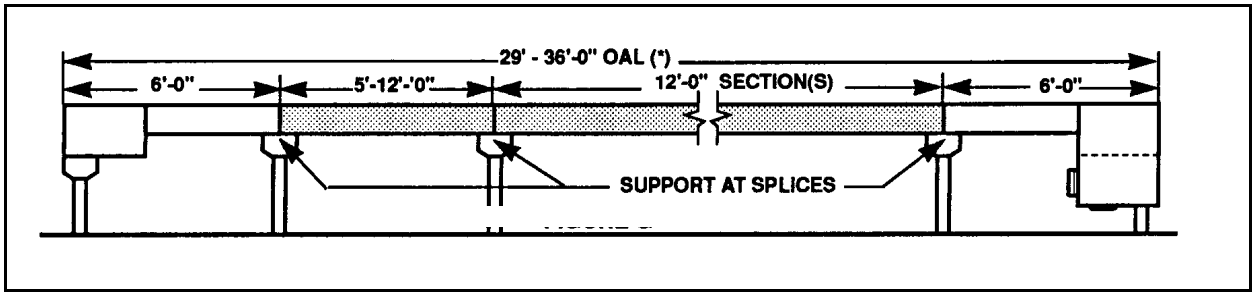


Figure G.12 – 29’ - 36’-0” OAL (see Note below)

Note: (*) The Overall Lengths (OAL) shown are based on one 12’-0” long intermediate section and one “short” section. These lengths increase in multiple of 12’ for each additional section.

Styles 5-8 - 90°, 60°, 45°, and 30° T/C Curve

Styles 5-8 - 90°, 60°, 45°, and 30° T/C Curves have a “discharge-end” drive unit (DISDU). If equipped with an optional “infeed-end” drive unit (INDU), a “P” is added to the style number (Style 5P-8P).

Curve Assembly

The drive and take-up units are fully-assembled to the curve section and the complete conveyor is shipped from the factory ready to install.

Note: If optional straight extension section(s) are required, see subsection “Adding Straight Extension Sections” before installing.

When installing, use the following steps:

Note: Check drive-type and required location before installing.

Step 1. Mount the floor supports (or ceiling hangers) to the terminal ends and curve section. For ceiling hangers, see Figure G.19 and Figure G.20.

Step 2. Position, connect with adjoining conveyor(s), and anchor the conveyor.

Step 3. Install accessory items.

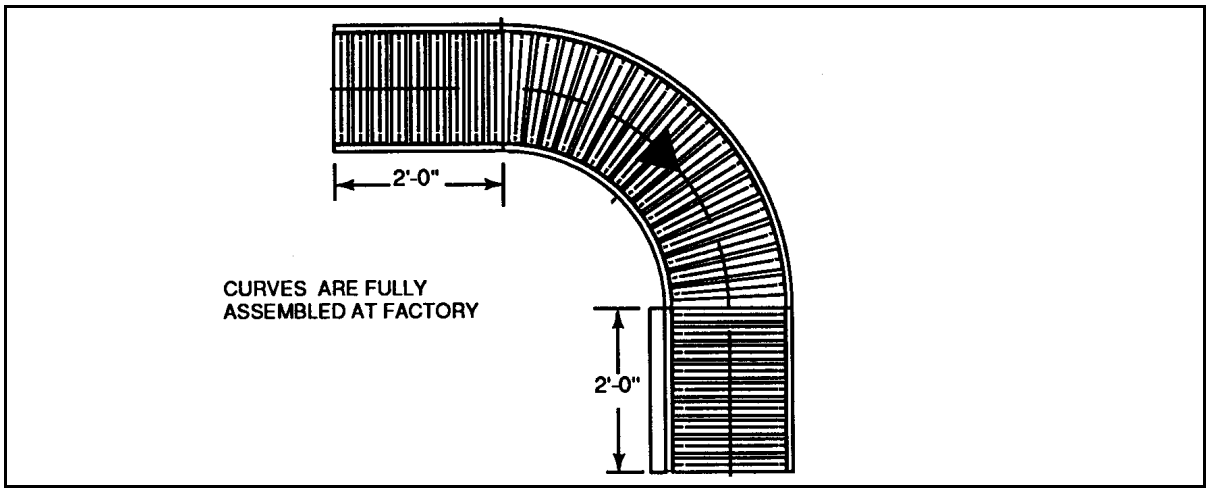


Figure G.13 – Style 5 - 90° Curve

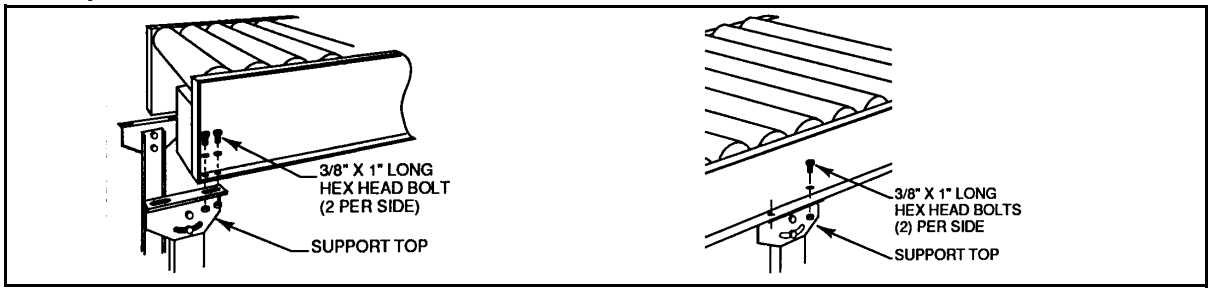


Figure G.14 – Installing Floor Supports

Figure G.15 –

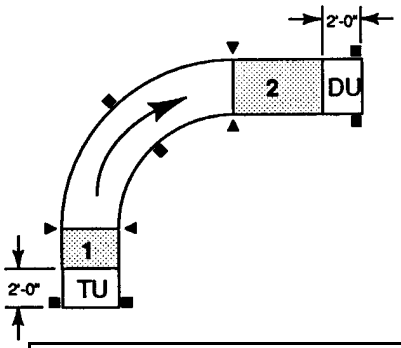
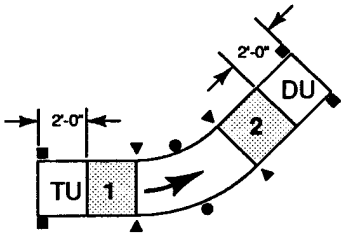


Figure G.16 – Style 5, 90° Curve

Note: DU = Drive Unit, TU = Take-Up Unit



Support Location Legend

- ■ Support always required.
- ▲ Support required only if connecting straight extension section is 36" or greater.
- ● Support required if straight extension section(s) #1 and/or #2 are less than 36".

Figure G.17 – Style 6, 60° Curve, Style 7, 45° Curve, and Style 8, 30° Curve

Style 9 - 180° T/C Curve

Style 9 - 180° T/C Curve has a “discharge-end drive unit (DISDU). If equipped with an optional “infeed-end” drive unit (INDU), a “P” is added to the style number (Style 9P).

Curve Assembly

The end drive and end take-up units are pre-assembled to separate 90° curve sections and shipped from the factory as separate drive/take-up curve sections. They are ready to be field assembled into a complete conveyor unit. When installing use the following steps.

Note: If optional straight extension section(s) are required, see subsection “Adding Straight Extension Sections” before installing.

Step 1. Assemble the drive/curve section to the take-up/curve section, see Figure G.4, and make the chain connections, Figure G.43, Figure G.44, and Figure G.46.

Step 2. Mount the ceiling hangers (or floor supports) to the two terminal ends, curve sections and splice joint connection(s). See Figure G.14 and Figure G.16 for Floor Supports.

Step 3. Position, connect with adjoining conveyor(s), and anchor the conveyor.

Step 4. Install accessory items.

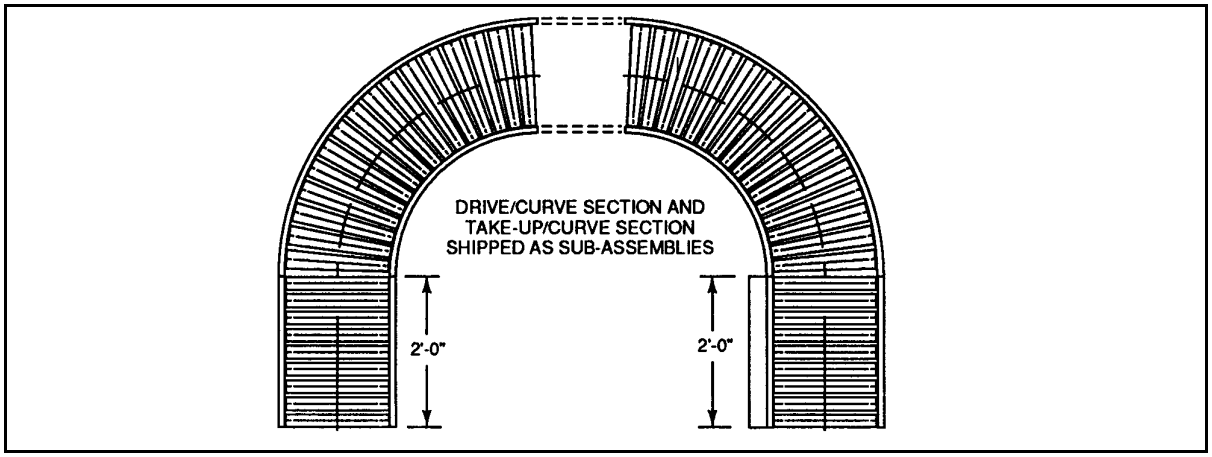


Figure G.18 – Style 9 - 180° Curve

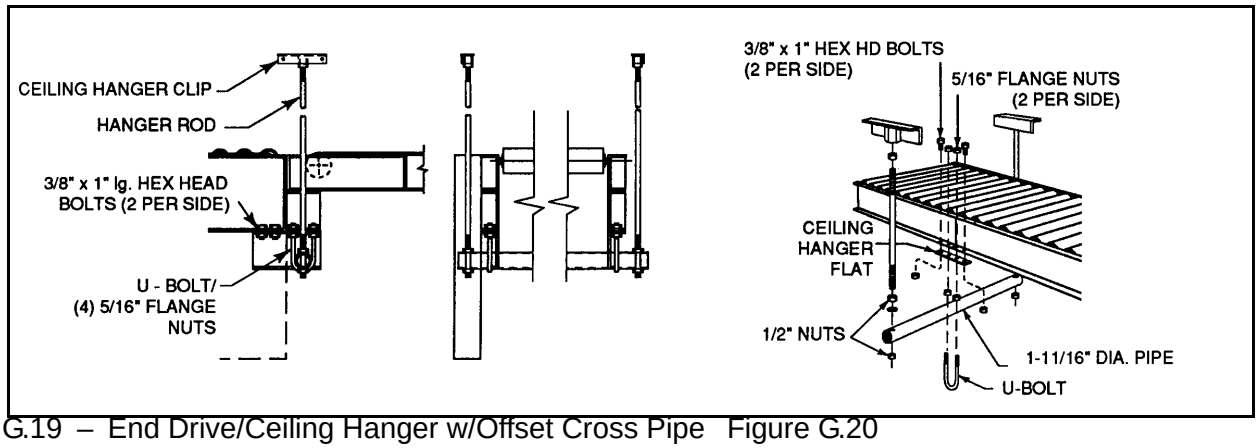


Figure G.19 – End Drive/Ceiling Hanger w/Offset Cross Pipe Figure G.20

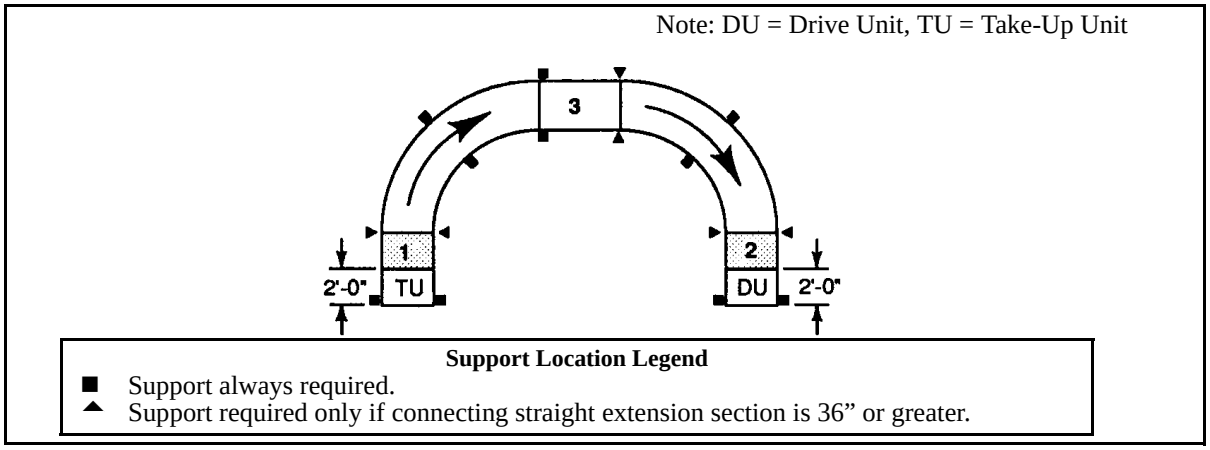


Figure G.21 – Style 9, 180° Curve

Style 10-13 - 90°, 60°. 45° and 30° T/C S-Curves

Styles 10-13 S-Curves have a “discharge-end” drive unit (ISDU). If equipped with an optional “infeed-end” drive unit (INDU), a “P” is added to the style number (Style 10P, 11P, 12P and 13P).

Curve Assembly

The end drive and end take-up units are pre-assembled to separate curve sections and shipped from the factory as separate drive/take-up curve section components. They are ready to be field-assembled into a complete conveyor unit. When installing use the following steps.

Note: If optional straight extension section(s) are required, see subsection “Adding Straight Extension Sections” before installing.

Before installing, check drive-type and required locations.

Step 1. Assemble the drive/curve sub-assembly to the take-up/curve sub-assembly, Figure G.23, and make the chain connections, see Figure G.42, Figure G.43, and Figure G.44.

Step 2. Mount the floor supports (or ceiling hangers) to the terminal ends, curve sections and power transfer unit. For additional information on ceiling hangers, see Figure G.14, Figure G.15, Figure G.19 and Figure G.20.

Step 3. Position, connect with adjoining conveyor(s), and anchor the conveyor.

Step 4. Install accessory items.

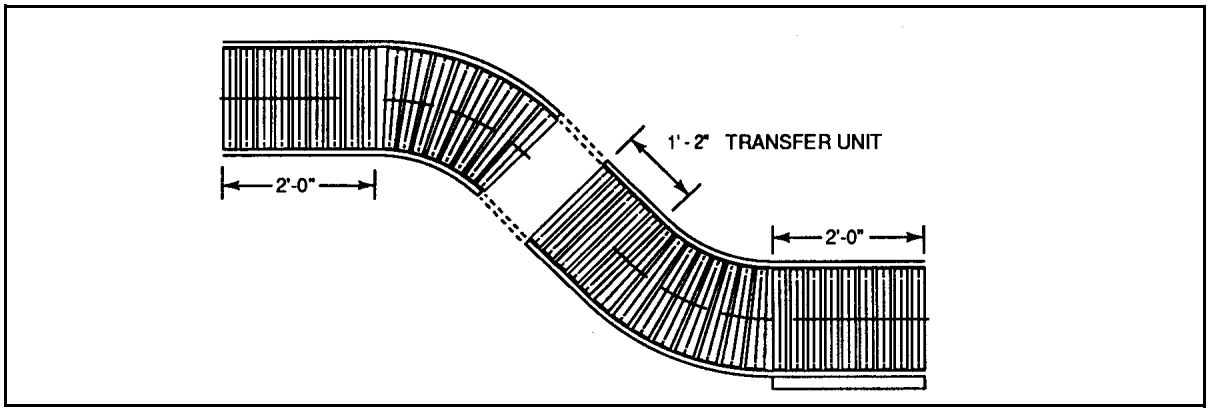


Figure G.22 – Style 12 - 45° S-Curve (Shown)

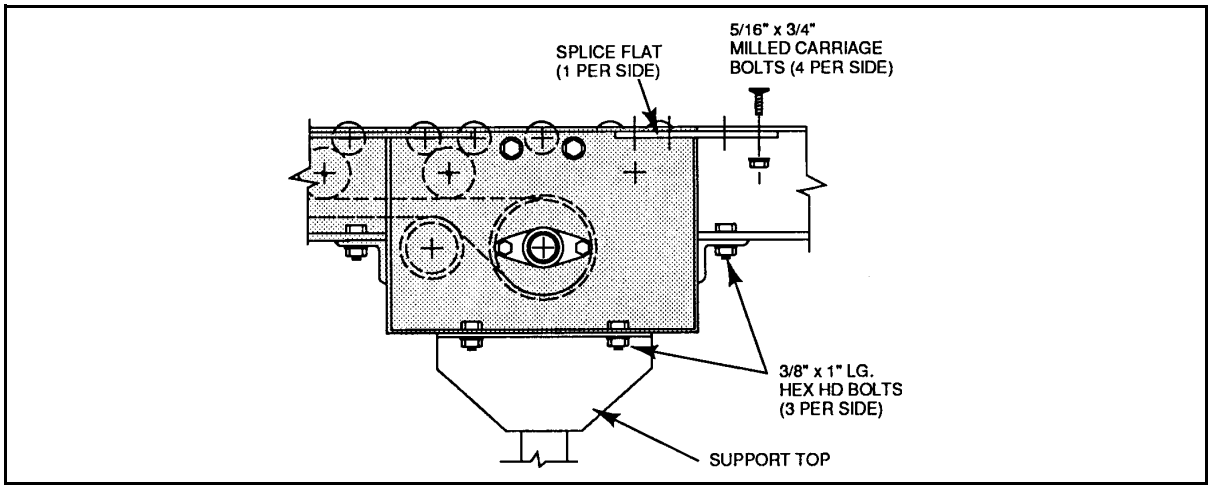


Figure G.23 – Power Transfer Unit Connection

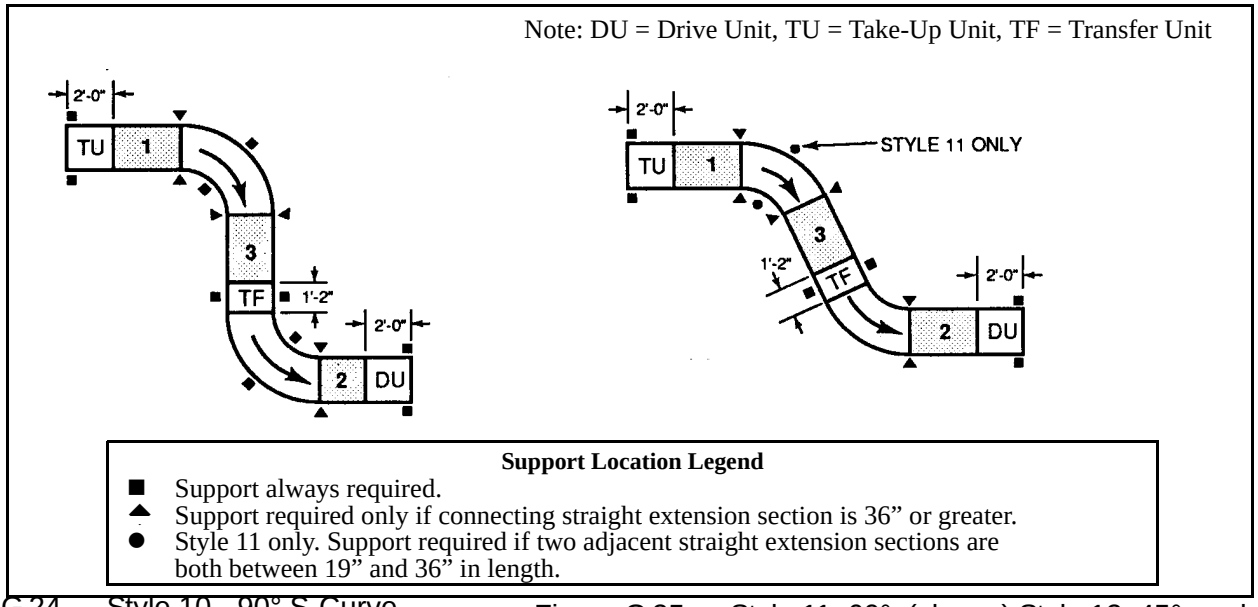


Figure G.24 – Style 10 - 90° S-Curve

Figure G.25 – Style 11, 60°, (shown) Style 12, 45°, and Style 13, 30° S-Curves

Style 14-21 - T/C Junctions

Styles 14 - 21 T/C Junctions have either a “discharge-end” (DISDU) or “infeed-end” drive unit (INDU). If equipped with an INDU, a “P” is added to the style number (Style 18P, 19P and 20P). (Exception - Style 21, merging-type curve junctions do not have the “P” suffix.) When installing use the following steps.

Junction Assembly

The drive unit, curve and/or junction sections are fully-assembled and shipped from the factory as a complete conveyor unit.

Note: If optional straight extension section(s) are required, see subsection “Adding Straight Extension Sections” before installing.

Step 1. Mount a floor support (or ceiling hanger) to the end drive unit and junction/curve section(s) (see Figure G.28, Figure G.32, Figure G.33, and Figure G.34).

Step 2. Position, attach tapered-end to the main-line, Figure G.27, and anchor the conveyor unit.

Step 3. Install accessory items.

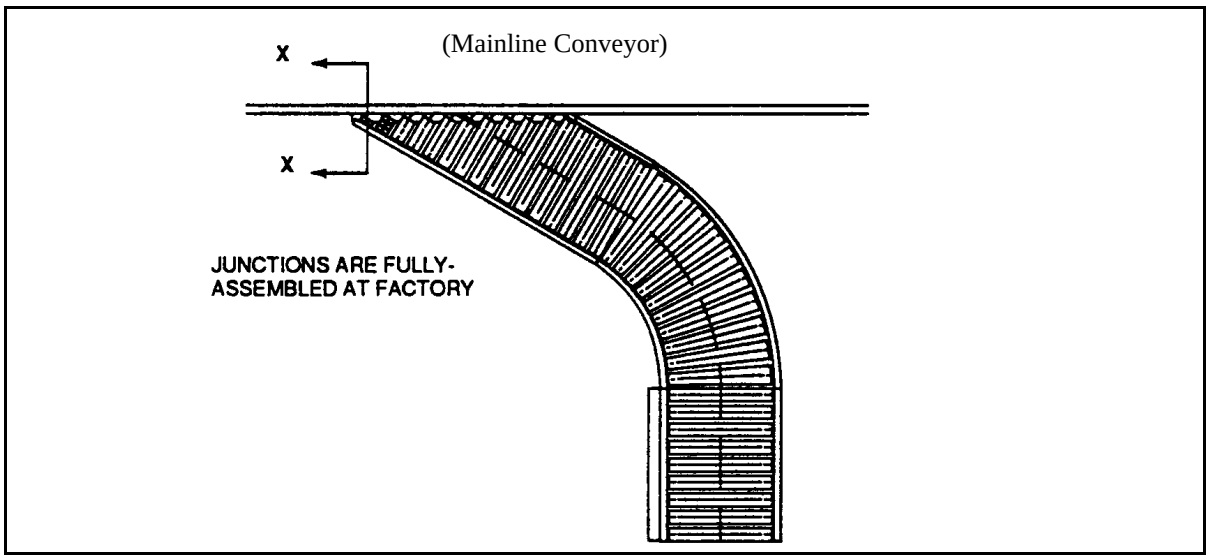


Figure G.26 – Style 15 - Combination Junction (shown)

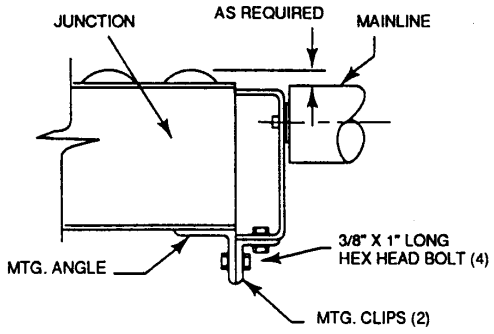


Figure G.27 – Section XX

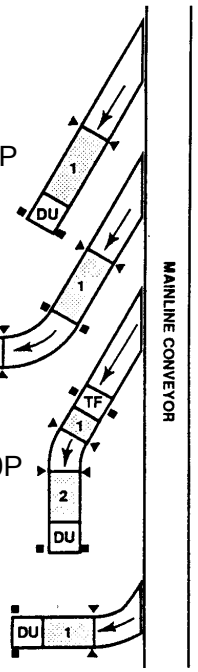
Note: DU = Drive Unit,
TF = Transfer Unit

Figure G.28 – Style 14/18P
Straight Junction

Figure G.29 – Style 15/19P
Combination Junctions

Figure G.30 – Style 16/20P
Parallel Junctions

Figure G.31 – Style 17/21
90° Junctions



Support Location Legend

■ Support always required.
◆ Support required only if connecting straight extension section (SES) is 36” or greater.

Model PRS - Powered Roller Skew

The Model PRS - Powered Roller Skew conveyor is only available with a “discharge-end” drive unit (DISDU).

The 10’-0” and 15’-0” long PRS conveyor is shipped from the factory as fully-assembled conveyor units. For the 20’-0” long PRS conveyors, the drive, take-up, and intermediate sections are pre-assembled and shipped as individual components.

When installing, use the following steps.

Step 1. For the 10’-0” and 15’-0” long units, mount floor supports, (or ceiling hangers) to the terminal ends (see Figure G.33 and Figure G.34).

For the 20’-0” long units; mount supports, assemble drive, intermediate and take-up sections (see Figure G.35). Also, see “Chain Connection/ Splicing” section.

Step 2. Position, connect with adjoining conveyor(s), and anchor the conveyor.

Step 3. Attach the side guide to the conveyor on side that products are to be skewed to Figure G.36 and Figure G.37.

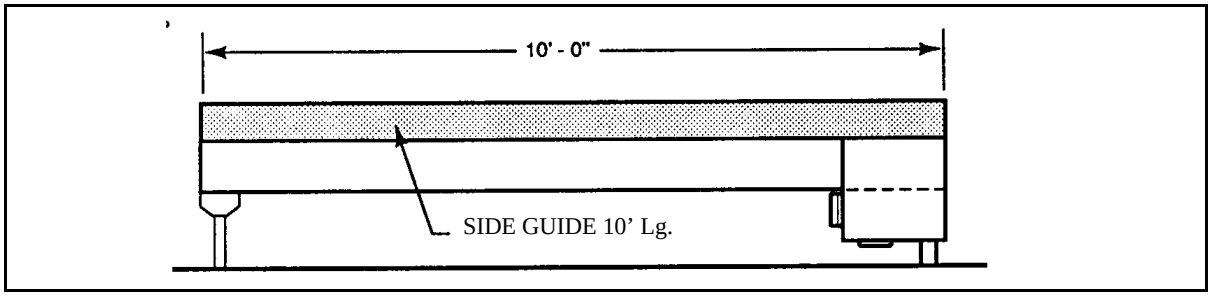


Figure G.32 – Model PRS Conveyor 10’-0” Long (shipped from the factory as complete unit)

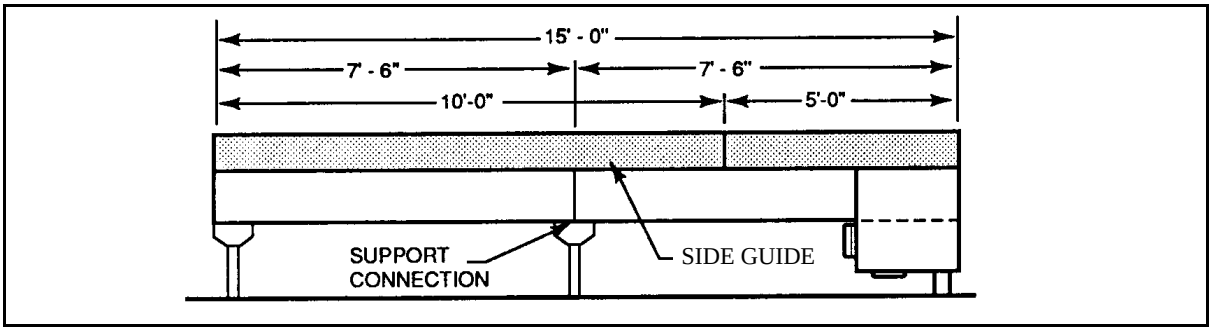


Figure G.33 – Model PRS Conveyor 15’-0” Long (shipped from the factory as complete unit)

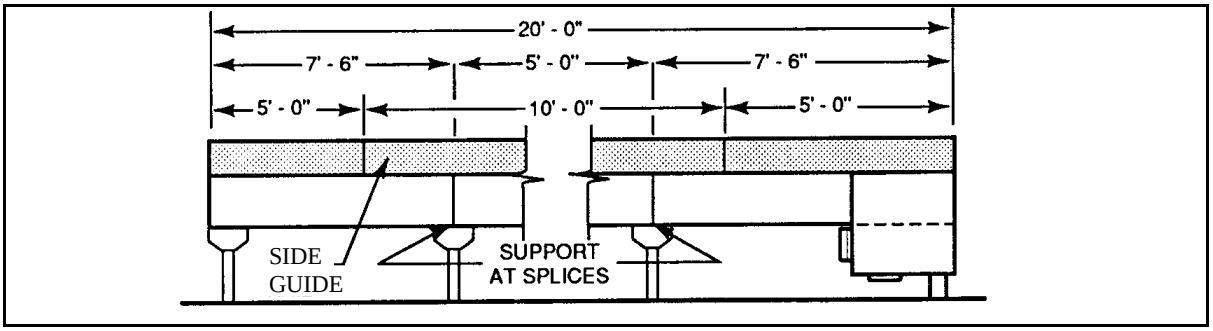


Figure G.34 – Model PRS Conveyor 20’-0” Long (shipped from the factory in three sections, assemble in field w/supports)

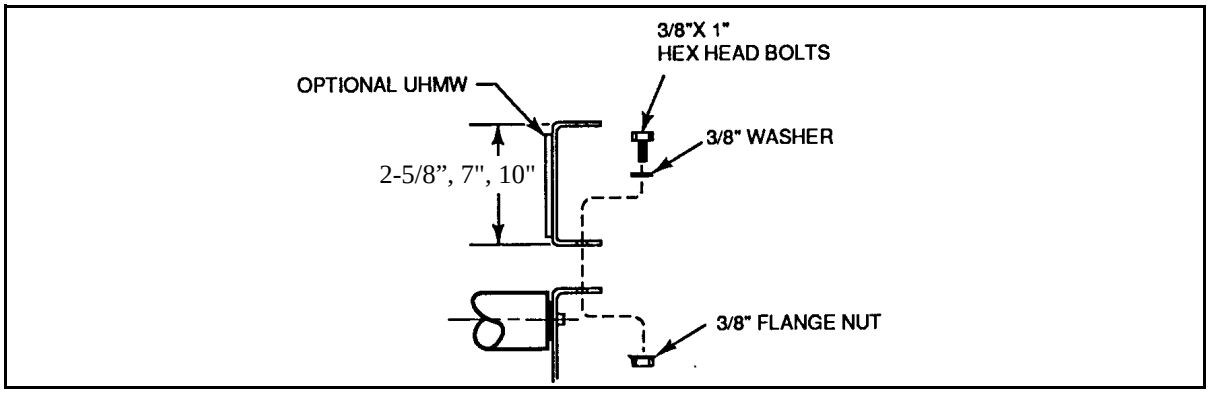


Figure G.35 – Mounting Plain/UHMW Face Side Guide

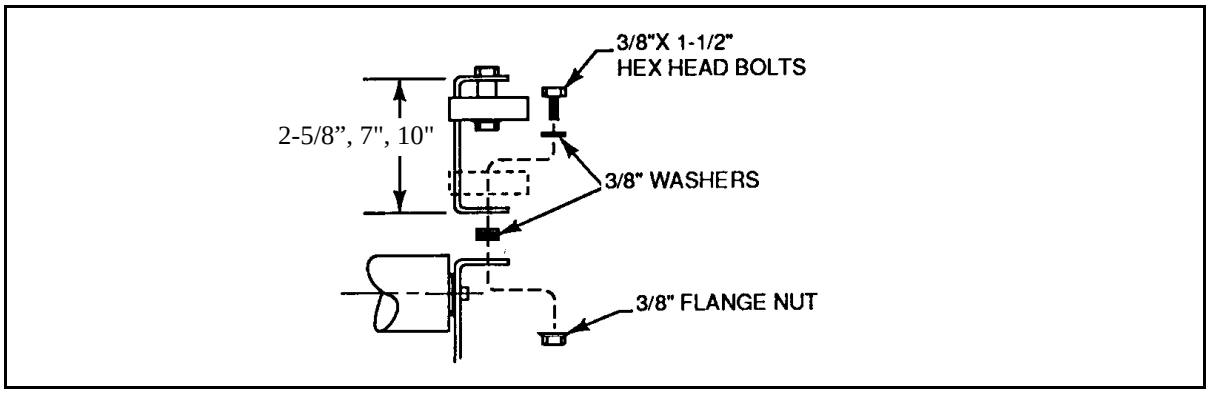


Figure G.36 – Mounting Wheel Face Side Guide

Chain Connection/Splicing

Style 1 Straight Conveyor and Style 9 180° Curve

Once all of the conveyor components have been positioned, aligned, connected, and anchored the next step is to make ALL of the chain connections (see Figure G.37). For assembly instruction, see subsection, “Style 1 Conveyor Assembly” and subsection “Model PRS - Powered Roller Skew”.

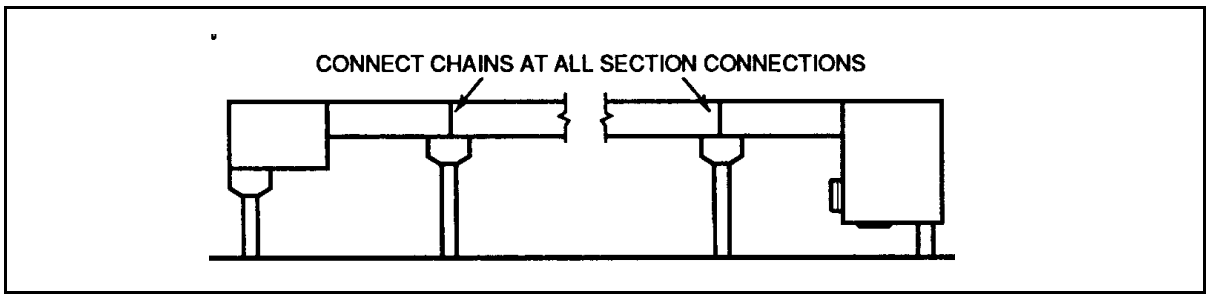


Figure G.37 – Style 1 - T/C Straight Conveyor

The bed sections and curve components are shipped from the factory with the “power” and “return” runs of RC-40 roller chain fully-assembled to the drive rail.

A Connector Link Assembly (connector link, link plates, and spring-clip) is assembled to each chain at both ends of the section. The two chains (plus a roller link) are secured by an Instruction Tag at each end. When installing the Connector Link Assembly, remove the Instruction Tags and disassemble the four connector link assemblies (see Figure G.38 and Figure G.39).

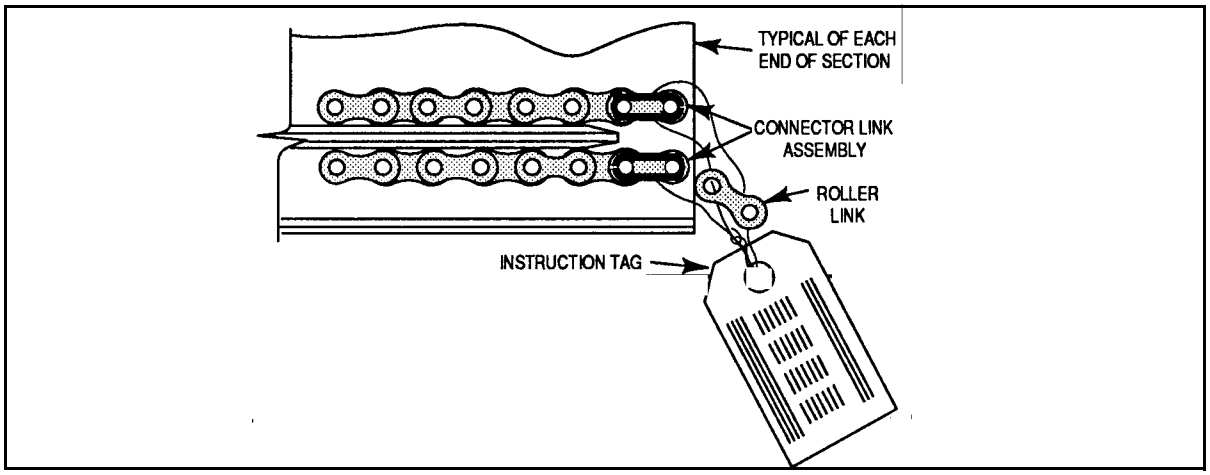
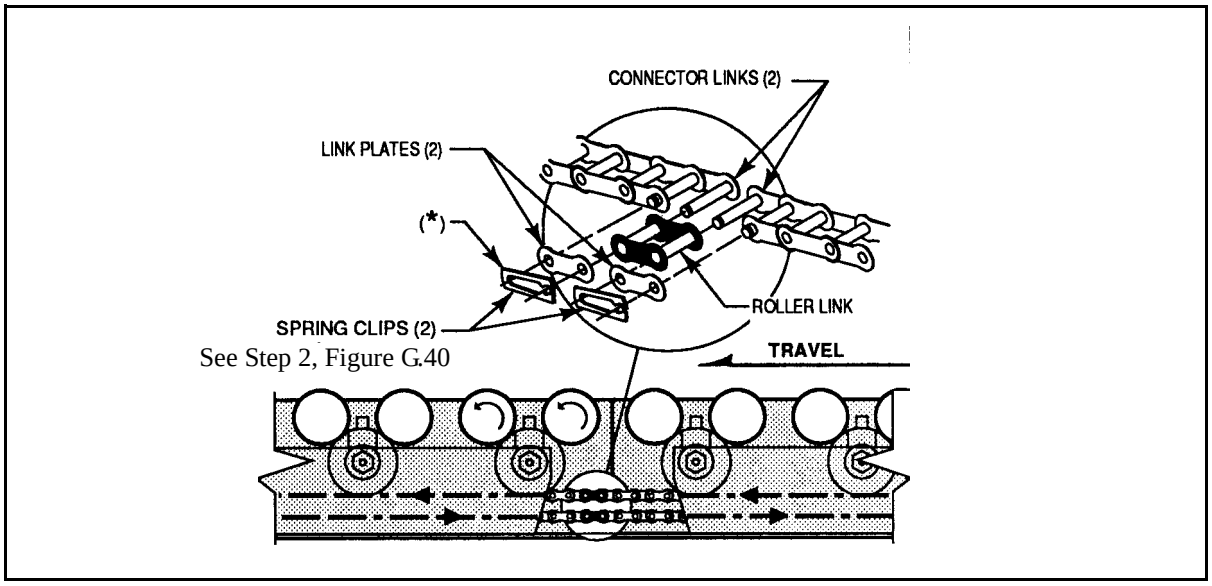


Figure G.38 – Instruction Tags on Connector Link Assembly



See Step 2, Figure G.40

Figure G.39

Use the following steps to connect the chain(s).

Step 1. Couple chains of adjoining sections. When assembling, the spring clips must be fully-seated in the grooves of the connector link pins.

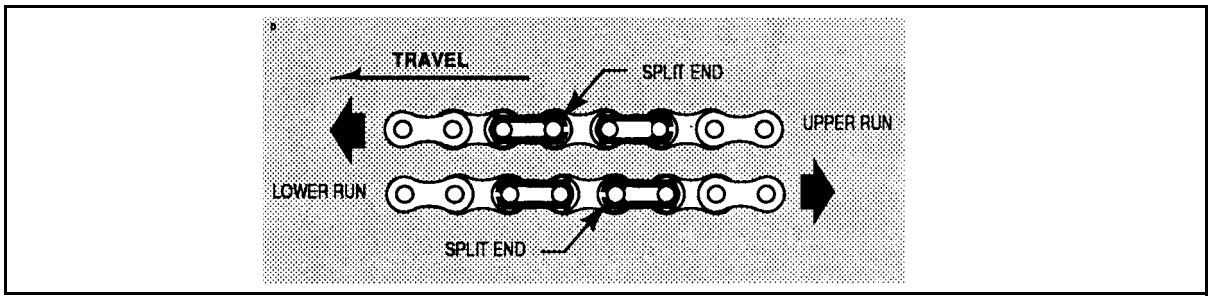


Figure G.40

Step 2. Orient each spring clip so that the “split end” is positioned as shown in Figure G.40 with the “closed end” towards the direction of chain travel.

Styles 10-13 - 90°, 60°, 45°, and 30° S-Curves

With the S-curves two sub-assemblies installed, the next step is to connect the chains of the curve and the transfer unit (see Figure G.41).

For installing instructions, see subsection “Styles 10-13 T/C S-Curves.”

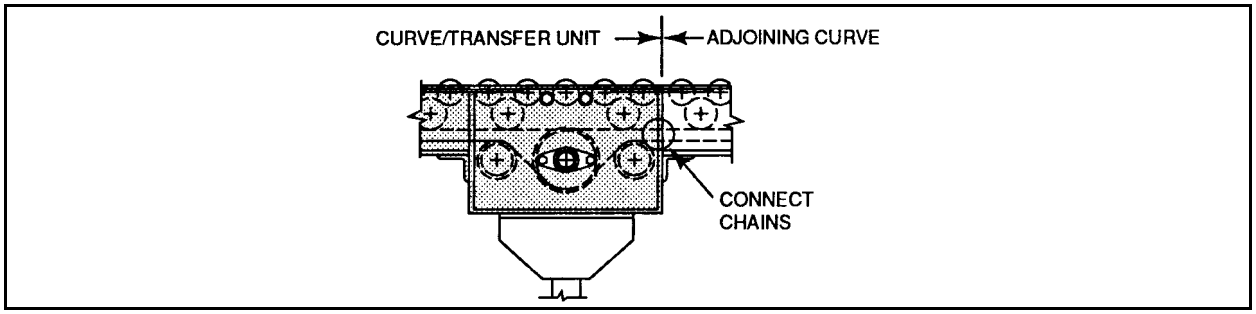


Figure G.41 – Connect Curve and Transfer Unit Chains

Adding Straight Extension Sections

The standard 2'-0" long straight terminal end(s) of a Curve/Junction may be extended to meet the layout requirements of a conveyor system. Straight extension sections are added to a curve/junction when installing.

To add a straight extension section, the following steps should be taken to ensure proper assembly and operation.

Disconnect Drive/Take-Up Unit

Step 1. Check that two screws secure the chain guide at the connection of the drive or take-up side plate and the frame rail (see Figure G.42).

If the chain guide is not secured, drill holes and screw guide to frame (see Figure G.43 and Figure G.44).

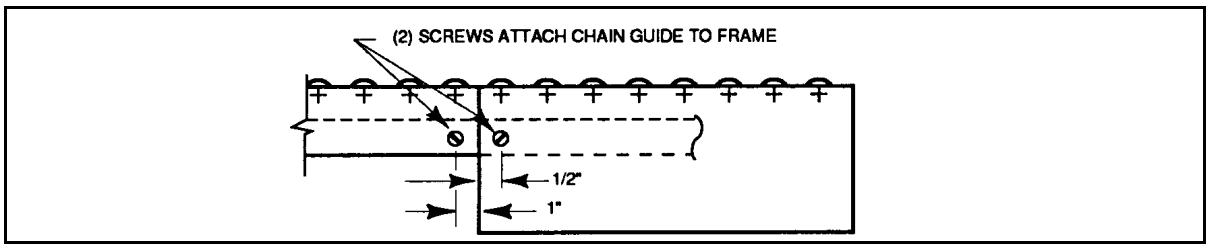


Figure G.42 – Secure Chain Guide

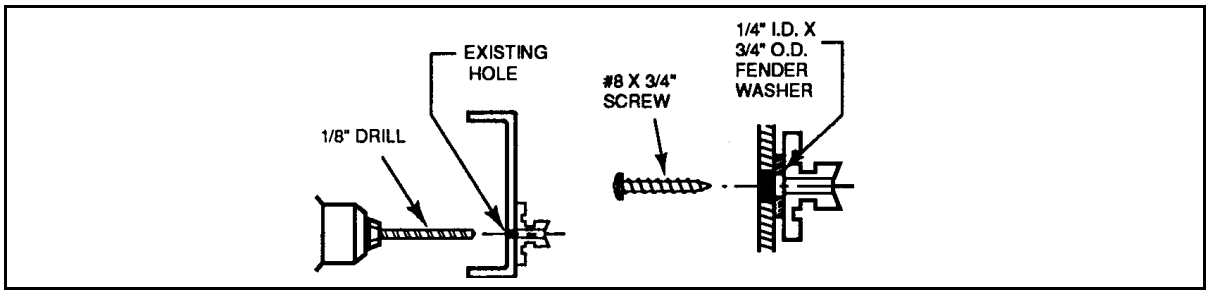


Figure G.43

Figure G.44

Before proceeding, adjust the conveyor's take-up and tensioner sprockets to release the chain tension, and remove the internal chain guard(s) as required (see Figure G.46).

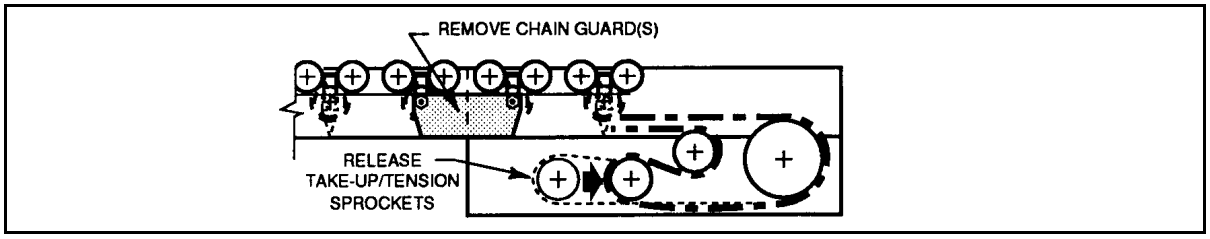


Figure G.46

Step 2. Separate the chain in the drive unit (or take-up unit) either by disconnecting the connector links or using a chain breaker.

Step 3. Check the chain guide at the joint (see Figure G.47). If it is continuous, cut the bevel ends as shown in Figure G.48.

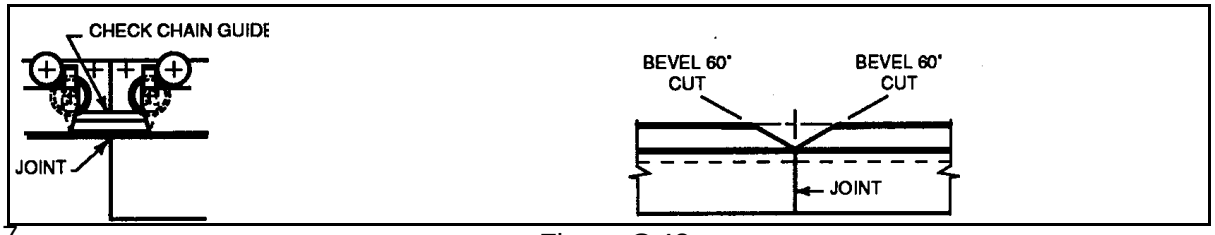


Figure G.47

Figure G.48

Step 4. Disconnect the drive unit (or take-up unit) from the curve or junction section by removing bolts and pulling the units apart (see Figure G.49).

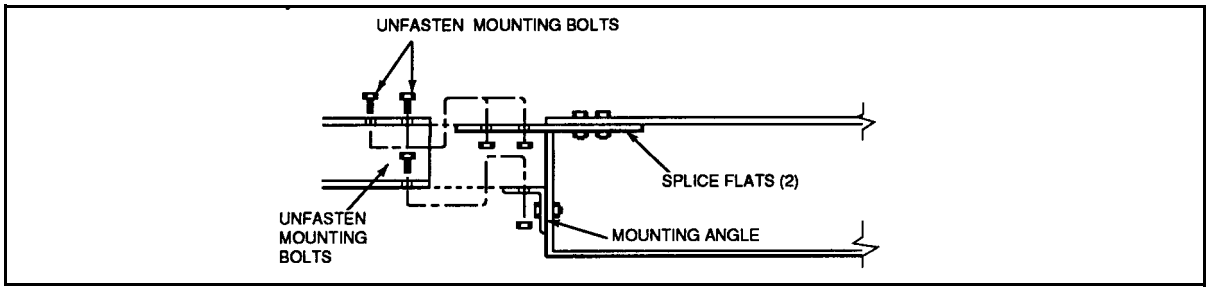


Figure G.49

Connect Straight Extension Section

Step 1. Assemble the Straight Extension Section to the drive unit (or take-up unit) and the curve or junction section.

Step 2. Make chain connection(s), see Steps 1 and 2 in the subsection “Chain Connection/Splicing”.

Step 3. Install ALL chain guards and covers.

CAUTION: The chain tension must be adjusted before starting the conveyor. See the subsection “Pre-Start-up Preparation” for chain-tensioning instructions.

Cutting Special Lengths

If the length of a standard intermediate/extension section has to be shortened, use the following steps and illustrations as a guide for making special length cuts.

Step 1.Layout the cut and flange holes (both rails).

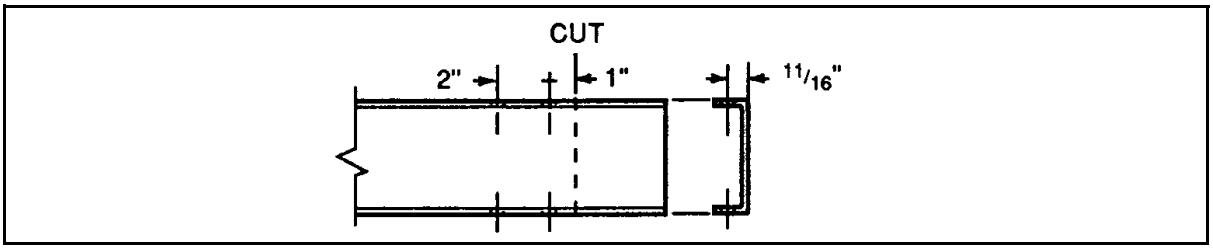


Figure G.50

Step 2.Drill (1) 1/8” diameter hole through the chain guide and side rail (see Figure G.42). Attach the chain guide to the rail, and drill or punch (8) 13/32” diameter holes in flanges. See Figure G.44 for attaching chain guide to the rail.

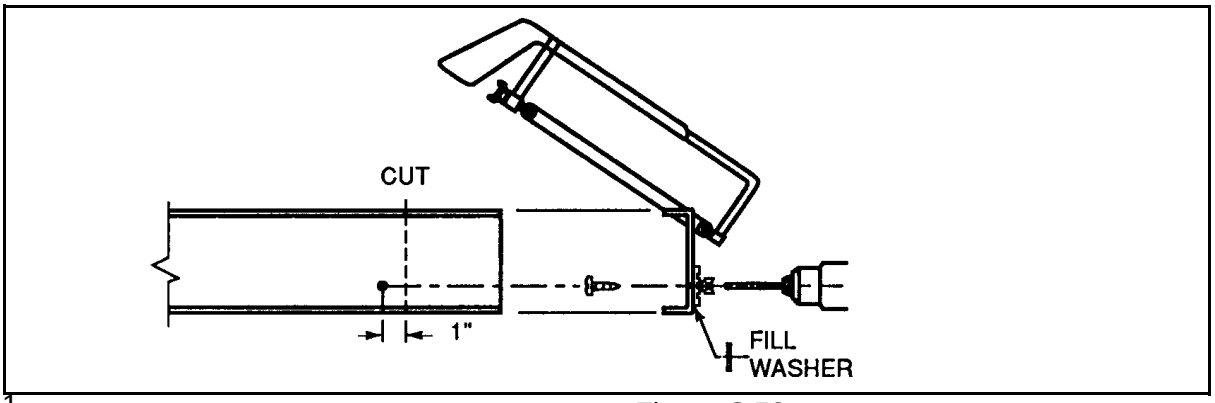


Figure G.51

Figure G.52

Step 3.Cut frame rails and chain guide using hack saw or portable band saw. Do not use a cutting torch.

Step 4.Bevel the “cut” end of the chain guide 60° (see Figure G.53).

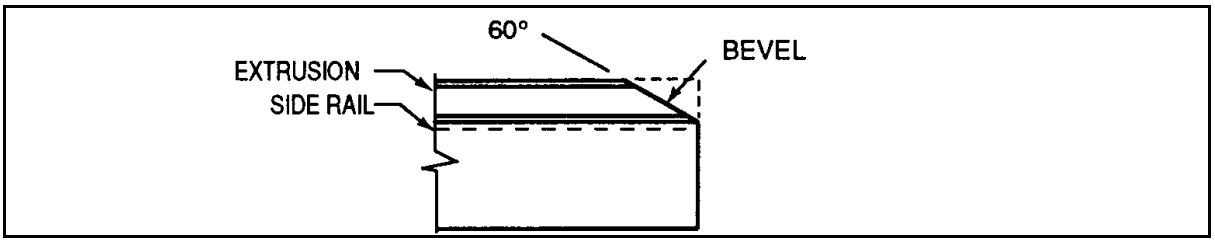


Figure G.53

Step 5. Attach the “special length” section to the adjoining components following the steps previously given.

Step 6. WARNING - Remove the drive wheel assembly if the sprocket is exposed and unguarded (see Figure G.54).

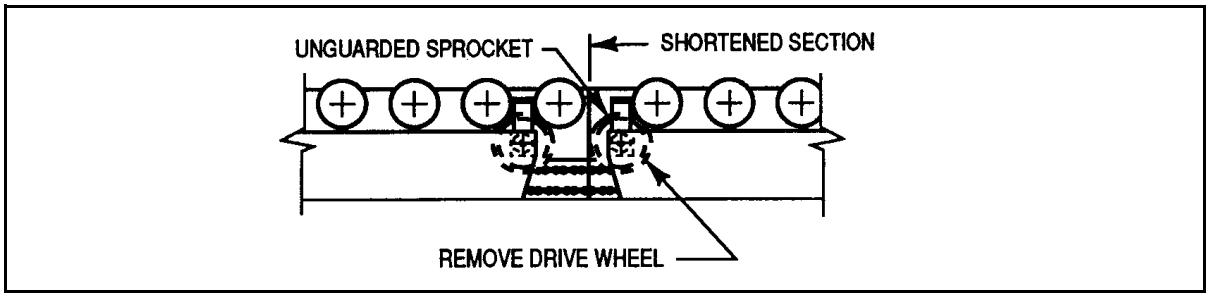


Figure G.54 – Removal of Unguarded Drive Wheel/sprocket

Step 7. Shorten/lengthen guard segments to guard chain and sprockets at the splice of the two sections (see Figure G.55 and Figure G.56).

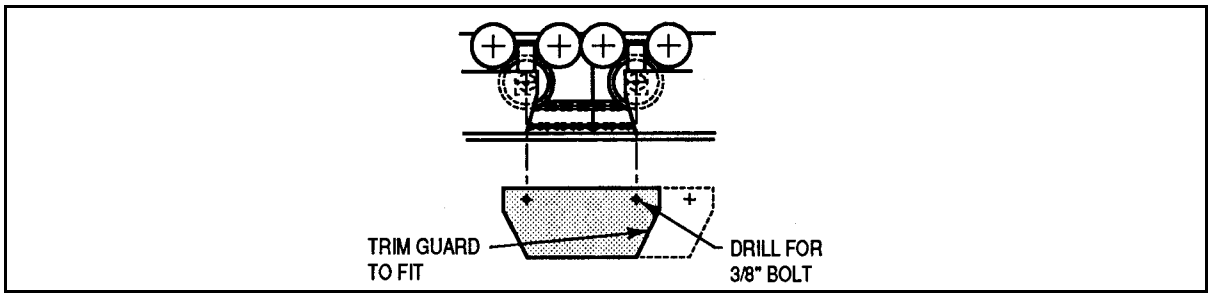


Figure G.55 – Shortened Guard Segment

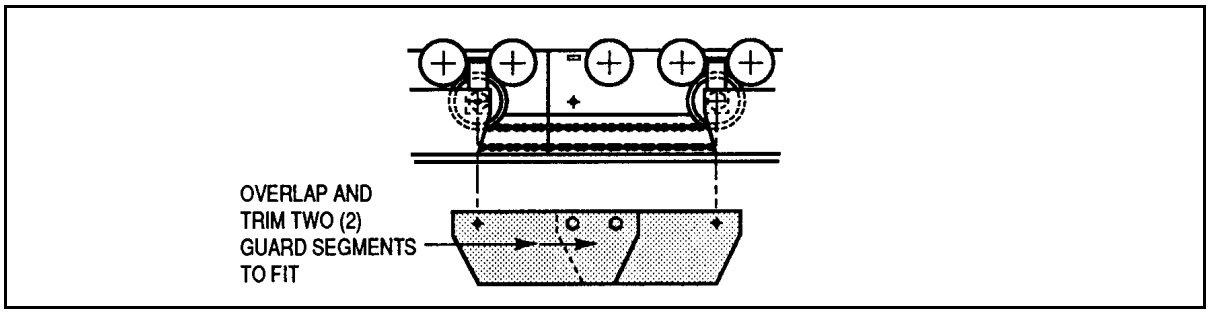


Figure G.56 – Lengthened Guard Segment

Note: Because the manufacturer has no control over special length cuts (which are a field modification), the customer/installer/end user is responsible for seeing that the drive components (chain and drive wheels/sprockets) are adequately guarded to assure personnel safety (see the “Safety Features” section.)

Step 8. (If required) Slave-drive non-powered roller from a “pair” of power rollers (as shown).

i

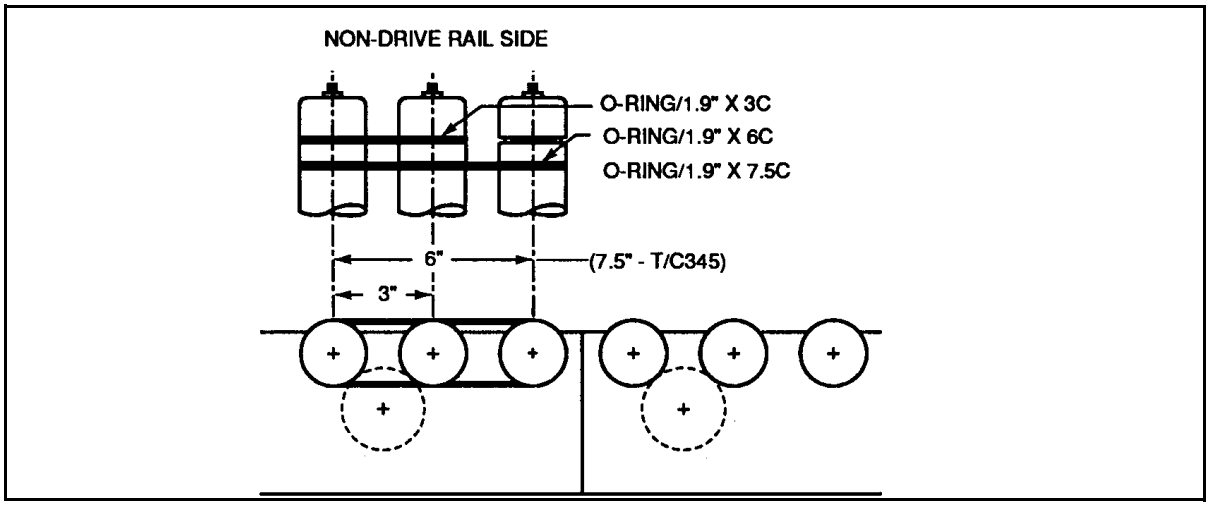


Figure G.57 – Order O-Rings/Grooved Rollers as Required for Conveyor With (“W”) and T/C Series

Power Unit/PTO Assembly

The Power Unit is shipped from the factory fully-assembled to the drive section. When installing, check the following before starting.

Lubricant

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

Reducer Plugs/Fittings

Check that the oil level and drain plugs are properly installed and sufficiently tightened. (Hub City reducers only) Check that the breather plug is properly installed and functioning.

CAUTION: Before working on a power unit or PTO unit, make certain the conveyor’s power disconnect is locked in open position and tagged to prevent accidental or unexpected application of power.

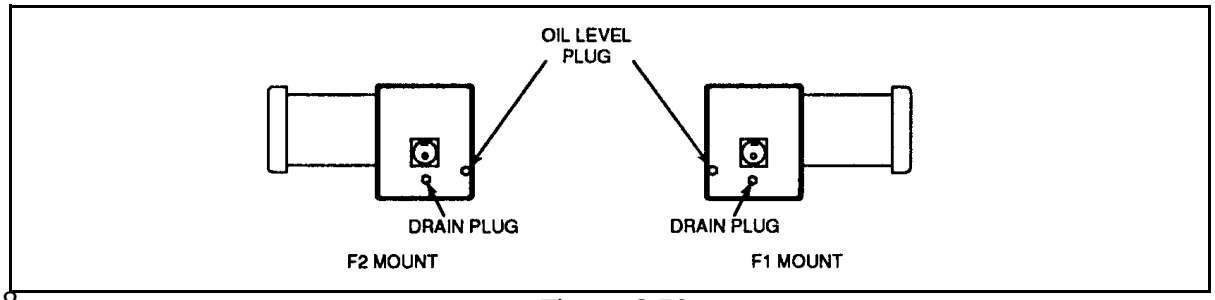


Figure G.58

Figure G.59

Check Sprocket Alignment / Set Screws / Chain Tension

Check sprocket alignment; check tightness of set screws, (internal drive sprocket), and/or taper lock hub, (power unit sprockets), fasteners (see Figure G.60 and Figure G.62). Check chain tension, adjust if necessary (see Figure G.61).

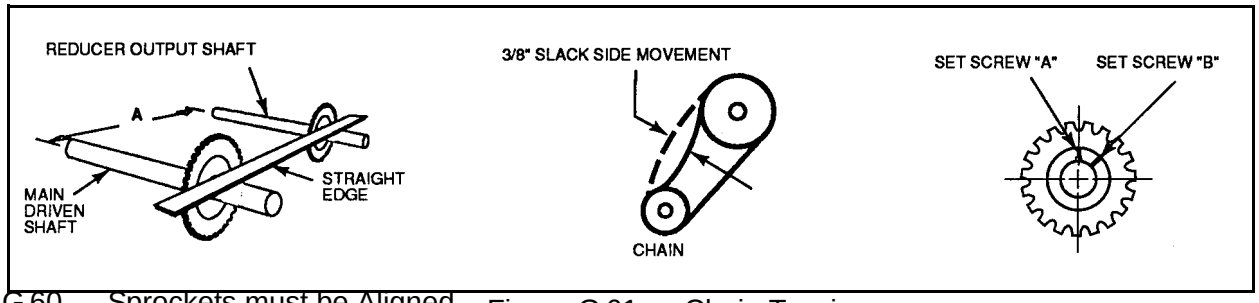


Figure G.60 – Sprockets must be Aligned.

Figure G.61 – Chain Tension Adjustment Shaft Must Be Parallel

Figure G.62 – Type B Sprocket/Hub

Set Screw Tightening Procedure

Use the following steps to tighten the set screws:

Step 1. "Snug-up" both set screws.

Step 2. Tighten (in sequence) set screw "A" 25%, "B" 50%, "A" 75%, "B" 100% and finally "A" 100% of recommended torque rating.

Table G.1 – Recommended Set Screw Torque

1/4"-20	5/16"-18	3/8"-16
70 inch-lbs.	130 inch-lbs.	230 inch-lbs.

PTO Unit Connection

Connect the end components of the two adjoining conveyors using a common floor support (see Figure G.63 and Figure G.64).

Note: BEFORE installing the drive chain as described below, check that the "driver" conveyor is wired to provide the desired "travel". See subsection "Electrical Wiring" in this section.

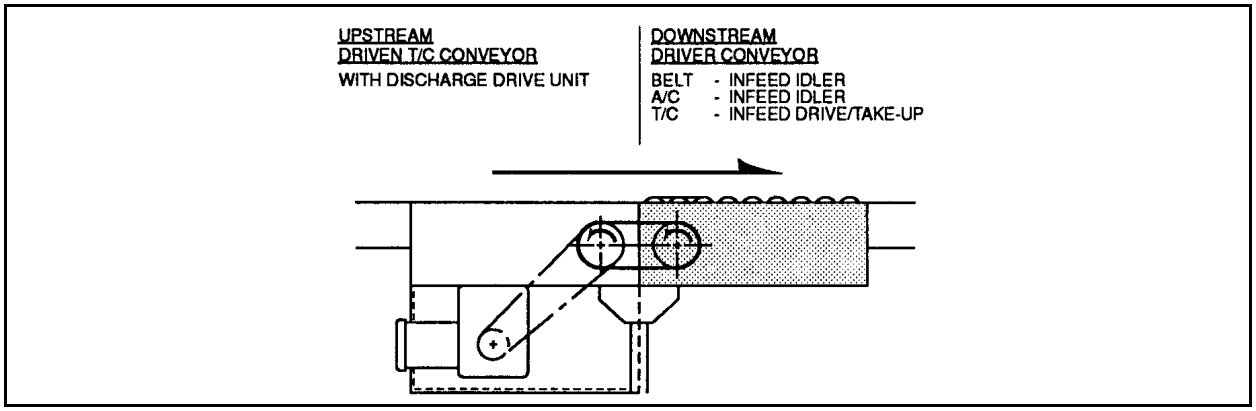


Figure G.63 – Discharge Drive Unit, Direct-Rotation PTO Infeed Drive Unit, Direct-Rotation PTO - (not shown)

PTO Unit Assembly

Drive Chain Connection

Based upon the end drive type of the “driven” (T/C) conveyor and the “driver” conveyor type (belt, A/C, T/C), route and connect the chain as described.

Direct-Rotation PTO Unit

Install the chain around the Driver Sprocket and Driven Sprocket as shown in Figure G.65.

Clutch-Equipped PTO Units

Both direct-rotation and counter-rotation type PTO units may be supplied with a solenoid-actuated, wrap-spring clutch assembly. Check sprocket alignment, install chain as described above, and wire 115V control solenoid.

Chain Guard Installation

When mechanical and electrical installation is complete, install the chain guard (see Figure G.64).

Note: The width of the chain guard is 3” or 5-1/4” (for clutch-equipped units).

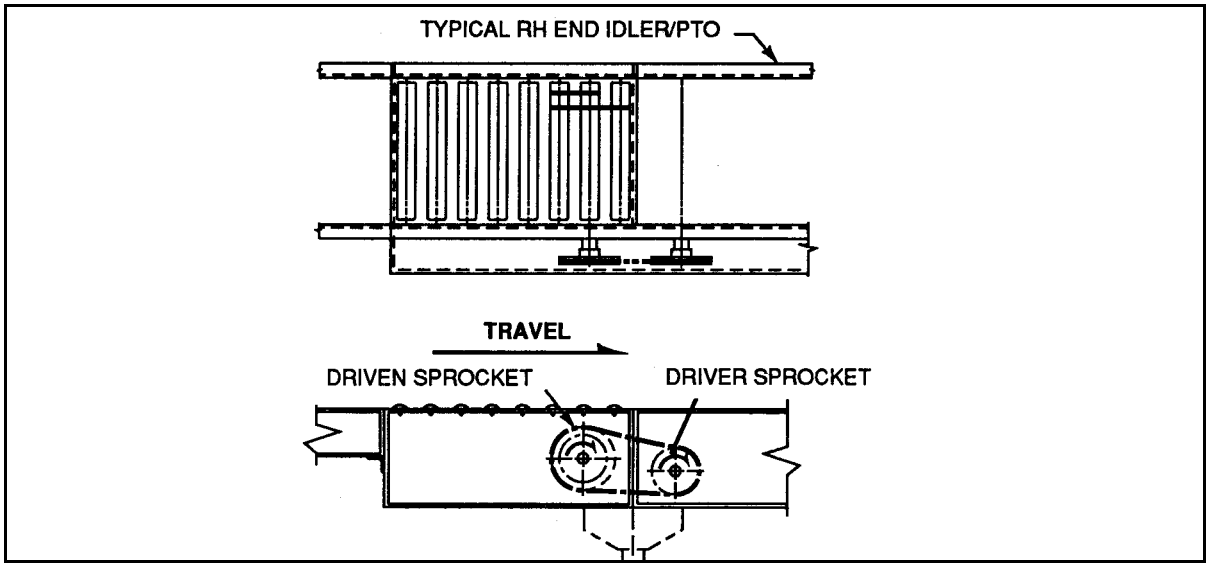


Figure G.64 – Direct-Rotation Type PTO Shown With Discharge Drive Unit (Without Optional Clutch).

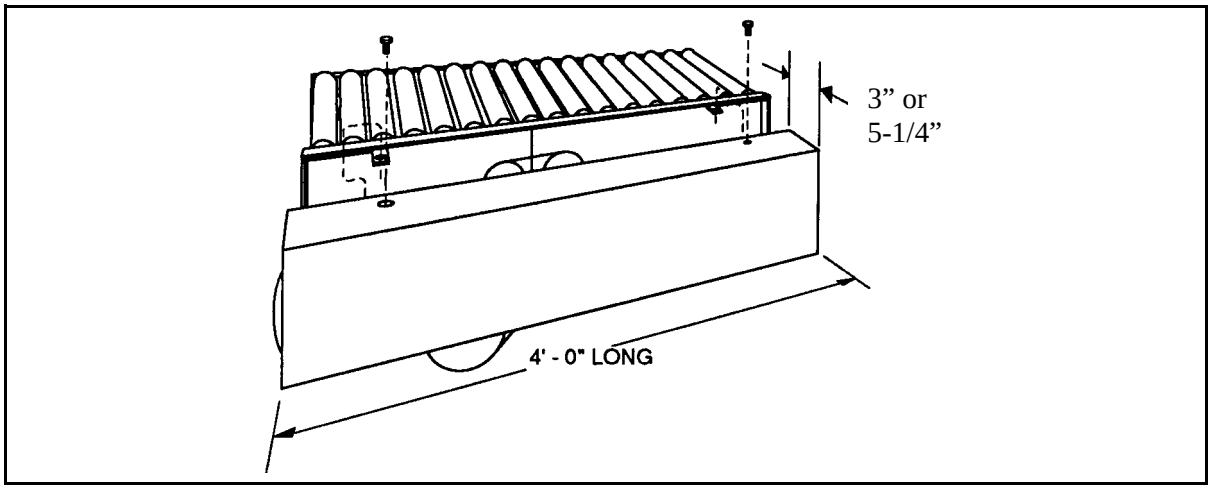


Figure G.65 – PTO Chain Guard

Pre-Start-up Preparation

To ensure the proper operation of a T/C conveyor, the following steps should be performed BEFORE the conveyor is first turned on.

Electrical Wiring

Step 1. Wire motor/starter, PTO clutch and/or other required electrical devices in accordance with the National Electrical Code. Wiring information is supplied by the manufacturers.

Step 2. Check “driver” sprocket rotation. See Figure G.66 and Figure G.67.

- Remove chain guard and disconnect the drive chain.
- Apply electrical power momentarily to determine that motor wiring provides required rotation of reducer output shaft. Change wiring leads if rotation is not correct.

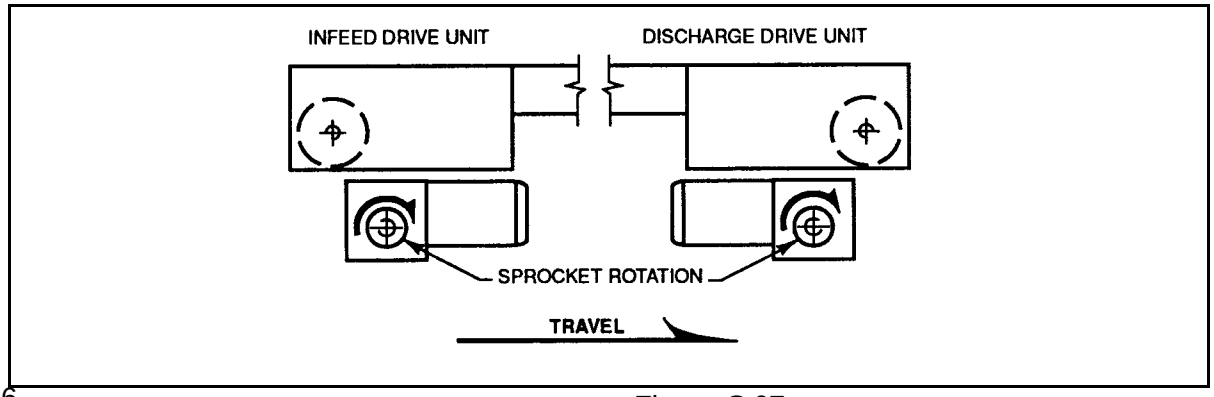


Figure G.66

Figure G.67

Power Unit/PTO Assembly

Step 1. Check the power unit (or PTO Unit) is properly assembled and ready to be put into operation. See subsection “Power Unit/PTO Assembly” in this section.

Chain Tension Adjustment - Discharge Drive Unit (DISDU)

Step 1. Adjust take-up sprocket until the tensioner spring is compressed to 3-1/2" (see Figure G.68 and Figure G.69).

Step 2. If adjusting the take-up does not cause the tensioner spring to compress, check that all chain link connections have been properly made. See subsection "Chain Connection/Splicing" in this section.

Step 3. If the amount of take-up adjustment is not sufficient to compress the spring to the 3-1/2" length, remove several inches of chain and re-adjust.

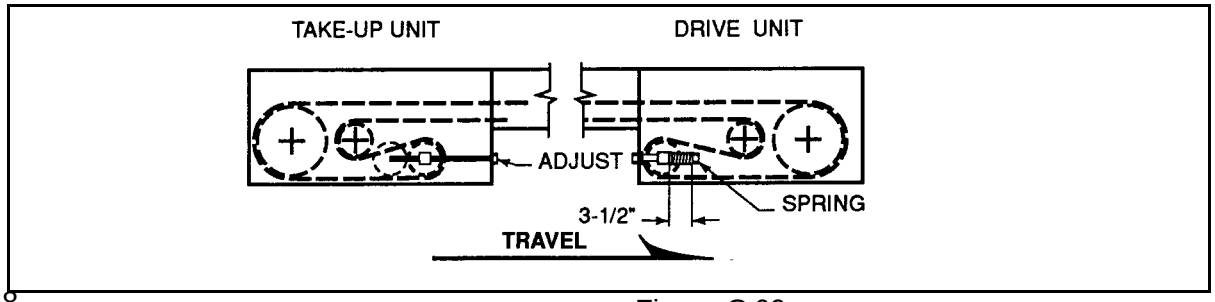


Figure G.68

Figure G.69

Chain Tension Adjustment - Infeed Drive Unit (INDU)

Step 1. Adjust take-up sprocket until the tensioner spring is completely compressed; then back off (loosen) take-up screw one (1) turn (see Figure G.70).

CAUTION: Do not over tighten the chain.

Step 2. If adjusting the take-up does not cause the chain to tighten, check that all chain link connections have been properly made. See subsection "Chain Connection/Splicing" in this section.

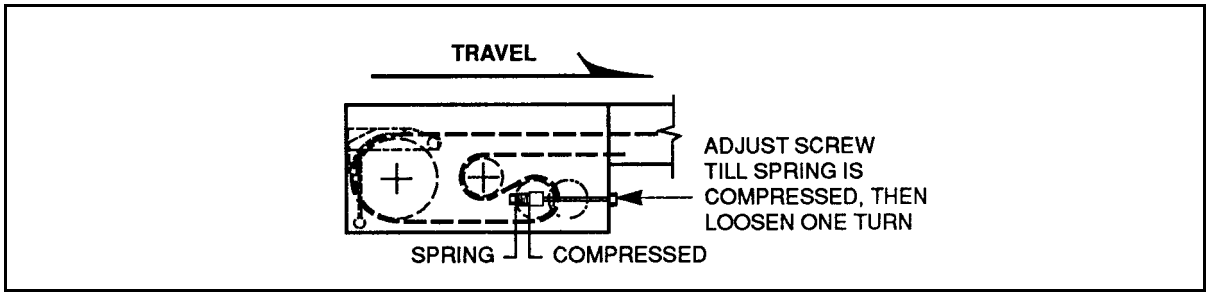


Figure G.70 – Infeed Drive Unit

Chain Tension Adjustment - S-Curves and Parallel Junctions

Both S-curves and parallel-type junctions have two internal drive chains. A separate chain take-up or tensioner is used to tension each chain.

The take-up location for each conveyor type is shown in Figure G.71. Follow the appropriate principles (given above) for “Discharge Drive Unit” or “Infeed Drive Unit”.

CAUTION: Do not over tighten the chain.

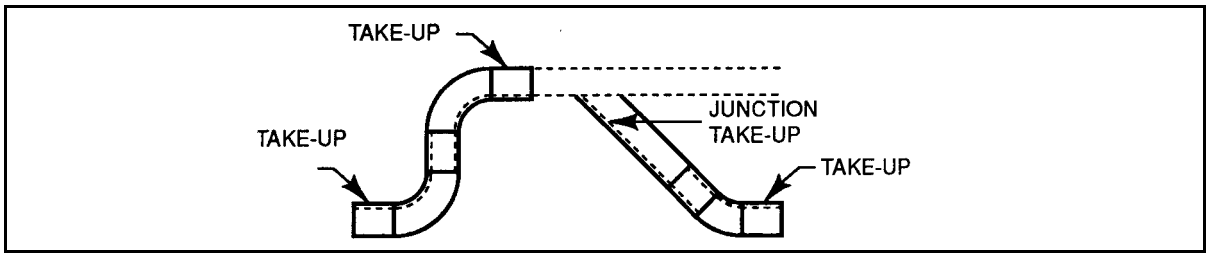


Figure G.71 – Take-up Tensioner Locations

Make Conveyor Safe/Ready For Test Run

Step 1. Install all protective guards and rollers except those in drive unit (to allow viewing of chain and drive sprocket during initial test run).

Step 2. Remove all tools and/or foreign objects from the conveyor.

Jog the Conveyor

Step 1. Run the conveyor momentarily and:

- Check that the conveyor is running in the right direction. If not, change the wiring leads to reverse the motor rotation.
- Check that both runs of chain are moving. If not, check for missing chain link connections.

Step 2. Remove all tools and/or foreign objects from the conveyor.

Conveyor Start-Up - Test Run

To check that each T/C conveyor has been assembled and installed correctly and is operating properly, the conveyor should be turned on and tested using the following steps.

Note: If a curve/junction is powered by an adjoining conveyor:

- first disconnect the PTO drive chain and test run the “driver” conveyor; then
- attach the drive chain and test the “driven” conveyor.

Step 1. Alert workers in area (see Caution Note)

CAUTION: Alert all personnel in the area that the conveyor is about to be started. Instruct them to stand clear of all moving parts.

Step 2. Start the conveyor and check the following:

- All “driven rollers” are powered.
- Conveyor runs smoothly and quietly with no unusual noises (reducer, bearings, etc.).

Step 3. Make any corrections required.

Step 4. Install chain guards and rollers not installed for the test run.

The conveyor is now ready to be put into operation as part of the total conveyor system.

Step 5. Personnel Training

The conveyors should be operated only by trained personnel. They must be knowledgeable about each conveyor and its intended use as well as the operation of the total system. They must know what steps are to be taken in an emergency situation.

SECTION H: MAINTENANCE

Recommended service checks and equipment maintenance are outlined below for typical, intermittent-duty conveyor applications. Additional maintenance and servicing schedule adjustments may be required for continuous-duty operation or extreme environmental conditions.

All newly installed equipment should be frequently inspected and serviced as needed during the first 40 hours of operation; thereafter, an appropriate maintenance program should be established and followed (see Table H-1).

Maintaining separate service log sheets on each type of conveyor is recommended for plants operating more than one shift. Each log sheet should show dates, detailed inspection service information, and name or initials of person(s) performing the equipment inspection or service for future reference.

CAUTION: 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 of chain tension, it is NOT necessary to have the conveyor turned ON in order to perform any of the work described in this section.

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 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.

Table H-1 – Scheduled Maintenance

	Components	Item Check									
		Lubrication	Oil Level	Tension	Wear	Alignment	Fasteners	Set Screws	Proper Position	Physical Condition	Operation
Weekly	Carrier Rollers									X	X
	Drive Chain - Internal	X		X						X	
	Electrical Devices								X	X	X
	General Structure						X			X	
	Power Unit - Reducer		X								
	Safety Guards/Devices								X	X	X
Monthly	Bearings - External						X	X		X	
	Power Unit Chains and Sprockets	X		X	X	X	X	X		X	
	Power Unit - Motor						X			X	
	Power Unit - Reducer						X			X	
	Supports and Hangers						X			X	
Semi Annually 1040 Hrs.	Bearings - External	X									
	Power Unit - Motor	X									
	Power Unit - Reducer	X	X								

Scheduled Maintenance

Intervals indicated for performing 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.

Initial Startup & 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.

CAUTION: 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.

Power Unit Reducer

Reliance RELIALUBE®

This unit is supplied with “lifetime” synthetic lubricants (Reliance = 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).

Hub City

After the first 100 hours of operation, drain and flush out the gear case with an approved non-flammable, non-toxic solvent. Refill with fresh lubricant. These units are supplied with Hub City’s “All Temperature Synthetic Gear Lubricant” (Mobile SHC-634). Consult Hub City if replacing the Hub City synthetic lubricant with another brand of premium gear lubricant.

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 plugs before putting the unit back into operation.

Daily Inspections

General walk-through inspections of the conveyor equipment during daily plant operation is 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. Any unusual conveyor noise, oil leaks, and operational problems should be immediately reported and promptly corrected.

Weekly Inspections

Carrier Rollers

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

Electrical Devices

Photocells, proximity sensors, limit switches, etc. should be periodically inspected and adjusted as needed. Lenses and reflectors on photoelectric devices should be wiped clean on a daily basis. For additional maintenance provisions, refer to the appropriate vendors instructions provided.

General Structure/Operation

Check the conveyor's physical condition, looking for lose fasteners, damaged or wearing components, build-up of dust and product spillage. 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 of hesitation.

Power Unit Reducer

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

Drive Chain - Internal

Check/adjust tension of internal drive chain. Inspect the chain for need of lubrication. If required, lubricate the chain (lightly) with SAE30 oil. Do not use grease.

Safety Guards/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.

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.

Power Unit Chain and Sprockets

Check tension per instructions given in “chain Maintenance” label located on the inside of the chain guard. Remove dirt or dried oil with a kerosene soaked rag.

Inspect the chain for need of lubrication. If required, lubricate the chain (lightly) with SAE30 oil; do not use grease.

Check sprocket 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.

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 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 ONLY - Wipe off any dirt on the breather plug which could clog the unit and interfere with its operation.

CAUTION: Chain tension must be check while the conveyor is running with and/or guards removed. When checking, be careful to stay clear of the chain and drive components.

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.

Semi Annual Maintenance

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 the all bearing housing. 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.

Power Unit Motor

Units up to 5 HP are lubricated for life. For 7.5 HP and 10 HP motors, refer to the manufacturer's motor lubrication plate or operating instruction tag wired to the motor.

Power Unit Reducer (Hub City ONLY)

Drain and refill with fresh gear lubricant. These units are filled with "All Temperature Synthetic Gear Lubricant", supplied by Hub City. Consult Hub City if replacing the Hub City Synthetic lubricant with another brand of premium gear lubricant.

Troubleshooting

Basic troubleshooting provisions are outlined below. For troubleshooting for the specific conveyor system installed, always check the maintenance information. Basic troubleshooting is outlined in Table H-2.

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 tagout the conveyor operation control(s) before attempting to correct any malfunction.

Table H-2 – Basic Troubleshooting Problems and Solutions

Problem	***Cause***	***Solution***
Conveyor does not start.	Electrical power shut off or control circuit NOT energized.	Check that system control panel(s) are energized. Be certain emergency stop devices are not activated.
	System control devices (photocells, limit switches, etc.) out of adjustment or defective.	Adjust or replace.
	Motor overload block open.	Check conveyor drive system and overload sizing before resetting.
Conveyor shuts off.	Accumulation photocell or other control device(s) actuated or defective.	Check conveyor accumulation or obstruction of control device; replace control device if defective.
	Emergency stop activated.	Correct condition and reset according to control logic.
	Power or component failure at system control center.	Refer to vendor manuals.
	Motor overload.	Check conveyor drive system and overload sizing before restarting.
Conveyor roller(s) not turning	Roller obstruction.	Remove obstruction and inspect roller for damage.
	Roller bearing failure.	Replace roller bearings.
	Dirty rollers.	Clean rollers and/or driver thoroughly. See Installation of Driver.
Gearmotor unusually noisy	Mounting bolts are loose.	Retighten mounting bolts.
	Unit misaligned or defective.	Realign or replace.
	Insufficient lubrication.	Lubricate gear motor. Refer to vendor tags on gear motor.

Table H-2 – Basic Troubleshooting Problems and Solutions

Problem	***Cause***	***Solution***
Gearmotor runs hot or overheats	Overload.	Check air pressure to take-up cylinder, check intermediate air pressure (15 psi). Lubricate the chain. Check sprocket bearings and proper engagement of chain with sprockets. Reduce load.
	High or low power voltage.	Refer to the motor nameplate for proper voltage and test with voltmeter.
	Inadequate ventilation or insufficient lubrications.	Service the unit.
Chain chatters or jumps off sprocket	Take-up is not functioning properly.	Check for free travel of take-up sled.
	Alignment between drive sprocket and chain is incorrect.	Check and, if necessary, adjust alignment.
	Chain worn out.	Check chain elongation and replace if required.
Excessive sprocket wear	Chain worn out (wears chain tooth profile).	Check chain elongation and replace if required.
	Alignment between sprocket and chain is incorrect (wears sprocket face).	Adjust sprocket alignment.
Excessive chain wear	Misalignment of sprocket (wears inner side of bushing link plates).	Check and, if necessary, adjust alignment.
	Inadequate chain lubrication (causes chain to elongate).	Lubricate chain.

SECTION I: SPARE PARTS

Introduction

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

The following pages illustrate the location of these recommended spare parts as they apply to each particular unit. Keep in mind that these illustrations apply to the standard product line only.

End Drive Units

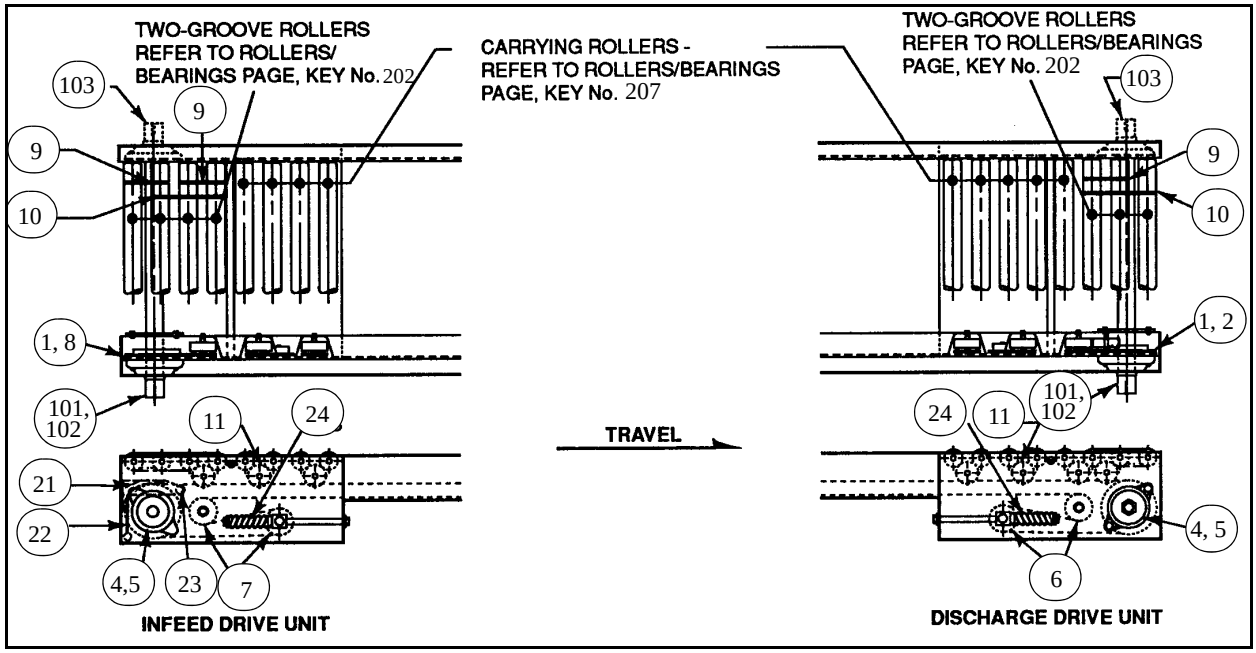


Figure I - 1 – Infeed Drive Units and Discharge Drive Unit

Bed Sections and Power Transfer Unit

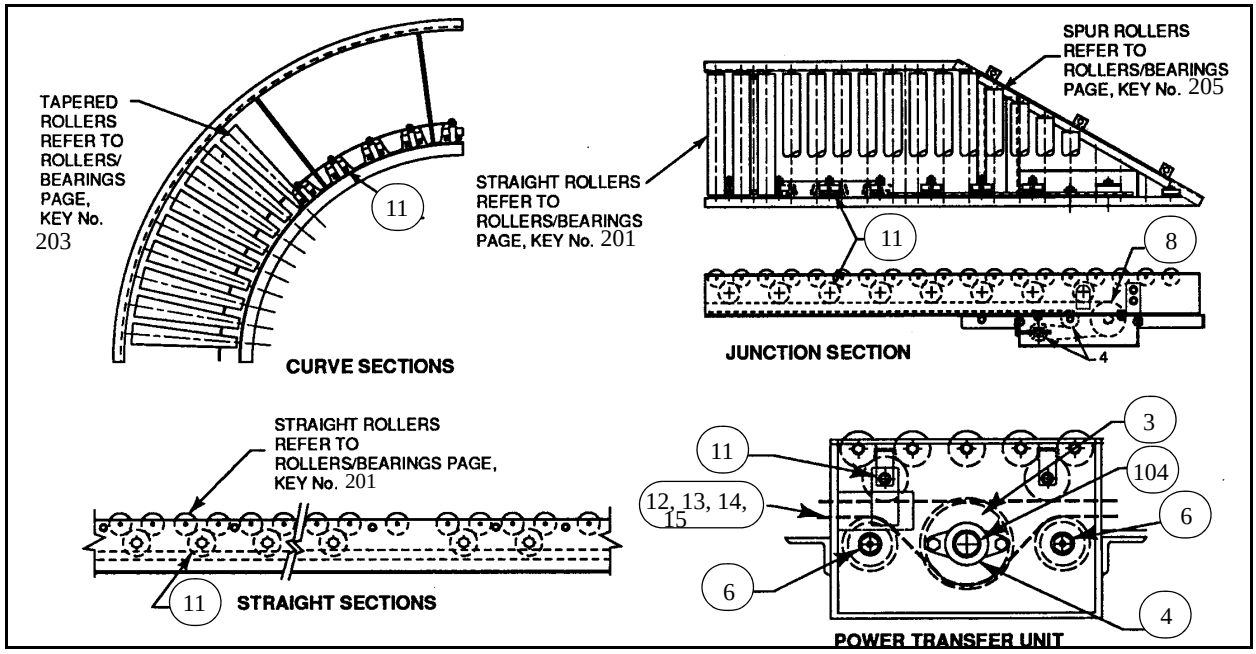


Figure I - 2 – Curve Sections, Straight Sections, Junction Section and Power Transfer Unit

End Take-Up Units

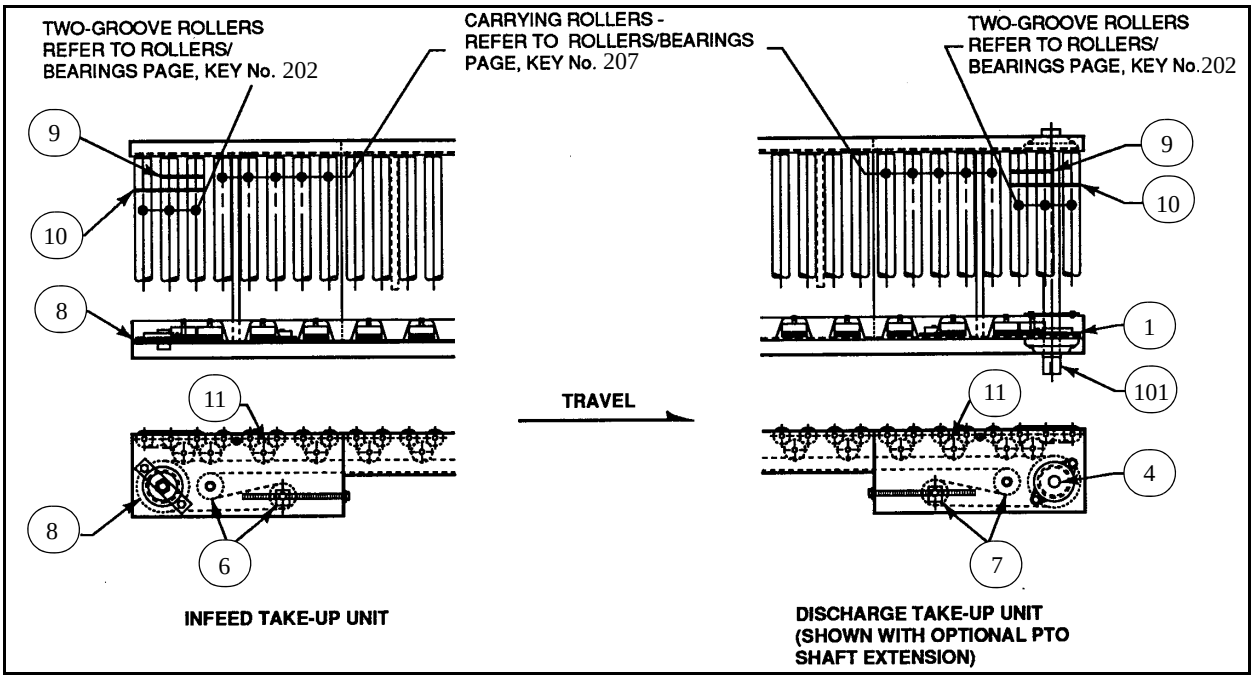


Figure I - 3 – Infeed Take-Up Unit and Discharge Take-Up Units

PRS Powered Roller Skew Conveyor

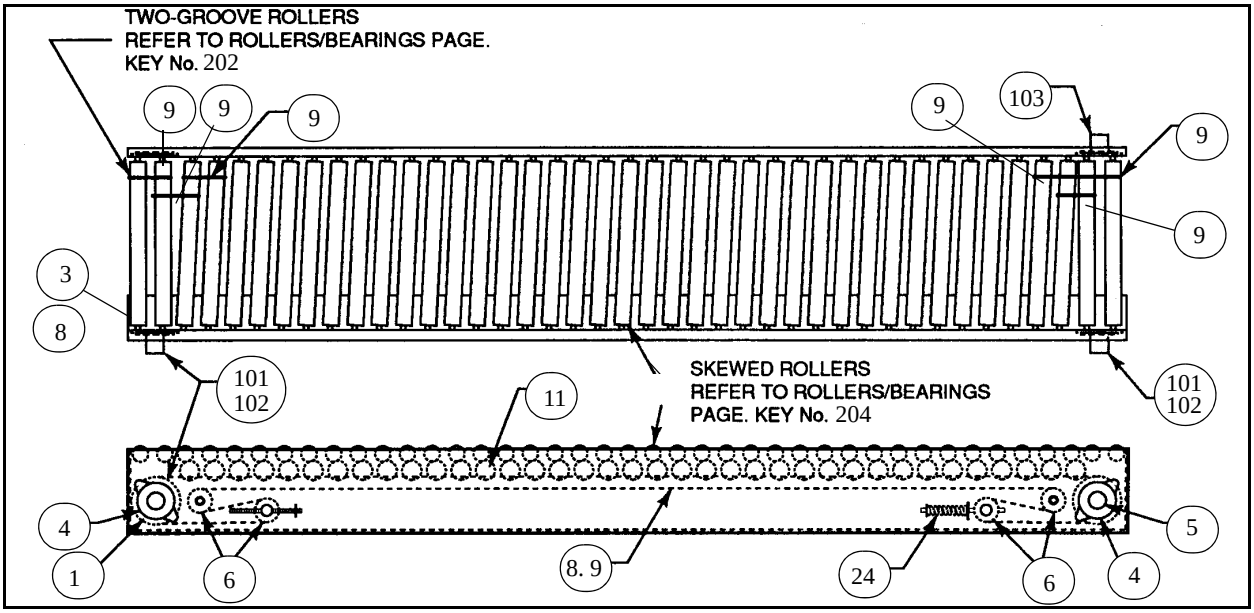


Figure I - 4

Power Units

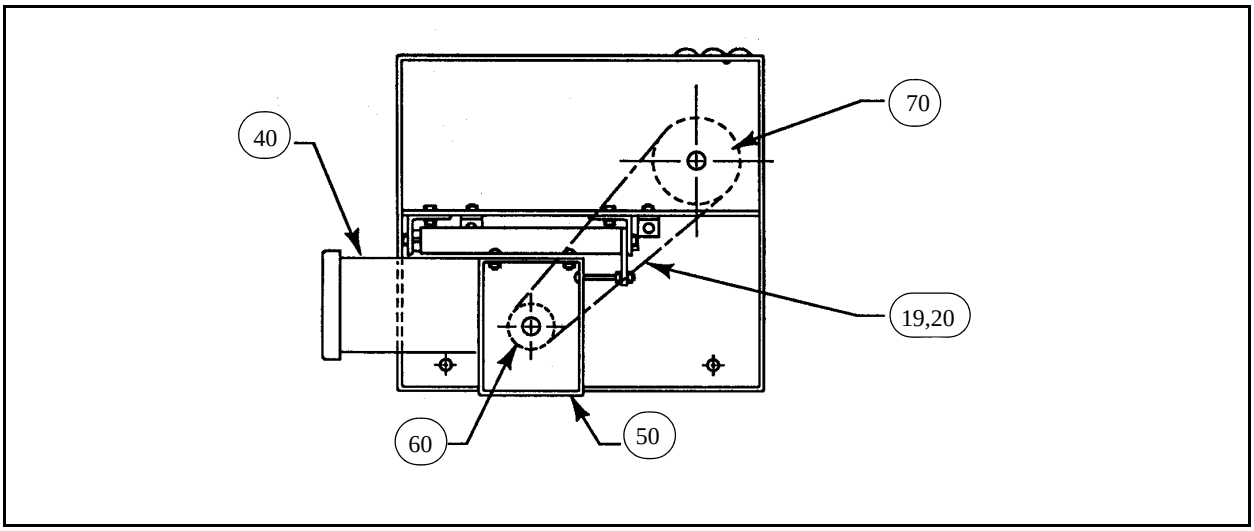


Figure I - 5 – Power Unit - Underhung Mount

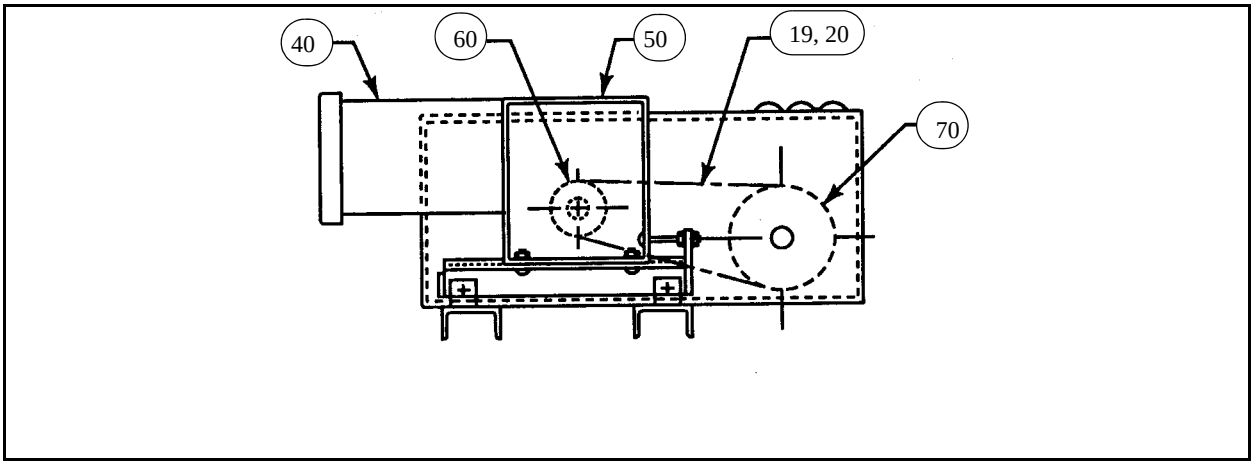


Figure I - 6 – Power Unit - Side Mounted

Power Take-Off Units

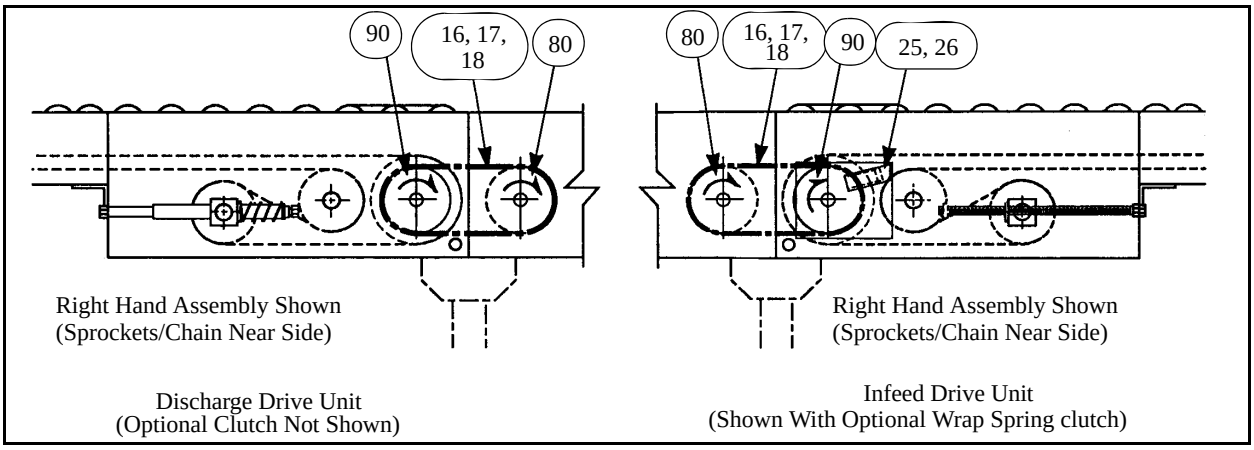


Figure I - 7 – Discharge Drive Unit (Left) and Infeed Drive Unit (Right) with Power Take-Off Units

Table I.1 – Wrap Spring Clutch Designation

PTO Unit Assembly	Drive Unit Type	
	Infeed	Discharge
RH	CCW	CCW
LH	CW	CW

CW = Clockwise Clutch Rotation
CCW = Counterclockwise Clutch Rotation

Non-Width Related Parts

Key No.	Part Description	Part Number
COMMON PARTS (NON-WIDTH RELATED)		
1	Drive Sprocket - H40B35, 1-7/16” BR, KW, SS	74-3191
2	Drive Sprocket - H40B35, 1” BR, DW, SS	74-3180
3	Drive Sprocket - H40B30, 1-7/16” BR, DW, SS	74-3166
4	Flange Bearing - 2-Bolt, 1-7/16” BR, Grease-Packed	40-0987
5	Flange Bearing - 2-Bolt, 1” BR, Grease-Packed	40-0980
6	Idler Sprocket - HB40A17, 5/8” BR, Grease-Packed	74-2932
7	Idler Sprocket - HBB40A25, 5/8” BR, Grease-Packed	74-2931
8	Idler Sprocket - HB40A35, 5/8” BR, Grease-Packed	74-2934
9	O-Ring/1.9” x 3C - 10-1/4” (3” Roller Center)	00-0002
10	O-Ring/1.9” x 6C - 15-5/8” (6” Roller Center)	00-0004
11	Drive Wheel - No. DW1 (0° to 150°F)	37-1095
	Drive Wheel - No. DW3 (-20° to 0°F)	37-0933
12	Chain - Side Bow RC40 (Style 5-21 Curves/Junctions)	20-0561
	Chain (High Speed/Cold Room/Freezer)	20-0581
13	Chain Coupler - RC40 (Side Bow)	20-0566
14	Chain - RC40 (Style 1/1P/PRS Conveyors)	20-0551
	Chain - (High Speed/Cold Room/Freezer)	20-0571
15	Chain Coupler - RC40	20-0020
16	Chain RC-50 (PTO Unit)	20-0983
17	Chain Coupler - RC-50	20-0984
18	Chain Offset Link - RC-50	20-0260
19	Chain - RC-60 (Power Unit)	20-0985
20	Chain Coupler - RC-60	20-0986
21	Chain Guide - UHMW	64-8862
22	Extension Spring - #310	31-0461
23	Tensioner Slide - UHMW	64-8863
24	Compression Spring - #55	31-0259
26	Wrap Spring Clutch CW	30-0072
26	Wrap Spring clutch CCW	30-0074
27	Grease, Lubriplate 110, 10 oz. Tube*	00-0035
28	Drive Wheel Axle	69-2603
29	Drive Wheel Shingle Guard	67-5108
30	Chain Track Extrusion - UHMW	67-5100
31	Chain Track Extrusion Mounting Bracket	67-5102
32	Finger Guard Clip	67-5104
33	Paint - Medium Gray, 5 Gal.	00-0008
34	Paint, Medium Gray, Spray Can	00-0009

Key No.	Part Description	Part Number				
40	Power Unit - C-Face Motor	Standard Motor		Brake Motor (Kit)		Horton Clutch/ Brake
		Reliance		Reliance		
	1/2 HP 56-C - 230-460/3/60	33-0601		(33-0903)		4870723
	3/4 HP 56-C - 230-460/3/60	33-0774				
	1 HP 56-C - 230-460/3/60	33-0775				
	1.5 HP 145-C - 230-460/3/60	33-0607		(33-0906)		4870724
	2 HP 145-TC - 230-460/3/60	33-0613				
	3 HP 182-TC - 230-460/3/60	33-0617		33-0619		NA
	5 HP 184-TC - 230-460/3/60	33-0621		33-0623		
50	Power Unit - C-Face Reducer					

Ratio	Frame		Reliance		Hub City	
	Red.	Motor	K1	L1	B	C
5:1	175ES	56C	81-0751	81-0752		
	175ES	140TC	81-0753	81-0754		
	17	56C				
	17	145TC				
10:1	175ES	56C	81-0755	81-0756		
	17	56C				
	200ES	140TC	81-0169	81-0770		
	262	140TC	81-0893	81-0894		
	26	145TC				
	350	180TC	81-0952	81-0953		
	37	182TC				
	454	182TC			81-1278	81-1279
15:1	175ES	56C	81-0757	81-0758		
	17	56C				
	262	140TC	81-0919	81-0939		
	26	140TC				
	350	140TC	81-0871	81-0872		
	350	180TC	81-0920	81-0940		
	37	140TC				
	37	180TC				

Key No.	Part Description		Part Number			
50	Power Unit - C-Face Reducer					
	Ratio	Frame		Reliance		Hub City	
		Red.	Motor	K1	L1	B	C
	20:1	175ES	56C	81-0759	81-0760		
		17	56C				
		262	56C	81-0906	81-0926		
		26	56C				
		350	140TC	81-0910	81-0930		
		37	145TC				
	25:1	262	56C	81-0879	81-0880		
		26	56C				
	30:1	175ES	56C	81-0763	81-0764		
		17	56C				
		262	56C	81-0907	81-0927		
		26	56C				
		350	140TC	81-0911	81-0931		
		37	145TC				
	40:1	350	56C	81-0863	81-0864		
		37	56C				

Key No.	Sprockets - Hardened Teeth w/Taper Lock Hubs - Part Numbers							
60	**Power Unit - Driver Sprocket**			**Sprocket Bore / Part Number**				
	Sprocket		**TL Hub No.**	**7/8”**	**1”**	**1-1/8”**	**1-1/2”**	**1-5/8”**
	RC-60	11T	No. 1008	74-5631				
	RC-60	12T	No. 1008	74-5632				
	RC-60	13T	No.1210	74-5633	74-5633	74-5633		
	RC-60	15T	No. 1610				74-5635	74-5635
	RC-60	16T	No. 1610	74-5636	74-5636	74-5636	74-5636	74-5636
	RC-60	17T	No. 1610				74-5637	74-5637
	RC-60	18T	No. 1610	74-5638	74-5638	74-5638	74-5638	74-5638
	RC-60	19T	No. 1610				74-5639	74-5639
	RC-60	21T	No. 2012			74-5641	74-5641	74-5641
	“TL” Hub		No. 1008	23-0701				
			No. 1210	23-0716	23-0717	23-0718		
			No. 1610	23-0746	23-0597	23-0578	23-0753	23-0751
			No. 2012			23-0778	23-0785	23-0787
70	**Power Unit - Driven Sprocket**			**Sprocket Bore / Part Number**				
	Sprocket		**TL Hub No.**	**1-7/16”**				
	RC-60	24T	No. 2012	74-5644				
	“TL” Hub		No. 2012	23-0781				
80	**PTO Unit - Driver Sprocket/Hub**			**Sprocket Hub Bore / Part Number***				
	Sprocket/Hub		**DR Conveyor**	**1-7/16”**	**1-11/16”**			
	RC-50	17T	A/CQ	74-5819				
			BCR/S Ser. 600	74-5819				
			BCR/S EIU All	74-5819				
			BCR/S Ser. 800		74-5820			
90	**PTO Unit - Driven Sprocket/Hub**			**Sprocket Hub Bore / Part Number***				
	Sprocket/Hub		**T/C Conveyor**	**1-7/16”**	**1-3/4”**			
	RC-50	17T	without Clutch	74-5819				
			with Clutch**		74-5823			

* Includes Taper Loc Hub

** Type A Plate Sprocket (Bolts to Wrap-Spring clutch)

Width Related Parts

Key No.	Part Description	Part Number				
PARTS - WIDTH RELATED		**16” W**	**22” W**	**28” W**	**34” W**	**40” W**
DRIVE SHAFT - END DRIVE UNITS AND END TAKE-UP UNITS W/PTO						
101	Single Extension - P.U.; PTO (1-7/16” dia.)	69-3155	69-3156	69-3157	69-3158	49-3159
	Plated (For Cold-Room Applications)	69-3160	69-3161	69-3162	NA	NA
102	Single Extension - PTO/Clutch (1” dia.)	69-2684	69-2685	69-2686	69-2687	69-2688
	Plated (For Cold-Room Applications)	69-0175	69-0176	69-0177	NA	NA
103	Double Extension - P.U./PTO (1-7/16” dia.)	69-3184	69-3185	69-3186	69-3187	69-3188
	Plated (For Cold-Room Applications)	69-3189	69-3190	69-3191	NA	NA
SHAFT - POWER TRANSFER UNIT						
104	No Extension (Power Transfer Units)	69-3201	69-3203	69-3205	69-3207	69-3216
	Plated (For Cold-Room Applications)	69-3202	69-3204	69-3206	NA	NA

Key No.	Roller Width "W"	Part Description and Number						
		Roller Number - Suffix						
		G	G-CR	HS	HS-CR	FZ	AB	GT
PARTS - WIDTH RELATED - BEARINGS/ROLLERS								
BEARINGS ONLY (Bearing No. & Part No.)								
No. G196 Roller		35-0253		35-0255		35-0256	NA*	35-0254
No. G254 Roller		NA		0999100		35-0296	35-0824	NA
No. G196 - Straight Carrier Rollers (Full Width "W")								
201	16"	50-5306	50-6906	50-5331	50-7106	50-5606	6114316	50-5326
	22"	50-5320	50-5342	50-5332	50-5345	50-5336	6114322	50-5327
	28"	50-5315	50-6915	50-5333	50-7115	50-5615	6114328	50-5328
	34"	50-5325	NA	50-5334	NA	NA	6114334	50-5329
	40"	50-5335	NA	50-5337	NA	NA	6114340	50-5330
No. G196 - Straight Grooved Rollers (Full Width "W")								
202	16"	50-3276	50-3450	50-3286	50-3453	50-3447	50-3291	50-3281
	22"	50-3277	50-3451	50-3287	50-3454	50-3448	50-3292	50-3282
	28"	50-3278	50-3452	50-3288	50-3455	50-3449	50-3293	50-3283
	34"	50-3279	NA	50-3289	NA	NA	50-3294	50-3284
	40"	50-3280	NA	50-3290	NA	NA	50-3295	50-3285
No. G254 - Tapered Rollers (Full Width 'W")								
203	16"	Use HS / HS-CR		50-2050	50-2055	50-2065	50-2060	NA
	22"	Use HS / HS-CR		50-2051	50-2056	50-2066	50-2061	NA
	28"	Use HS / HS-CR		50-2052	50-2057	50-2067	50-2062	NA
	34"	Use HS		50-2053	NA	NA	50-2063	NA
	40"	Use HS		50-2054	NA	NA	50-2064	NA
No. G196 - PRS Skewed Rollers								
204	16-1/8"	50-3394	50-6894	50-4694	50-7094	50-5594	50-2268	50-2267
	22-1/8"	50-2269	50-2274	50-2271	50-2275	50-2272	50-2273	50-2270
	28-3/16"	50-2276	50-2281	50-2278	50-2282	50-2279	50-2280	50-2277
	34-1/4"	50-5340	NA	50-2284	NA	NA	50-2285	50-2283
	40-5/16"	50-2286	NA	50-2288	NA	NA	50-2289	50-2287

(*) All No. G196AB rollers have "crimped" ends. Therefore, the bearings are non-replaceable. Order complete roller.

LEGEND:

G	=	Grease-Packed	AB	=	Precision ABEC-1 Brg.	GT	= Teflon-Sealed
G-CR	=	Cold Room	HS	=	High-Speed		
FZ	=	Freezer	HS-CR	=	High-Speed Cold Room		

Key No.	Roller Width "W"	Part Description and Number						
		Roller Number - Suffix						
		G	G-CR	HS	HS-CR	FZ	AB	GT
PARTS - WIDTH RELATED - BEARINGS/ROLLERS (CONTINUED)								
No. G196 - Junction Rollers								
205	3-7/8" 4" 5-5/8"	50-2133 50-5321 50-2134	50-7171 50-6921 50-7172	50-2243 50-4690 50-2244	50-7270 50-7121 50-7271	50-4279 50-5598 50-6570	50-6928 50-6975 50-6929	49-1758 50-9923 49-1759
	7" 7-5/16" 9-1/16"	50-3308 50-2135 50-2136	50-5808 50-7173 50-7174	50-4608 50-2245 50-2246	50-7008 50-7272 50-7273	55-5508 50-6571 50-6572	50-6976 50-2100 50-6977	50-9905 49-1760 49-1761
	10" 10-5/8" 10-3/4"	50-3313 50-2224 50-2225	50-6813 50-7175 50-7176	50-4613 50-2247 50-2248	50-7013 50-7274 50-7275	50-5513 50-4082 50-4281	50-6977 50-2201 50-6969	50-9929 49-1762 49-1763
	10-13/16" 10-7/8" 12-1/2"	50-3300 50-2226 50-5304	50-6800 50-7177 50-6904	50-4600 6105405 50-4686	50-7000 50-7276 50-7104	55-5500 50-4282 50-4604	49-1797 50-2202 50-6970	50-9947 49-1764 50-9931
	12-7/8" 13" 13-1/4"	50-2227 50-3317 50-4772	50-7178 50-6817 50-7179	50-2249 50-4617 6105407	50-7277 50-7017 50-7278	50-4283 50-5517 50-4284	50-2203 50-6978 50-4789	59-1765 50-9896 49-1766
	13-5/16" 13-5/8" 14-1/4"	50-2228 50-2229 50-2137	50-7180 50-7181 50-7182	50-2250 50-2251 50-2120	50-7279 50-7280 50-7281	50-4285 50-4286 50-6573	50-2204 50-2205 50-2101	49-1767 49-1768 49-1769
	14-3/4" 15-7/16 15-1/2"	50-2230 50-2231 50-5305	50-7183 50-7184 50-3332	50-2252 50-2253 50-2254	50-7282 50-7283 50-7105	50-4287 50-4288 50-5605	50-2206 50-2207 50-4905	49-1770 40-1771 49-1772
	16-3/8" 17-5/8" 17-3/4"	50-2232 50-2233 50-6964	50-7185 50-7186 50-6967	50-2255 50-2256 50-6965	50-7284 50-7285 50-6968	50-4289 50-4290 50-6574	50-2208 50-2209 50-6966	49-1773 49-1774 49-1775
	18-11/16" 19" 19-7/16"	50-2234 50-3358 50-2138	50-7187 50-6858 50-7188	50-2258 50-6971 50-2121	50-7286 50-7058 50-7287	50-4291 50-5558 50-6575	50-2211 50-6971 50-2102	49-1776 49-1777 49-1778
	20-1/16" 21-1/8" 21-3/16"	50-2235 50-3331 50-2139	50-7189 50-6831 50-7190	50-2259 50-4631 50-2122	50-7288 50-7031 50-7289	50-4292 50-5531 50-6576	50-2212 50-6884 50-2103	49-1779 50-9821 49-1798
	21-5/8" 22-15/16" 23-3/4"	50-2236 50-2140 50-2237	50-7191 50-7192 50-7193	50-2260 50-2123 50-2261	50-7290 50-7291 50-7292	50-4293 50-6577 50-4294	50-2213 50-2104 50-2214	49-1780 49-1781 49-1782
	24-5/8" 25" 25-7/8"	50-2141 50-3359 50-2238	50-7194 50-6859 49-1711	50-2124 50-2113 50-2262	50-7293 50-7059 49-1737	50-6578 50-5559 49-1743	50-2105 50-6979 50-2215	49-1783 49-1784 49-1717
	26-3/16 26-3/8" 26-15/16"	50-2239 50-2142 50-2240	50-7195 50-7196 NA	50-2263 50-2125 50-2264	50-7294 59-7295 NA	50-4295 50-6579 NA	50-2216 50-2106 50-2217	49-1785 49-1786 49-1787
	28-1/8" 29-13/16" 31"	50-4780 50-2143 50-3345	NA NA NA	6105446 50-2126 50-4645	NA NA NA	NA NA NA	50-4797 50-2107 50-6973	49-1788 49-1789 50-9833

Key No.	Roller Width "W"	Part Description and Number						
		Roller Number - Suffix						
		G	G-CR	HS	HS-CR	FZ	AB	GT
PARTS - WIDTH RELATED - BEARINGS/ROLLERS (CONTINUED)								
No. G196 - Junction Rollers								
205	31-9/16" 31-3/4" 33-5/16"	50-2144 50-2241 50-2145	NA NA NA	50-2127 50-2265 50-2128	NA NA NA	NA NA NA	50-2108 50-2218 50-2109	49-1790 49-1791 49-1792
	34-3/8" 35-1/16" 35-15/16"	50-3351 50-2146 50-2242	NA NA NA	50-4651 50-2129 50-2266	NA NA NA	NA NA NA	50-6885 50-2110 50-2219	50-9839 49-1793 49-1794
	36-3/4" 37" 38-1/2"	50-2147 50-3360 50-2148	NA NA NA	50-2130 50-2114 50-2131	NA NA NA	NA NA NA	50-2111 50-6974 50-2112	49-1795 49-1799 49-1796

SECTION J: PRODUCT INDEX

T/C 250 Conveyors - Styles 01 And 01P

ITEM CLASS B 2 8 9

- 9 — COMPONENT
- 8 — STYLE
- 2 — FAMILY
- B — PRODUCT LINE

STYLE 01

(F1) TAKE-UP
(F2) INTERMEDIATE SECTION
(F3) IS CRV EXT, WHL & CHAIN
(F4) 01 DISDU & TK EXT, WHL SIDE BOW & CHAIN
(F5) IS ROLLERS
(F6) DR DISCHARGE
(F7) PU DISDR RU-LS
(F8) PU DISDR LU-RS
(F9) MOTOR
(F10) CHAIN GUARDS DISDR

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C 01 HORIZONTAL	18342 D	826486	826487	826488	826489	826490

STYLE 01P

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) INTERMEDIATE SECTION
(F7) IS CRV EXT, WHL SIDE BOW & CHAIN
(F8) 01P INDU & TK EXT, WHL & CHAIN
(F9) IS ROLLERS
(F10) TK DISCHARGE

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C 01P HORIZONTAL	18346 D	826491	826492	826493	826494	826495

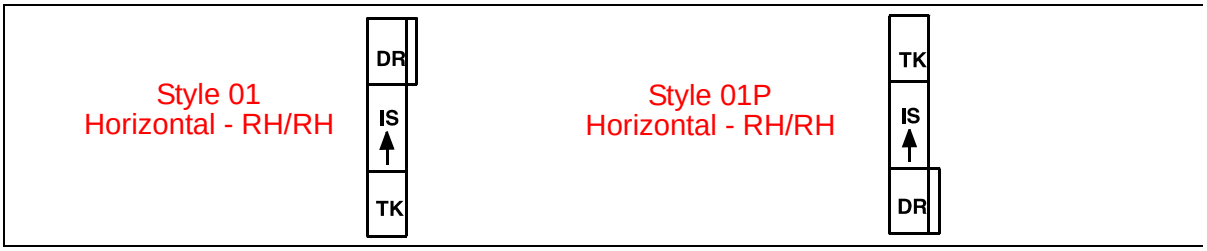


Figure J - 1 T/C 250 Conveyors - Styles 01 and 01P

T/C 250 Conveyors - Styles 05_ To 08_

ITEM CLASS B 2 5 3

(F1) TK INFEED
(F2) CRV
(F3) EXT, WHL & CHAIN
(F4) DISDR & TK ROLLERS
(F5) CRV ROLLERS
(F6) DR DISCHARGE
(F7) PU DISDR RU-LS
(F8) PU DISDR LU-RS
(F9) MOTOR
(F10) CHAIN GUARDS DISDR

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
T/C 05 90 DEG CRV	18260 D	826496	826497	826498	826499	826500
T/C 06 60 DEG CRV	18261 D	826501	826502	826503	826504	826505
T/C 07 45 DEG CRV	18262 D	826506	826507	826508	826509	826510
T/C 08 30 DEG CRV	18263 D	826511	826512	826513	826514	826515

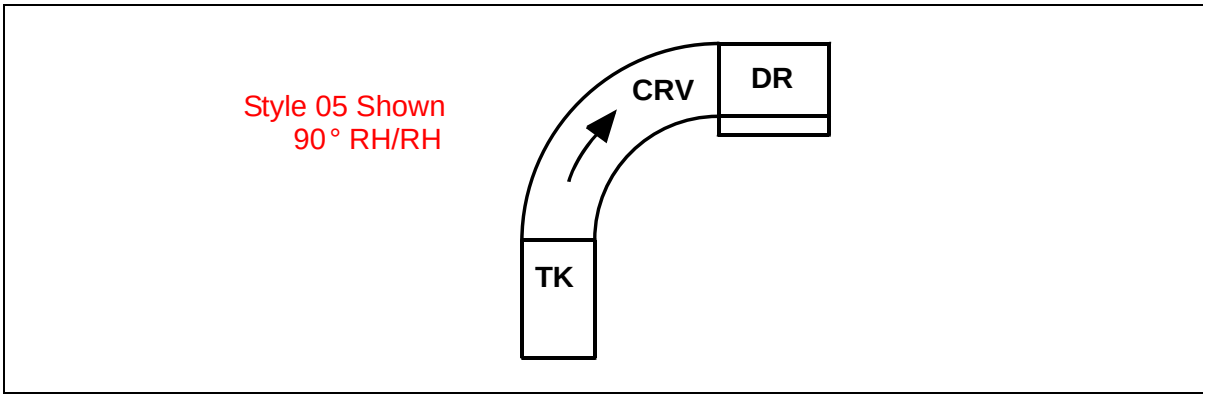


Figure J - 2 T/C 250 Conveyors - Styles 05_ to 08_

T/C 250 Conveyors - Styles 05P To 08P

ITEM CLASS B 2 5 3

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) CRV
(F7) EXT, WHL & CHAIN
(F8) TK & INDR ROLLERS
(F9) CRV ROLLERS
(F10) ID DISCHARGE

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C 05P 90 DEG CRV	18279 D	826516	826517	826518	826519	826520
T/C 06P 60 DEG CRV	18280 D	826521	826522	826523	826524	826525
T/C 07P 45 DEG CRV	18281 D	826526	826527	826528	826529	826530
T/C 08P 30 DEG CRV	18282 D	826531	826532	826533	826534	826535

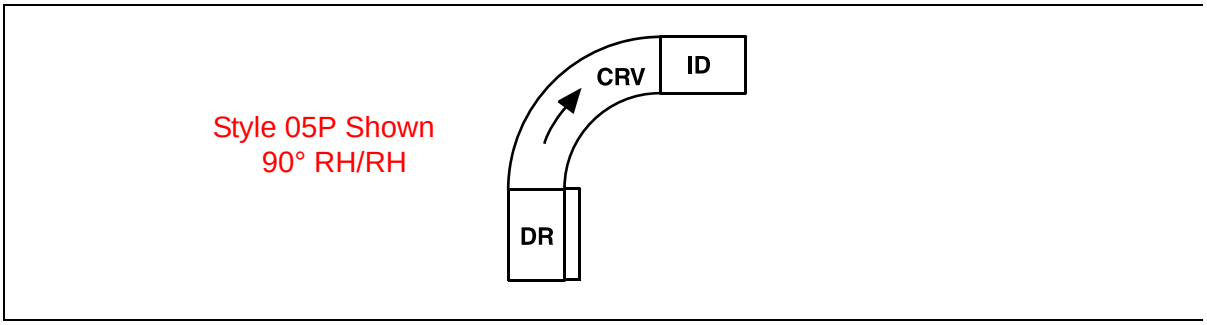


Figure J - 3 T/C 250 Conveyors - Styles 05P to 08P

T/C 250 Conveyors - Style 14

ITEM CLASS B 2 7 1

(F1) JCT 30 DEG
(F2) 14 EXT, WHL & CHAIN
(F3) DISDR OR TK ROLLERS
(F4) JCT 30 DEG ROLLERS
(F5) DR DISCHARGE
(F6) PU DISDR RU-LS
(F7) PU DISDR LU-RS
(F8) MOTOR
(F9) CHAIN GUARDS DISDR

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
T/C 14 30 DEG STRAT JCT	18269 D	826536	826537	826538		
T/C 14 30DEG STRAT JCT	18270 D				826539	826540

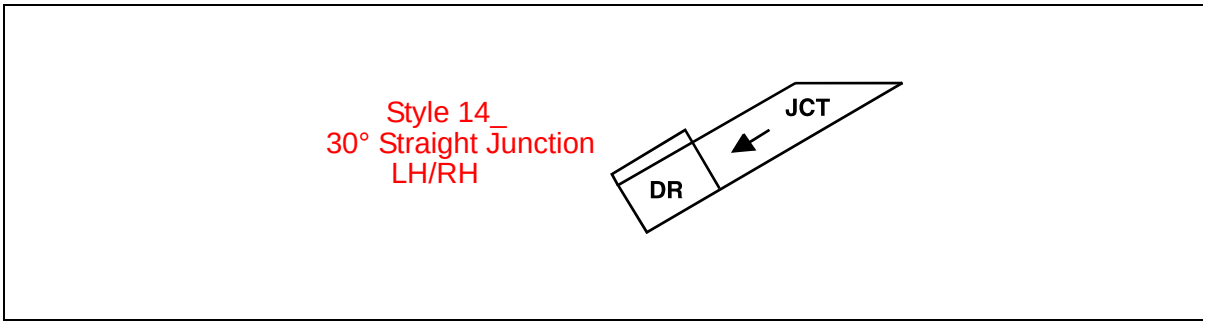


Figure J - 4 T/C 250 Conveyors - Style 14_

T/C 250 Conveyors - Styles 14P

ITEM CLASS B 2 7 1

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) JCT 30 DEG
(F7) 14 P EXT, WHL & CHAIN
(F8) INDR ROLLERS
(F9) JCT 30 DEG ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C 14P 30 DEG STRAT JCT	18288 D	826546	826547	826548		
T/C 14P 30 DEG STRAT JCT	18289 D				826549	826550

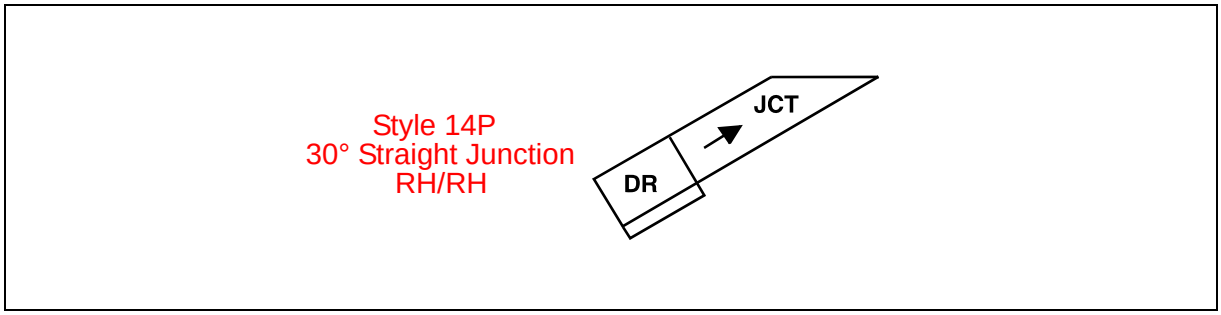


Figure J - 5 T/C 250 Conveyors - Styles 14P

T/C 250 Conveyors - Style 15_

ITEM CLASS B 2 7 2

(F1) JCT 30 DEG
(F2) 60 DEG CRV
(F3) 15 EXT, WHL & CHAIN
(F4) DISDR OR TK ROLLERS
(F5) 15 ROLLERS
(F6) DR DISCHARGE
(F7) PU DISDR RU-LS
(F8) PU DISDR LU-RS
(F9) MOTOR
(F10) CHAIN GUARDS DISDR

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
T/C 15 30 DEG COMB JCT	18271 D	826541	826542	826543	826544	826545

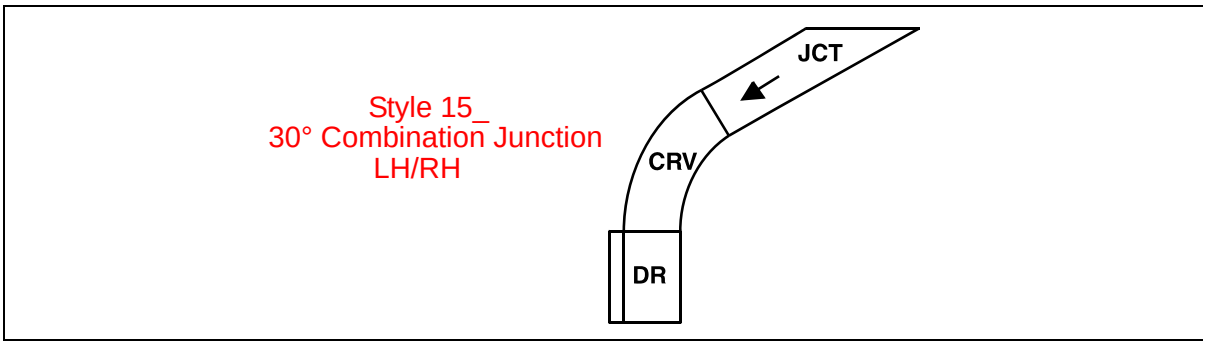


Figure J - 6 T/C 250 Conveyors - Style 15_

T/C 250 Conveyors - Style 15P

ITEM CLASS B 2 7 2

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) 60 DEG CRV
(F7) JCT 30 DEG
(F8) 15P EXT, WHL & CHAIN
(F9) INDR ROLLERS
(F10) 15 ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C 15P 30 DEG COMB JCT	18290 D	826551	826552	826553	826554	826555

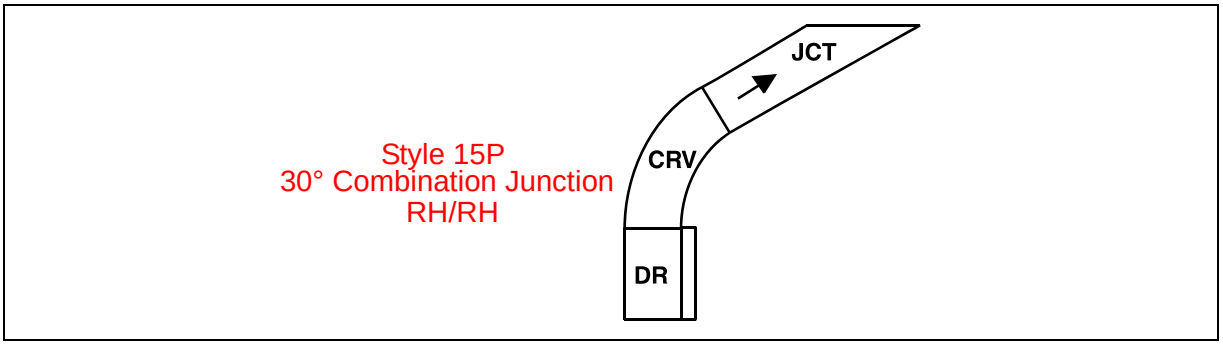


Figure J - 7 T/C 250 Conveyors - Style 15P

T/C 250 Conveyors - Style 16_

ITEM CLASS B 2 7 3

(F1) JCT 30 DEG
(F2) PT
(F3) 30 DEG CRV
(F4) 16 EXT, WHL & CHAIN
(F5) DISDR, TK OR 16 ROLLERS
(F6) DR DISCHARGE
(F7) PU DISDR RU-LS
(F8) PU DISDR LU-RS
(F9) MOTOR
(F10) CHAIN GUARDS DISDR

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
T/C 16 30 DEG PRL JCT	18272 D	826411	826412	826413	*NA	*NA

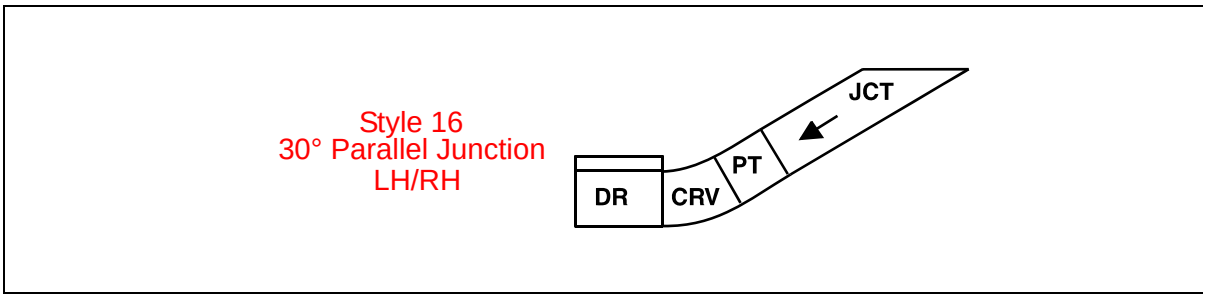


Figure J - 8 T/C 250 Conveyors - Style 16_

*Cannot be shipped in one piece. See pages J.18, J.26, and J.31.

T/C 250 Conveyors - Style 16P

ITEM CLASS B 2 7 3

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) 30 DEG CRV
(F7) PT
(F8) JCT 30 DEG
(F9) 16P EXT, WHL & CHAIN
(F10) 16 & INDR ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C 16P 30 DEG PRLJCT	18291 D	826414	826415	826416	*NA	*NA

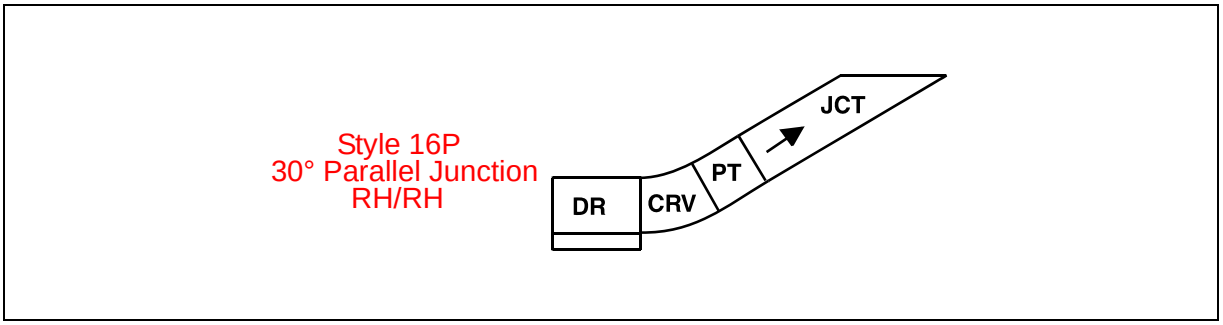


Figure J - 9 T/C 250 Conveyors - Style 16P

*Cannot be shipped in one piece. See pages J.19, J.26, and J.31.

T/C 250 Conveyors - Style 18_

ITEM CLASS B 2 7 1

(F1) JCT 45 DEG
(F2) 18 EXT, WHL & CHAIN
(F3) DISDR OR TK ROLLERS
(F4) JCT 45 DEG ROLLERS
(F5) DR DISCHARGE
(F6) PU DISDR RU-LS
(F7) PUR DISDR LU-RS
(F8) MOTOR
(F9) CHAIN GUARDS DISDR

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
T/C 18 45DEG STRAT JCT	18293 D	826556	826557	826558		
T/C 18 45DEG STRAT JCT	18294 D				826559	826560

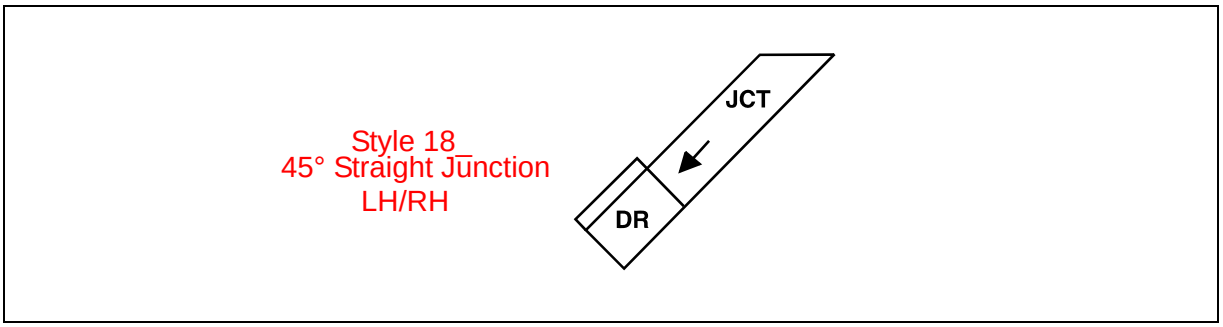


Figure J - 10 T/C 250 Conveyors - Style 18_

T/C 250 Conveyors - Style 18P

ITEM CLASS B 2 7 1

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) JCT 45 DEG
(F7) 18 EXT, WHL & CHAIN
(F8) INDR ROLLERS
(F9) JCT 45 DEG ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C 18P 45 DEG STRAT JCT	18274 D	826566	826567	826568		
T/C 18P 45 DEG STRAT JCT	18275 D				826569	826570

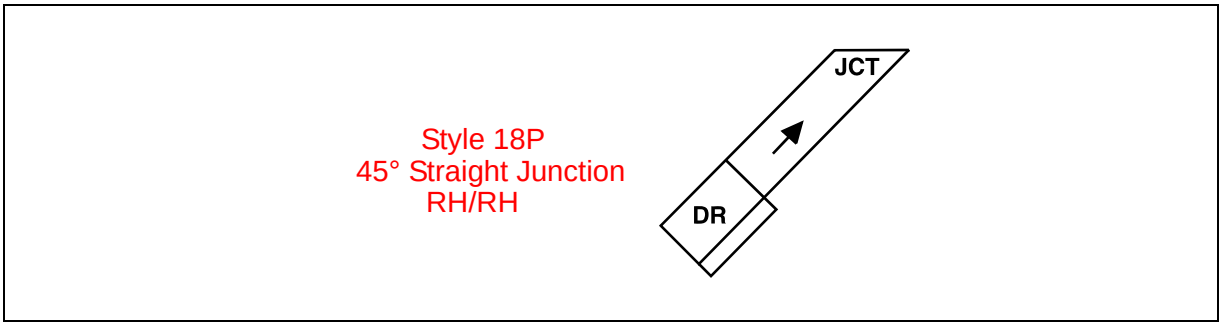


Figure J - 11 T/C 250 Conveyors - Style 18P

T/C 250 Conveyors - Style 19_

ITEM CLASS B 2 7 2

(F1) JCT 45 DEG
(F2) 45 DEG CRV
(F3) 19 EXT, WHL & CHAIN
(F4) DISDR OR TK ROLLERS
(F5) 19 ROLLERS
(F6) DR DISCHARGE
(F7) PU DISDR RU-LS
(F8) PU DISDR LU-RS
(F9) MOTOR
(F10) CHAIN GUARDS DISDR

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
T/C 19 45DEG COMB JCT	18295 D	826561	826562	826563	826564	826565

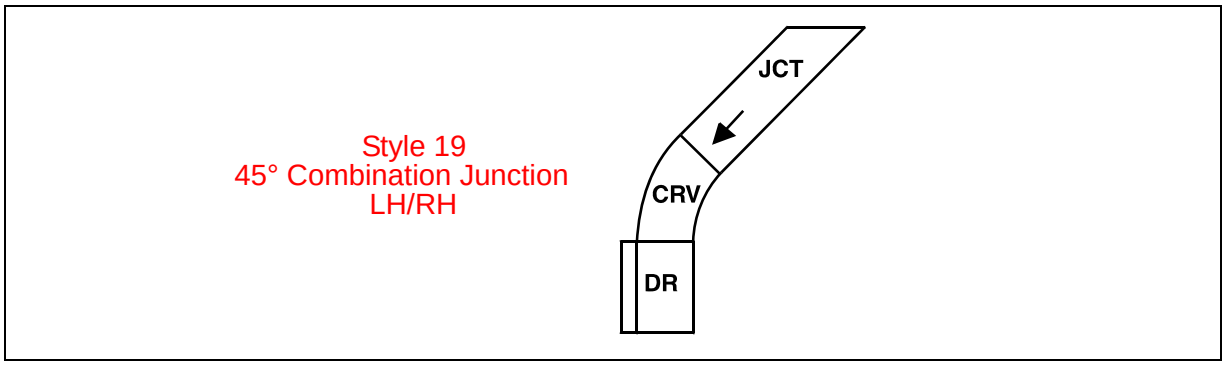


Figure J - 12 T/C 250 Conveyors - Style 19_

T/C 250 Conveyors - Style 19P

ITEM CLASS B 2 7 2

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) 45 DEG CRV
(F7) JCT 45 DEG
(F8) 19 EXT, WHL & CHAIN
(F9) INDR ROLLERS
(F10) 19 ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C 19P 45 DEG COMB JCT	18276 D	826571	826572	826573	826574	826575

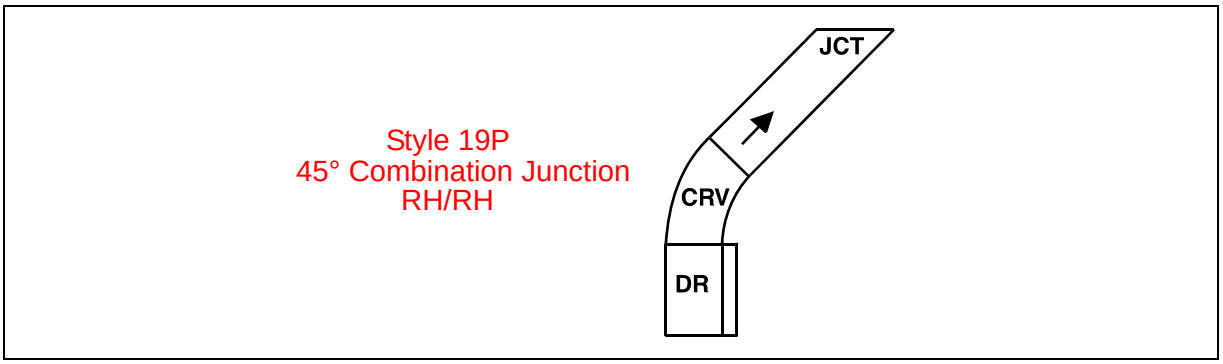


Figure J - 13 T/C 250 Conveyors - Style 19P

T/C 250 Conveyors - Style 20_

ITEM CLASS B 2 7 3

(F1) JCT 45 DEG
(F2) PT
(F3) 45 DEG CRV
(F4) 20 EXT, WHL & CHAIN
(F5) DISDR, TK, OR 20 ROLLERS
(F6) DR DISCHARGE
(F7) PU DISDR RU-LS
(F8) PU DISDR LU-RS
(F9) MOTOR
(F10) CHAIN GUARDS DISDR

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
T/C 20 45 DEG PRL JCT	18296 D	826417	826418	826419	*NA	*NA

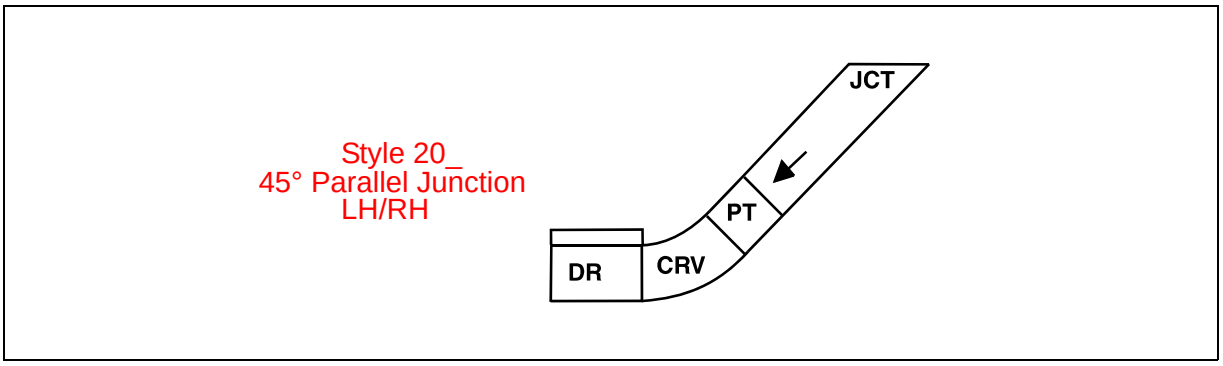


Figure J - 14 T/C 250 Conveyors - Style 20_

*Cannot be shipped in one piece. See pages J.18, J.26, and J.31.

T/C 250 Conveyors - Style 20P

ITEM CLASS B 2 7 3

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) 45 DEG CRV
(F7) PT
(F8) JCT 45 DEG
(F9) 20 EXT, WHL & CHAIN
(F10) INDR & 20 ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C 20P 45 DEG PRL JCT	18277 D	826420	826421	826422	*NA	*NA

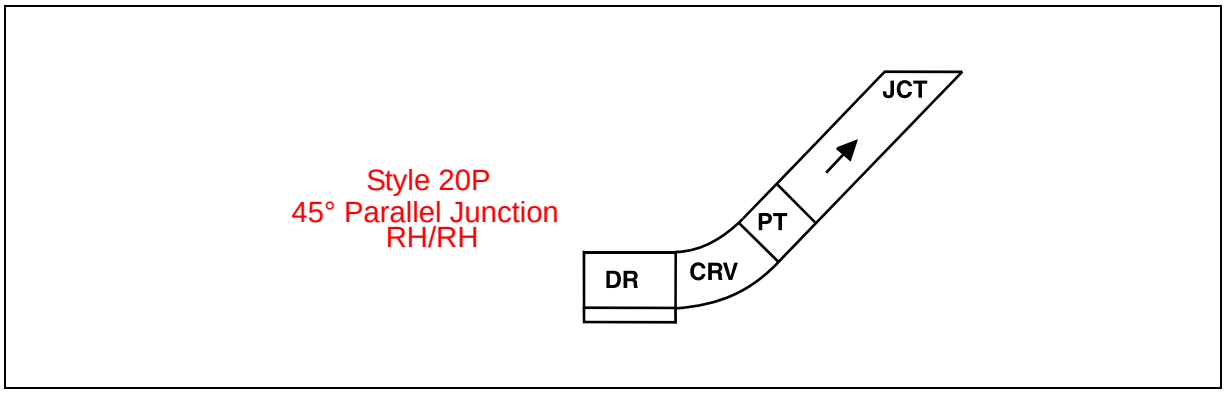


Figure J - 15 T/C 250 Conveyors - Style 20P

*Cannot be shipped in one piece. See pages J.19, J.26, and J.31.

T/C 250 Conveyors - Styles 17_ & 21_

ITEM CLASS B 2 7 4

STYLE 17_

(F1) DIVERGE JCT 90 DEG
(F2) 17 EXT, WHL & CHAIN
(F3) DISDR OR TK ROLLERS
(F4) 17, 21 ROLLERS
(F5) DR DISCHARGE
(F6) PU DISDR RU-LS
(F7) PU DISDR LU-RS
(F8) MOTOR
(F9) CHAIN GUARDS DISDRN

DESCRIPTION	DWG NO.	16" W	22" W'	28" W	34" W	40" W
T/C 17 90 DEG CRV JCT	18273 D	826576	826577	826578	826579	826580

STYLE 21_

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) MERGE JCT 90 DEG
(F7) 21 EXT, WHL & CHAIN
(F8) INDR ROLLERS
(F9) 17, 21 ROLLERS

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
T/C 21 90 DEG CRV JCT	18278 D	826581	826582	826583	826584	826585

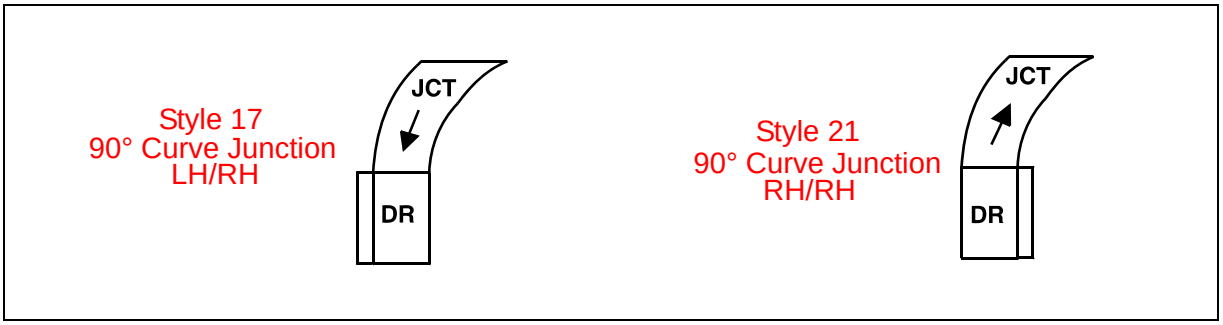


Figure J - 16 T/C 250 Conveyors - Styles 17_ and 21_

T/C 250 Conveyors - Infeed Take-Up/CRV

ITEM CLASS B 2 5 5

(F1) TK INFEED
(F2) CRV
(F3) INTU/CRV EXT, WHL & CHAIN
(F4) DISDR OR TK ROLLERS
(F5) CRV ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C INTU/CRV 90 DEG	18332 D	822708	822709	822710	822711	822712
T/C INTU/CRV 60 DEG	18333 D	822713	822714	822715	822716	822717
T/C INTU/CRV 45 DEG	18334 D	822718	822719	822720	822721	822722
T/C INTU/CRV 30 DEG	18335 D	822723	822724	822725	822726	822727

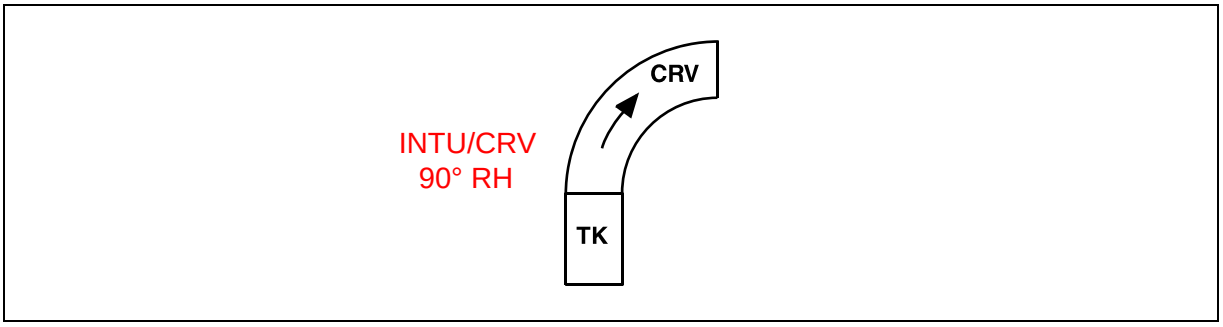


Figure J - 17 T/C 250 Conveyors - Infeed Take-Up/CRV

T/C 250 Conveyors - CRV/DISDR

ITEM CLASS B 2 5 2

(F1) CRV
(F2) DISDU/CRV EXT, WHL & CHAIN
(F3) DISDR OR TK ROLLERS
(F4) CRV ROLLERS
(F5) DR DISCHARGE
(F6) PU DISDR RU-LS
(F7) PU DISDR LU-RS
(F8) MOTOR
(F9) CHAIN GUARDS DISDR

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C DISDU/CRV 90 DEG	18327 D	826586	826587	826588	826589	826590
T/C DISDU/CRV 60 DEG	18328 D	826591	826592	826593	826594	826595
T/C DISDU/CRV 45 DEG	18329 D	826596	826597	826598	826599	826600
T/C DISDU/CRV 30 DEG	18330 D	826601	826602	826603	826604	826605

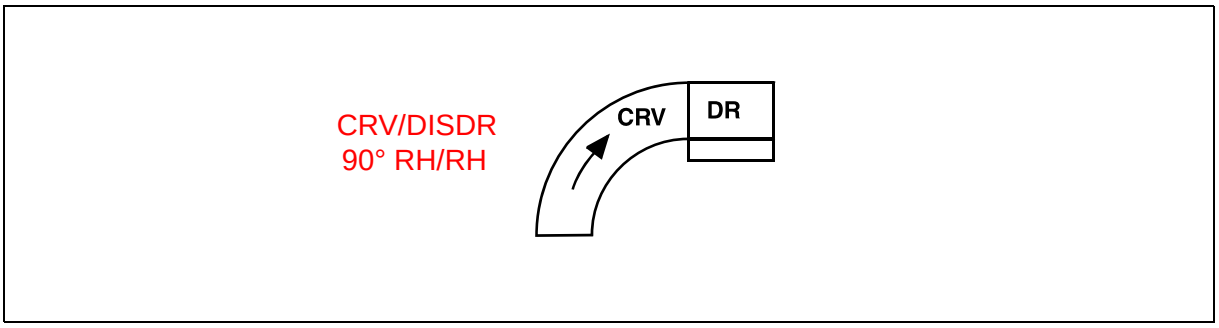


Figure J - 18 T/C 250 Conveyors - CRV/DISDR

T/C 250 Conveyors - INDR/CRV

ITEM CLASS B 2 5 2

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) CRV
(F7) INDU/CRV EXT, WHL & CHAIN
(F8) INDR ROLLERS
(F9) CRV ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C INDU/CRV 90 DEG	18322 D	826616	826617	826618	826619	826620
T/C INDU/CRV 60 DEG	18323 D	826621	826622	826623	826624	826625
T/C INDU/CRV 45 DEG	18324 D	826626	826627	826628	826629	826630
T/C INDU/CRV 30 DEG	18325 D	826631	826632	826633	826634	826635

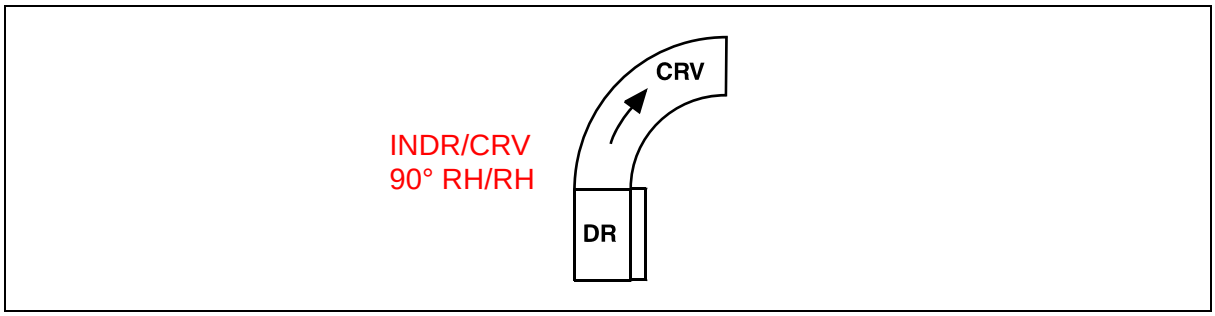


Figure J - 19 T/C 250 Conveyors - INDR/CRV

T/C 250 Conveyors - CRV/DISTU

ITEM CLASS B 2 5 5

(F1) CRV
(F2) TK DISCHARGE
(F3) DISTU/CRV EXT, WHL & CHAIN
(F4) CRV ROLLERS
(F5) TK DISDR OR TK ROLLERS

DESCRIPTION	DWG NO.	16” w	22” W	28” w	34” W	40” W
T/C DISTU/CRV 90 DEG	18337 D	822738	822739	822740	822741	822742
T/C DISTU/CRV 60 DEG	18338 D	822743	822744	822745	822746	822747
T/C DISTU/CRV 45 DEG	18339 D	822748	822749	822750	822751	822752
T/C DISTU/CRV 30 DEG	18340 D	822753	822754	822755	822756	822757

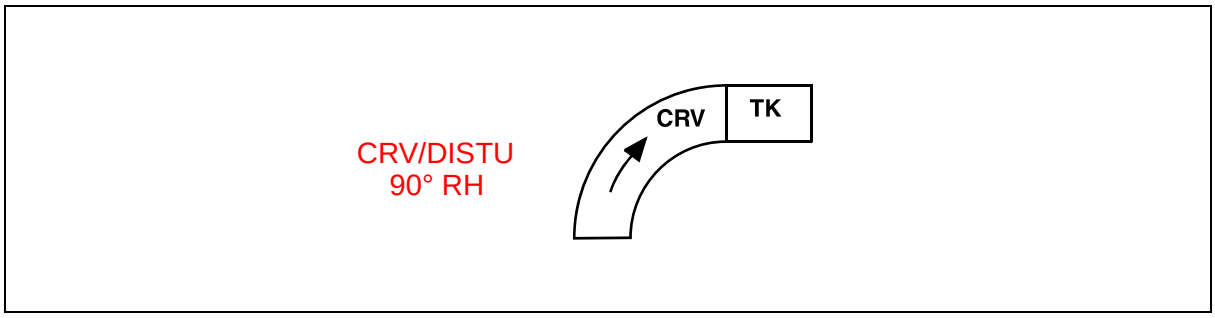


Figure J - 20 T/C 250 Conveyors - CRV/DISTU

T/C 250 Conveyors - INDR/CRV/DISPT

ITEM CLASS B 2 6 3

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) MOTOR
(F5) CHAIN GUARDS INDR
(F6) CRV
(F7) PT
(F8) INDR/CRV/DISPT EXT
(F9) INDR & PT ROLLERS
(F10) CRV ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C INDU/CRV/DISPT 90 DEG	18834 D	826646	826647	826648	826649	826650
T/C INDU/CRV/DISPT 60 DEG	18835 D	826651	826652	826653	826654	826655
T/C INDU/CRV/DISPT 45 DEG	18836 D	826656	826657	826658	826659	826660
T/C INDU/CRV/DISPT 30 DEG	18837 D	826661	826662	826663	826664	826665

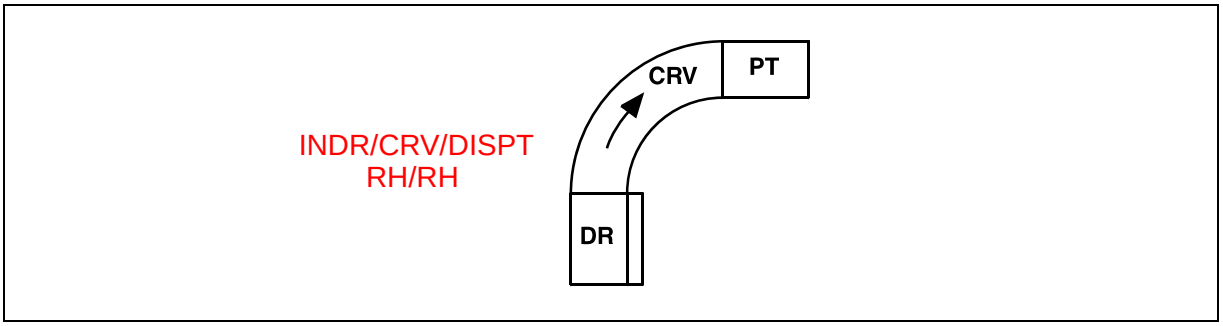


Figure J - 21 T/C 250 Conveyors - INDR/CRV/DISPT

T/C 250 Conveyors - CRV/DISPT

ITEM CLASS B 2 6 1

(F1) CRV
(F2) PT
(F3) CRV/PT EXT, WHL & CHAIN
(F4) CRV ROLLERS
(F5) PT ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C CRV/DISPT 90 DEG	18830 D	822648	822649	822650	822651	822652
T/C CRV/DISPT 60 DEG	18831 D	822653	822654	822655	822656	822657
T/C CRV/DISPT 45 DEG	18832 D	822658	822659	822660	822661	822662
T/C CRV/DISPT 30 DEG	18833 D	822663	822664	822665	822666	822667

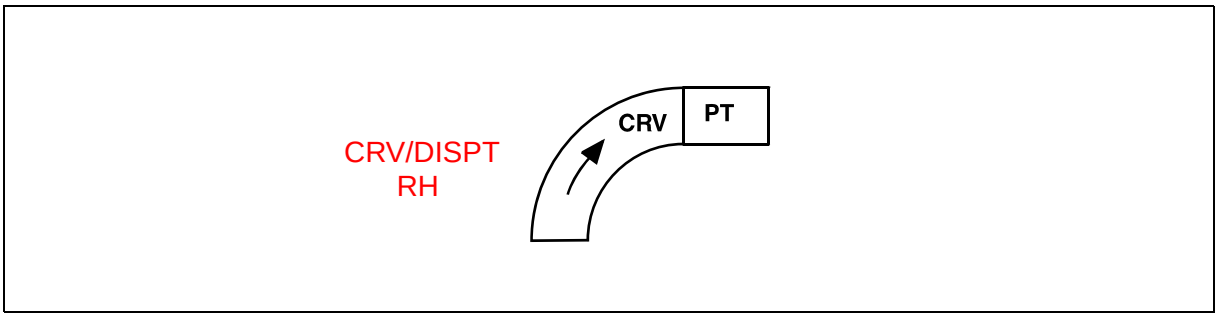


Figure J - 22 T/C 250 Conveyors - CRV/DISPT

T/C 250 Conveyors - INTU/CRV/PT

ITEM CLASS B 2 6 4

(F1) TK INFEED
(F2) CRV
(F3) PT
(F4) INTRU/CRV/PT. EXT, WHL & CHAIN
(F5) DISDR OR TK ROLLERS
(F6) CRV ROLLERS
(F7) PT ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C INTU/CRV/DISPT 90 DEG	18310 D	822688	822689	822690	822691	822692
T/C INTU/CRV/DISPT 60 DEG	18311 D	822693	822694	822695	822696	822697
T/C INTU/CRV/DISPT 45 DEG	18312 D	822698	822699	822700	822701	822702
T/C INTU/CRV/DISPT 30 DEG	18313 D	822703	822704	822705	822706	822707

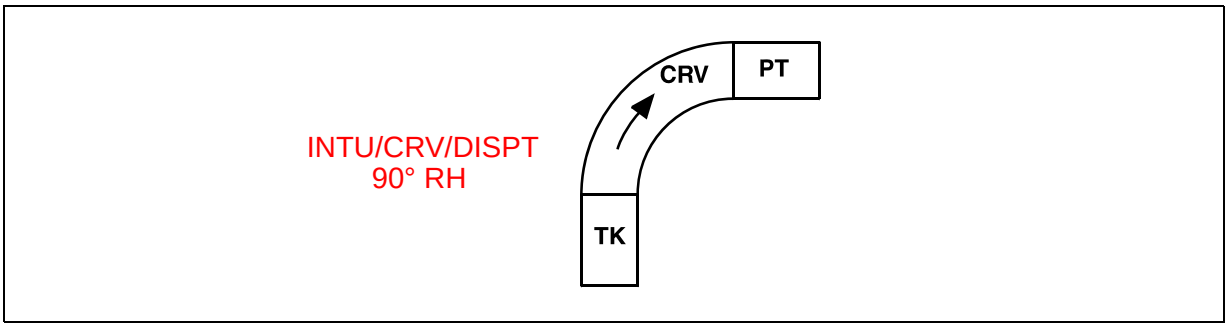


Figure J - 23 T/C 250 Conveyors - INTU/CRV/PT

T/C 250 Conveyors - CRV/DISID

ITEM CLASS B 2 7 9

(F1) CRV
(F2) ID DISCHARGE
(F3) DISID/CRV EXT, WHL & CHAIN
(F4) CRV ROLLERS
(F5) DISDR OR TK ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C DISID/CRV 90 DEG	18367 D	822858	822859	822860	822861	822862
T/C DISID/CRV 60 DEG	18368 D	822863	822864	822865	822866	822867
T/C DISID/CRV 45 DEG	18369 D	822868	822869	822870	822871	822872
T/C DISID/CRV 30 DEG	18370 D	822873	822874	822875	822876	822877

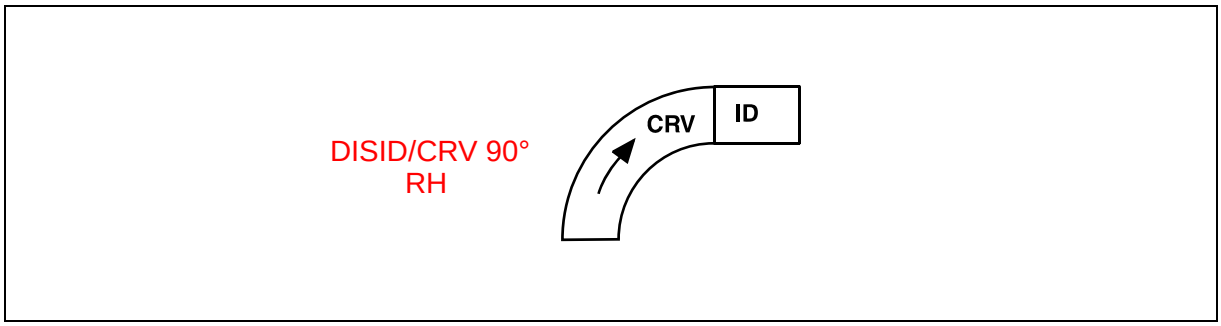


Figure J - 24 T/C 250 Conveyors - CRV/DISID

T/C 250 Conveyors - Power Transfer/IS

ITEM CLASS B 2 6 2

(F1) PT
(F2) INTERMEDIATE SECTION
(F3) IS CRV EXT, WHL & CHAIN
(F4) PT EXT,WHL & CHAIN
(F5) IS ROLLERS
(F6) PT ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C INPT/IS	18307 D	822768	822769	822770	822771	822772

(F1) INTERMEIDATE SECTION
(F2) PT
(F3) IS CRV EXT, WHL & CHAIN
(F4) PT EXT, WHL & CHAIN
(F5) IS ROLLERS
(F6) PT ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C DISPT/IS	18349 D	822773	822774	822775	822776	822777

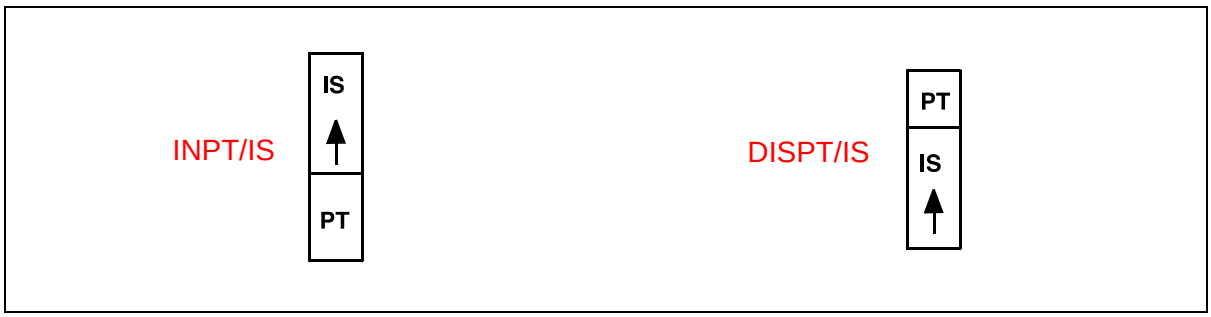


Figure J - 25 T/C 250 Conveyors - Power Transfer/IS

T/C 250 Conveyors - JCT/PT

ITEM CLASS B 2 7 5

(F1) JCT
(F2) PT
(F3) PT/JCT EXT, WHL & CHAIN
(F4) JCT ROLLERS
(F5) PT ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C JCT/DISPT 45 DEG	18838 D	822778	822779	822780	822781	822782
T/C JCT/DISPT 30 DEG	18839 D	822783	822784	822785	822786	822787

(F1) PT
(F2) JCT
(F3) PT/JCT EXT, WHL & CHAIN
(F4) PT ROLLERS
(F5) JCT ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C INPT/JCT 45 DEG	18840 D	822788	822789	822790	822791	822792
T/C INPT/JCT 30 DEG	18841 D	822793	822794	822795	822796	822797

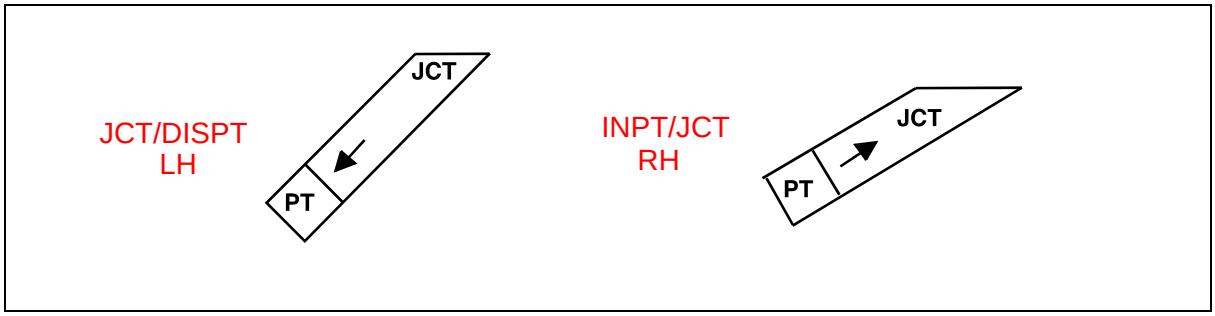


Figure J - 26 T/C 250 Conveyors - JCT/PT

T/C 250 Conveyors - Curves

ITEM CLASS B 2 5 8

(F1) CRV
(F2) CRV EXT, WHL & CHAIN
(F3) CRV ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C CRV 90X__	18318 B-	822808	822809	822810	822811	822812
T/C CRV 60X__	18319 B-	822813	822814	822815	822816	822817
T/C CRV 45X__	18320 B-	822818	822819	822820	822821	822822
T/C CRV 30X__	18321 B-	822823	822824	822825	822826	822827

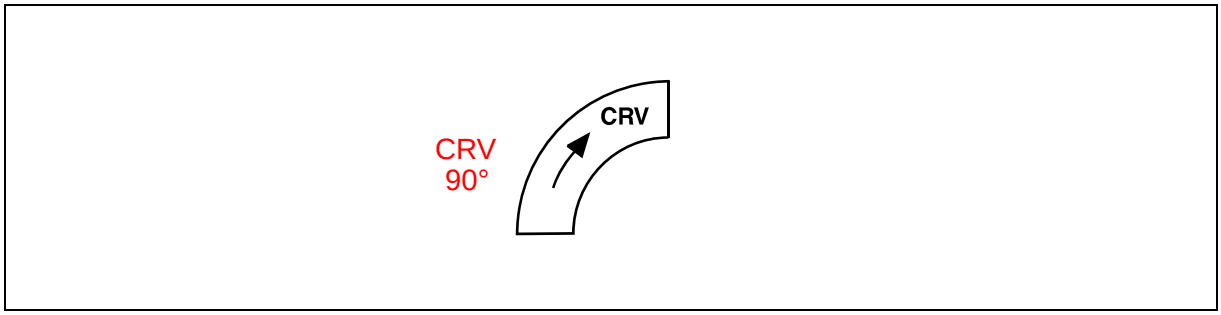


Figure J - 27 T/C 250 Conveyors - Curves

T/C 250 Conveyors - Junctions

ITEM CLASS B 2 7 7 & B 2 7 6

(F1) JCT
(F2) MERGE & DIVERGE EXT, WHL & CHAIN
(F3) JCT ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C DIVERGE JCT 90 DEG	18362 D	822848	822849	822850	822851	822852
T/C MERGE JCT 90 DEG	18363 D	822853	822854	822855	822856	822857
T/C DIVERGE JCT 45 DEG	18371 D 18372 D	822828	822829	822830	822831	822832
T/C MERGE JCT 45 DEG	18373 D 18374 D	822833	822834	822835	822836	822837
T/C DIVERGE JCT 30 DEG	18375 D 18376 D	822838	822839	822840	822841	822842
T/C MERGE JCT 30 DEG	18377 D 18378 D	822843	822844	822845	822846	822847

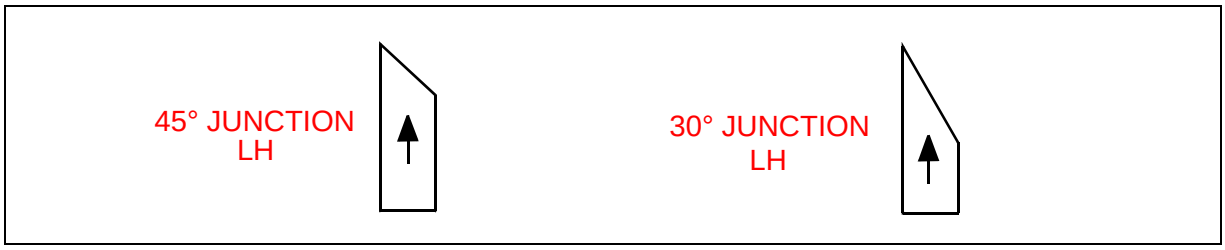


Figure J - 28 T/C 250 Conveyors - Junctions

T/C 250 Conveyors - INTU/IS

ITEM CLASS B 2 5 6 & B 2 8 2

(F1) TK INFEED
(F2) INTERMEDIATE SECTION
(F3) IS EXT, WHL & CHAIN
(F4) DISDR OR TK EXT, WHL & CHAIN
(F5) IS ROLLERS
(F6) DISDR OR TK ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C INTU/IS	18344 D	822728	822729	822730	822731	822732
T/C INTU/IS STRAT	18341 D	822733	822734	822735	822736	822737

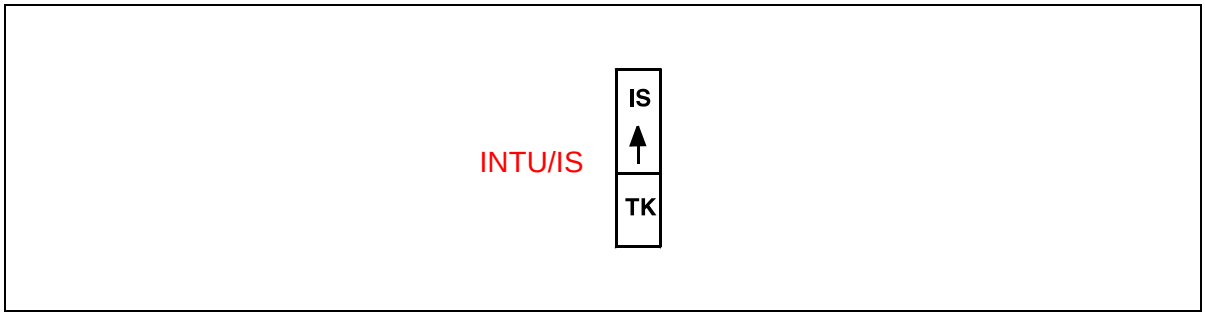


Figure J - 29 T/C 250 Conveyors - INTU/IS

T/C 250 Conveyors - IS/DISTU

ITEM CLASS B 2 5 6 & B 2 8 2

(F1) INTERMEDIATE SECTION
(F2) TK DISCHARGE
(F3) IS EXT, WHL & CHAIN
(F4) DISDR OR TK EXT, WHL & CHAIN
(F5) IS ROLLERS
(F6) DISR OR TK ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C DISTU/IS	18348 D	822758	822759	822760	822761	822762
T/C DISTU/IS STRAT	18326 D	822763	822764	822765	822766	822767

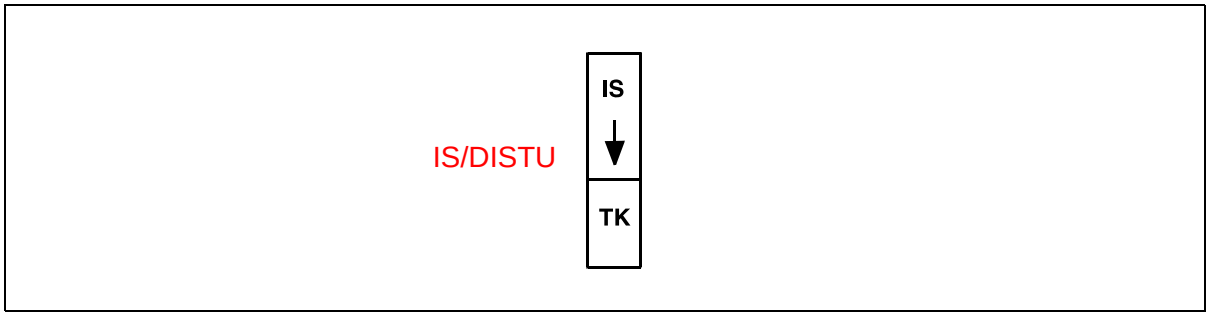


Figure J - 30 T/C 250 Conveyors - IS/DISTU

T/C 250 Conveyors - Intermediate Sections

ITEM CLASS B 2 5 7 & B 2 8 3

(F1) INTERMEDIATE SECTION
(F2) IS EXT, WHL & CHAIN
(F3) IS ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C IS (SIDEBOW CHAIN)	18358 D	822798	822799	822800	822801	822802
T/C IS (STRAT CHAIN)	18260 D	822803	822804	822805	822806	822807

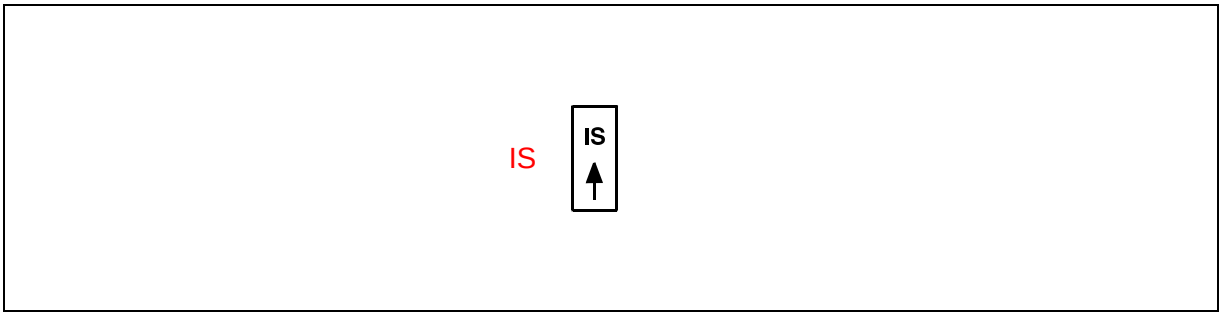


Figure J - 31 T/C 250 Conveyors - Intermediate Sections

T/C 250 Conveyors - IS/DISDR

ITEM CLASS B 2 5 1 & B 2 8 1

(F1) INTERMEDIATE SECTION
(F2) IS EXT, WHL & CHAIN
(F3) DISDR OR TK EXT, WHL & CHAIN
(F4) IS ROLLERS
(F5) DISDR OR TK ROLLERS
(F6) DR DISCHARGE
(F7) PU DISDR RU-LS
(F8) PU DISDR LU-RS
(F9) MOTOR
(F10) CHAIN GUARDS DISDR

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C DISDU/IS CRV	18343 D	826606	826607	826608	826609	826610
T/C DISDU/IS STRAT	18331 D	826611	826612	826613	826614	826615

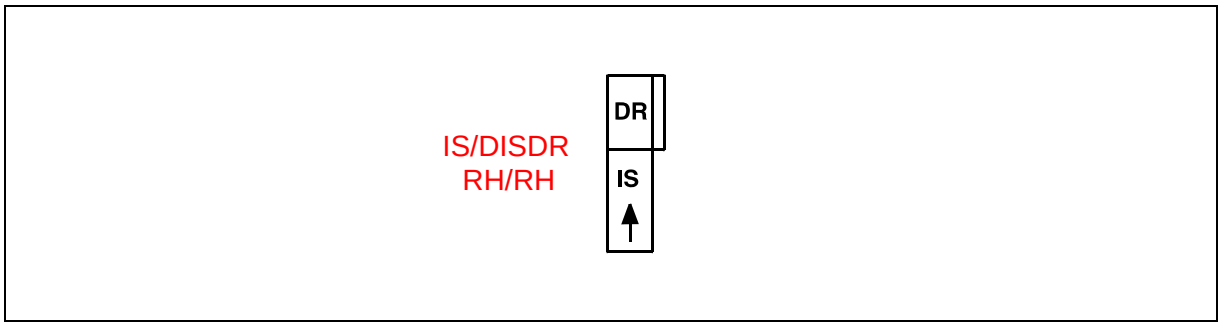


Figure J - 32 T/C 250 Conveyors - IS/DISDR

T/C 250 Conveyors - INDR/IS

ITEM CLASS B 2 5 1 & B 2 8 1

(F1) DR INFEED
(F2) PU INDR RU-LS
(F3) PU INDR LU-RS
(F4) CHAIN GUARDS INDR
(F5) INTERMEDIATE SECTION
(F6) IS EXT, WHL & CHAIN
(F7) INDU EXT, WHL & CHAIN
(F8) IS ROLLERS
(F9) INDR ROLLERS

DESCRIPTION	DWG NO.	16” W	22” W	28” W	34” W	40” W
T/C INDU/IS	18347 D	826636	826637	826638	826639	826640
T/C INDU/IS STRAT	18336 D	826641	826642	826643	826644	826645

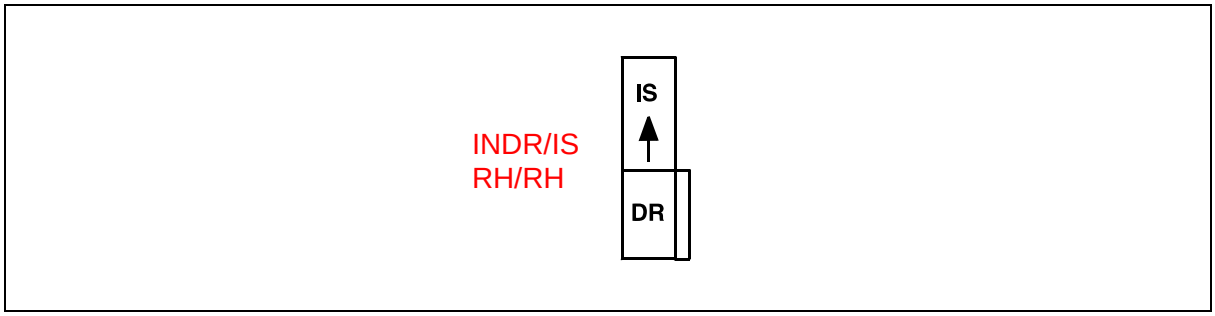


Figure J - 33 T/C 250 Conveyors - INDR/IS

Powered Roller Skews (PRS)

ITEM CLASS B 2 8 9

(F1) SKEW
(F2) CHAIN
(F3) ROLLERS
(F4) GROOVED ROLLERS
(F5) SKEWED ROLLERS
(F6) POWER UNITS RU-LS
(F7) POWER UNITS LU-RS
(F8) MOTORS
(F9) CHAIN GUARDS

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
PRS LH 10-0/	17250 B-	826666	826667	826668	826669	826670
PRS RH 10-0/	17250 B-	826671	826672	826673	826674	826675
PRS LH 15-0/	17257 B-			826676	826677	826678
PRS RH 15-0/	17256 B-			826679	826680	826681

(F1) SKEW
(F2) CHAIN
(F3) ROLLERS
(F4) GROOVED ROLLERS
(F5) SKEWED ROLLERS
(F6) POWER UNITS RU-LS
(F7) POWER UNITS LU-RS
(F8) MOTORS
(F9) CHAIN GUARDS

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
PRS LH 7-6/__ DR END	17294 D				826682	826683
PRS RH 7-6/__ DR END	17294 D				826684	826685

(F1) SKEW
(F2) CHAIN
(F3) ROLLERS
(F4) GROOVED ROLLERS
(F5) SKEWED ROLLERS

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
PRS LH 7-6/__ TK END	17295 D				822900	822901
PRS RH 7-6/__ TK END	17295 D				822898	822899

(F1) SKEW
(F2) CHAIN
(F3) ROLLERS

DESCRIPTION	DWG NO.	16" W	22" W	28" W	34" W	40" W
PRS LH 5-0/__ IS	17296 D				822904	822905
PRS RH 5-0/__ IS	17296 D				822902	822903