
Accuglide™ Powered Roller Accumulation Conveyor Design Manual

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Read these documents thoroughly before attempting to perform installation, maintenance or repairs to the applicable Intelligrated equipment components or devices. Exercise extreme caution when working around moving and rotating 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 and OSHA/ANSI standards.

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Revision	Date	Initials	Description
Rev 1	8/06/12	KK, MM	Add Humphrey connector information to the Component Index - Accessories

Use of Manual

This manual contains important information. Please read this manual before attempting to operate or perform installation or maintenance on this Conveyor.

This manual is designed for operator personnel who have a substantial knowledge of mechanical operations and who have basic knowledge of typical mechanical operations. Failure to comply with the instructions and warnings contained in this manual, and the warnings posted on the Conveyor can result in serious injury to personnel and/or damage to the equipment.

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This manual contains a generalized description of the Conveyor and its operation available at the time this manual was approved for printing. Intelligrated reserves the right to make changes in design and specifications and to make additions to, or improvements in, the product without imposing any obligations upon it to install them on previously manufactured products.

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1 General Description

Introduction



The Intelligated® Accuglide™ powered roller conveyor provides quiet, positive transportation and zero-pressure accumulation of cartons, totes, etc. in accumulation lines that may include both straight and curve sections. This chain-drive, zero-pressure accumulation conveyor is designed to control product flow and optimize throughput while minimizing product damage. The standard dual-zone control modules offer an array of benefits, including the flexibility of multiple accumulation and release modes. These modules are DIP switch configurable to easily fine tune the line pressure, accumulation density and throughput rate.

Accuglide incorporates several features designed to minimize installation and maintenance downtime.

- Quick and easy conveyor release mode configuration
- Easy zone control/power connections
- Quiet non-contacting sensors
- Safe, low voltage power supply requirements
- Release rates available up to 95%
- Acceptance rates up to 100%

Simple efficient roller chain and urethane driver pads are pneumatically raised to engage and power the carrier rollers. They are lowered to disengage drive power from the rollers when sensors detect the presence of product within the next downstream zone.

The Accuglide powered roller conveyor has many benefits and options, they are:

Benefits

- Convey around curves with a single drive
- Ease of installation and start-up
- Quiet, positive transportation with zero pressure accumulation
- Quick and easy conveyor release mode configuration
- Safe, low-voltage power supply requirements, and
- Quick error diagnosis to minimize downtime.

Options

- Sensor-less transportation or photo-electric accumulation
- Standard or under-roller style photo-eye sensors
- High-speed rollers with coated axles to minimize noise and frame wear
- High volume acceptance and release (slug)
- Brake-modules
- Mechanical or solenoid-style oiler, and
- Spring or pneumatic-style automatic chain-tensioner.

Product Summary

- Widths (Conveyor):** Standard - 16, 22, 28, 34 and 40 inches (Between Frame). Left and Right Hand
- Capacity:** 100 lbs./ft. Live Load; (200 lbs. max. item weight)
- Drive Section:** 6 feet long, 650 pounds Effective Pull Capacity; with power unit, spring-type chain tensioner, magnetic-type track lubricator, and 6-foot long operational zone; Right Hand / Left Hand assembly. Carrier rollers set high at 2 inch centers with fixed-type mounting. Carrier rollers are always located at infeed end of conveyor.
- Drive section includes standard spring-actuated chain tensioner and magnetic lubricator. Additional chain tensioner and lubricator options are available. Refer to the *Accuglide Installation Manual* - Chapter 4 Accessories for details.
- Power Units:** **Direct Drive and Side Mount** - 3/4 to 5 HP C-Face motor (Baldor) and C-Face, right-angle reducer (Dodge) providing 60-270 fpm (all speeds are not available in all horse-powers); standard and premium-efficiency motors; direct drive. Under-hung mount. **Side Mount and Underhung** - 3 to 5 HP. 350 to 600 fpm.
- Intermediate Section - Straight:** -“Accumulation” and “Transportation” types; (standard) 3 feet to 12 feet long in operational-zone length increments; bolted cross members; low-pressure air actuators support the drive components; carrier rollers at 2-inch, 3-inch, or 4-inch centers with fixed or pop-out type roller mounting; Right Hand / Left Hand assembly.
- Accumulation** – 3-foot-long operational zones; each zone controlled by Solenoid Control Module and photo-eye sensor (24VDC); trailing-zone control; Carrier Roller set High; common piping for all operational modes (singulation, auto-slug, dual-zone and slug). (1-inch incremental lengths: 3 feet-1 inch through 5 feet-11 inches).
- Transportation/Pneumatic** – Same as “accumulation-type” without zone-control components. Low-pressure air actuators support the drive components.
- Transportation/Mechanical** – Same as “accumulation-type” without zone-control components. Springs support the drive components.

Intermediate Section - Transportation Type - 30°, 45°, 60°, 90° and 180° with tapered Curved: rollers set high at 2-inch for TTF frame 3-inch roller centers (nominal at inside rail) for 26IR, 11-inch-long straight tangent at each end. Constant drive to Carrier Rollers.

Intermediate Section - 30°/45° merge with fixed Carrier Rollers set high at 2-inch roller Sawtooth Junction: centers. RH and LH merge assembly(ies) for RH/LH Chain Drive; transportation only; requires separate air supply (30 psi).

Available in main-line widths of 22 inches, 28 inches, 34 inches, and 40 inches W. Spur-line widths are 6 inches less than main-line width.

Length varies based on width of the main-line conveyor.

Idler Section: 3-foot-long overall with 3-foot-long accumulation zone, (controlled by solenoid valve remote 110VAC or 24VDC release signal); Carrier Rollers set High at 2-inch centers w/fixed-type mounting; all Carrier Rollers powered. Located at discharge end of conveyor.

Carrier Rollers: Straight – 1.9-inch galvanized steel tubing with standard precision-type ABEC bearings., High Speed Bearing, or Premium High Speed bearings.

Tapered – 2.50-inch/1.63-inch O.D. tapered, galvanized-steel tubing with ABEC or High Speed bearing only.

A specific “pop-out” carrier roller has a fixed axle that sets in molded, pop-out mounting inserts that are factory-assembled into the frame rail's hex axle holes at the specified centers. Pop-Out carrier rollers are not available for rollers on 2 inch centers.

Pop-out rollers should not be used in overhead situations. When offset side guide and pop-out rollers are selected, the side guide should not be offset to the inside of the conveyor frame.

Factory assembled into Infeed Drive Sections, Intermediate Curve Sections, Intermediate Merge Sections and Discharge Idler Sections; shipped separate and field-installed into Intermediate Straight Sections.

-
- Bearings:** ABEC – standard ABEC-1 rated bearings with a solid 7/16-inch steel hex axle. All standard ABEC rollers are double-sprung (axle can be compressed from either side).
- High Speed – High Speed – ABEC-1 rated bearings with a nylon coated axle. Roller features a 5/16-inch hexagonal steel axle core, with a 7/16-inch nylon adapter sleeve, which significantly reduces noise and frame wear. This roller is typically applied at speeds greater than 300 fpm.
- Premium High Speed (not available for tapered rollers) – ABEC-1 rated bearings with a nylon coated axle; this roller is similar to the standard High Speed, but offers an enhanced appearance utilizing an injection-molded bearing cap. There is also a nominal sound reduction compared to the standard High Speed rollers.
- Drive Components:** RC50 chain with extended pins and extruded urethane drive pad (gray with purple indicator stripe).
- Power Requirement:** For Power Unit – 230-460/3/60 VAC or 575/3/60 VAC - 380 VAC, 3 PH, 50 HZ
For Power Unit Side Mounted - 380VAC, 3PH, 50HZ
For Zone Control/Actuation Components – 110/3/60 VAC (7 AMP)
For Component Solenoid-valves – 115 VAC or 24 VDC
- Finish:** Powder-coated

Accessories:

Standard Accessories

- Air Control Assembly Kit (Filter/Regular)
- BM Curve Air Control 3-0 - Field Kit GEN 1.5
- BM Curve Solenoid _V_ Field Kit
- BM Intermediate Section System Control
- Drip Pan
- Field Cut Kit Template
- Terminal End Cover
- Interface Head-Tail Field Kit (GEN 1.5)
- Interface Head-Tail Field Kit (GEN 2)
- Power Supply
- Power Isolation Cord
- Power Tap / Slug Module Cord (T-Cord)
- Slug Terminator Cord 0-6 Black
- Blade Stop - Idler Section
- Brake Module - Idler Section
- Brake Module - Intermediate - Straight/Curve Sections
- Brake Module Kits
- Chain RC50 w/ext Pin__
- DriverPadw/WearIndicator

Optional Accessories

- Straight Side Guide
- Photo Eye and Reflector Side Guides
- Skate Wheel Side Guide
- Curve Side Guide
- Merge (Sawtooth) Section Side Guide
- Bull Nose Side Guide
- Side Guide Transition
- Side Guide Transition - End
- 9.75/6.5 Transition Bracket Field Kit
- Chain Track Lubricator
- Oil Reservoir and 1 Liter Float Switch
- Air-Actuated Chain-Tension - Drive Section
- Angle End Stop
- Knee Brace Assembly
- Rollers, Fixed ABEC, Fixed High Speed, Fixed Premium and Pop-out ABEC.
- Splice Plate Kit
- Splice Angle for Curves and Drive
- Skew Kit





2 Specifications

Introduction

This chapter contains more detailed information about the major sections and components of the Accuglide conveyor system.

The following conveyor sections are covered in this chapter:

- Drive Sections - Direct and Side Mounted
- Idler Section
- Intermediate Straight Section
- Intermediate Curve Section
- Intermediate Merge (Sawtooth) Section

The following components are covered in this chapter:

- Solenoid Control Modules
- Photo-Eyes and Reflectors
- Power Supply
- Power/Communication Cords
- Air Control Kits
- Drive/Idler Piping Kit

Drive Section - Direct

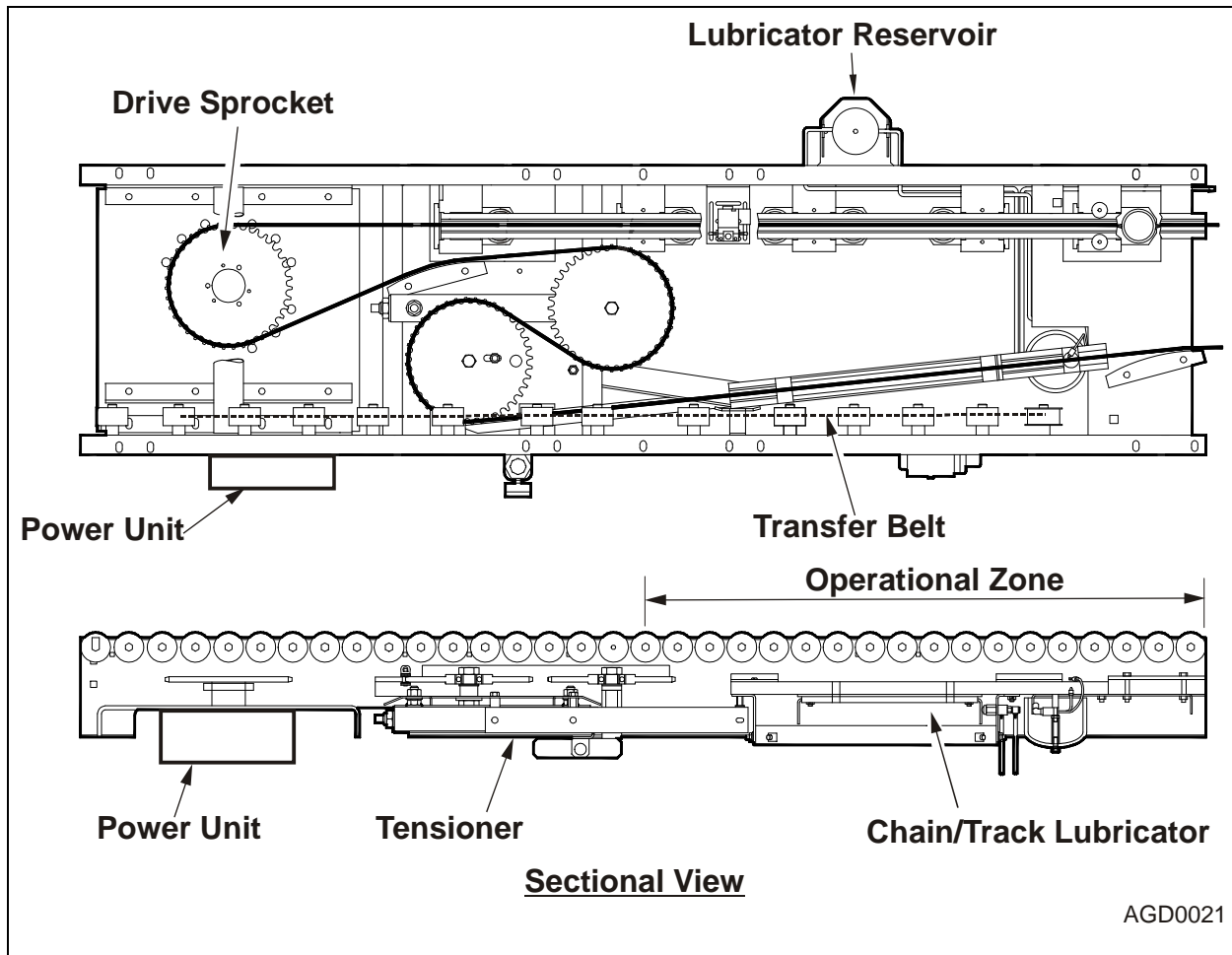


Figure 2 - 1 Accuglide Drive Section - Direct (Left-Hand Assembly Shown)

<p>Drive Frame:</p>	<p>6 feet long X 6-1/2 inches deep X 1-1/4-inch flange-formed rails; axle mounting holes for fixed mounting of 1.9 inches dia. Carrier Rollers at 2-inch centers; bolted cross members. Right-Hand and Left-Hand assembly. Power Unit Mounting Frame has vertical adjustment of drive sprocket. Extruded UHMW chain track.</p>
<p>Carrier Rollers - Mounting</p>	<p>AB - Straight (No.G196AB) 1.9-inch O.D. (galv.) ABEC bearings. HS - Straight (No.G196CB) 1.9-inch O.D. (galv.) ABEC bearing with nylon sleeved axles. PR - Straight (No. 6203) 1.9-inch O.D. (galv.) ABEC bearings. Factory-installed into section at 2-inch roller centers; Fixed-type mounting ONLY.</p>

Power Unit:	<p>Motor (Baldor) - 3/4 - 5 HP, C-face, 1725 rpm, Totally-Enclosed, Fan-Cooled, 208-230/460 VAC, 3PH, 60HZ or 575 VAC, 3PH, 60HZ (premium-efficiency motors available).</p> <p>Reducer (Dodge Tigear2); - Right-angle, C-face, ventless, for standard fixed speeds from 60-240 fpm.</p> <p>Direct Chain Drive - RC50 sprocket (39 tooth, hardened) mounted via locking-type bushing to the reducer's vertical output shaft.</p>
Chain Tensioner / Take-Up:	<p>Spring-loaded, telescoping tensioner maintains chain tension and compensates for wear; manual adjustment; 6 inches take-up travel; proximity switch (24VDC or 110VAC - specify) detects when tensioner/chain requires attention.</p> <p>Air-type also available - see Accessories chapter for detailed information.</p>
Capacity:	650# Effective Pull max.
Chain Track Oiler	<p>Magnetic-type, sprays an oil mist (10W, non-detergent) to reduce friction between chain's side plate and the supporting UHMW track.</p> <p>Magnets create a constant contact pressure between the drive chain and the oiler's chain support track section. When the sliding-friction between the two (2) components exceeds a pre-set amount, the spring-loaded, sliding track advances with the moving chain and actuates a 3-way, normally-closed air valve. The released air picks up lubricant from the reservoir and sprays an oil mist onto the bottom surface of the chain. The chain transfers the lubricant onto the track. The unit will lubricate the chain / track until the sliding friction is reduced to an acceptable level. Solenoid-types also available. See Accessories chapter for detailed information.</p>
Oiler Reservoir	<p>The standard reservoir holds 1 liter of SAE 10W non-detergent motor oil.</p> <p>The oil reservoir with float switch is an alternate for the standard, without switch type. It uses SMC Reservoir AL-DUM00277. Note: The float switch is optional.</p>
Operational Zone	One (1) 6-foot-long zone; the zone's powered / non-powered state controlled by zone control components (pneumatic valve and sensor) located in first operational zone of the adjoining downstream section.
Accessory / Options	<p>Optional Air-Actuated Chain Tensioner</p> <p>Optional Solenoid-Controlled Chain Track Lubricator</p> <p>Optional Drip Pan</p> <p>See Accessories for detailed information.</p>

Drive Section - Side Mounted

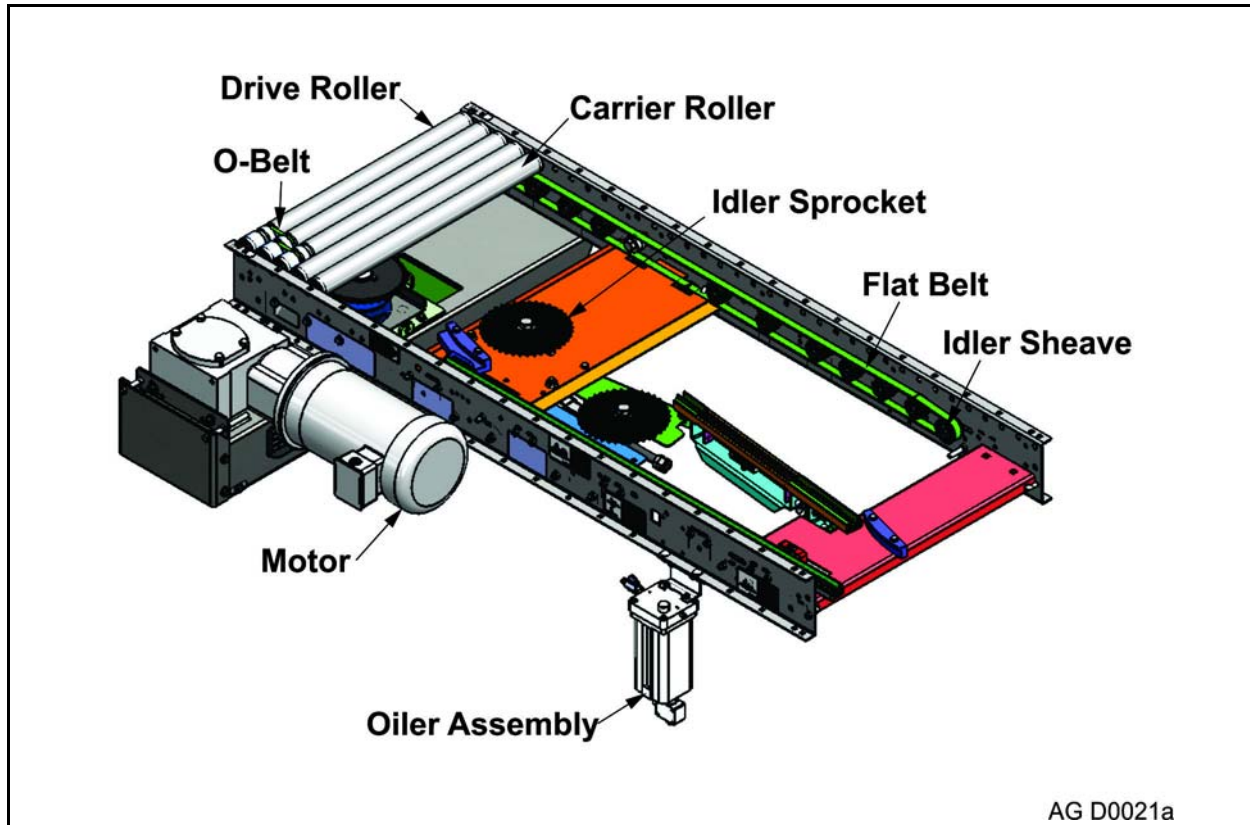


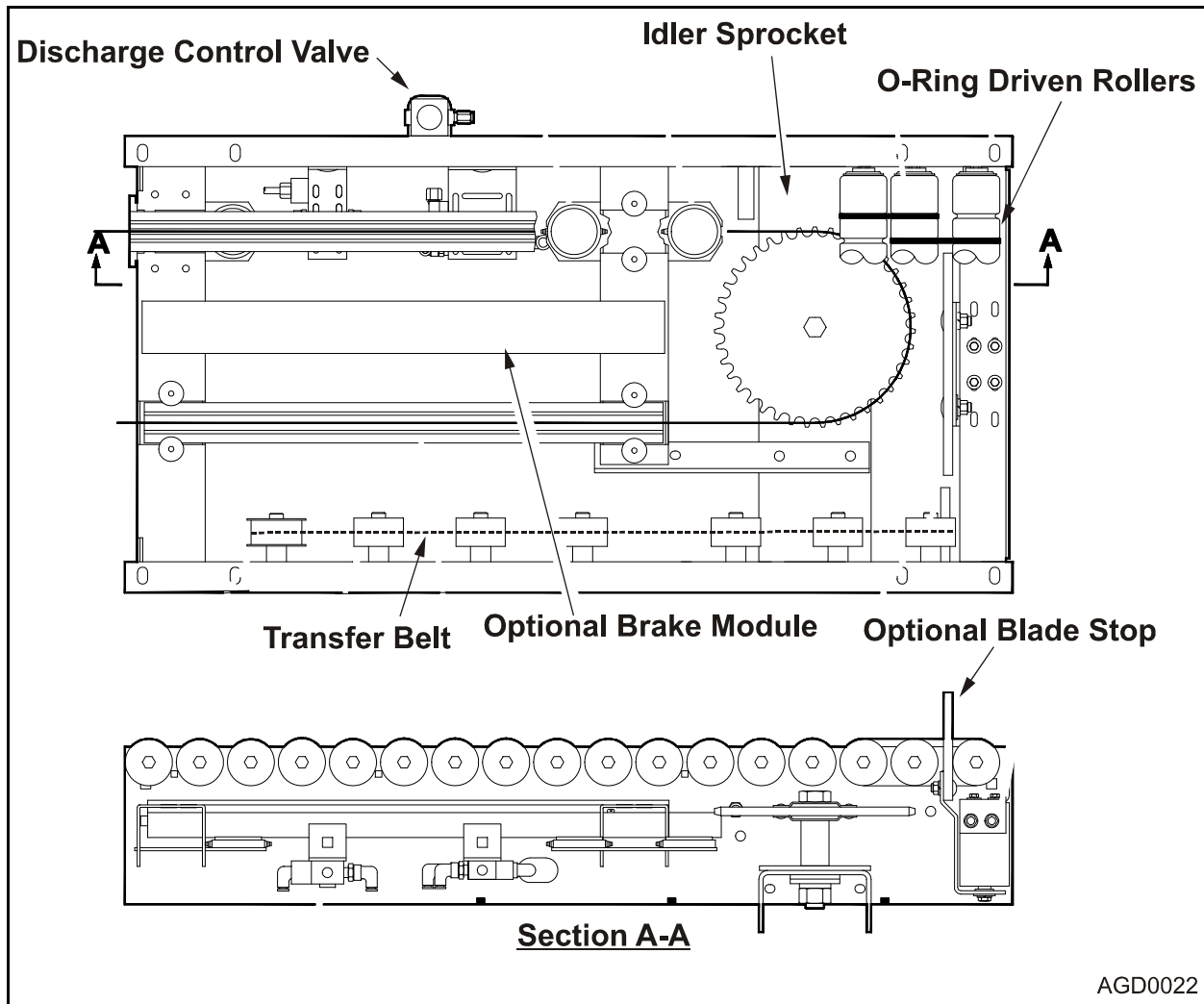
Figure 2 - 2 Accuglide Side Mounted Drive Section

Drive Frame:	6 feet long X 6-1/2 inches deep X 1-1/4-inch flange-formed rails; axle mounting holes for fixed mounting of 1.9 inches dia. Carrier Rollers at 2-inch centers; bolted cross members. Right-Hand and Left-Hand assembly. Power Unit Mounting Frame has vertical adjustment of drive sprocket. Extruded UHMW chain track.
Carrier Rollers - Mounting	AB - Straight (No.G196AB) 1.9-inch O.D. (galv.) ABEC bearings. HS - Straight (No.G196CB) 1.9-inch O.D. (galv.) ABEC bearing with nylon sleeved axles. PR - Straight (No. 6203) 1.9-inch O.D. (galv.) ABEC bearings. Factory-installed into section at 2-inch roller centers; Fixed-type mounting ONLY.
Chain Drive	Chain pitch various on drive size.
Belt and Sprocket System	Gates Polychain Carbon

Height	Side Mounted Drive - 13 inches minimum for chain drive and Gates Polychain drive.
Power Unit:	Motor (Baldor) - 3/4 - 5 HP, C-face, 1725 rpm, Totally-Enclosed, Fan-Cooled, 208-230/460 VAC, 3PH, 60HZ or 575 VAC, 3PH, 60HZ (premium-efficiency motors available). Reducer (Dodge Tigear2); - Right-angle, C-face, ventless, for standard fixed speeds from 60-240 fpm. Direct Chain Drive - RC50 sprocket (39 tooth, hardened) mounted via locking-type bushing to the reducer's vertical output shaft. Standard and Side Mounted Drive - 380VAC, 3PH, 50HZ.
Chain Tensioner / Take-Up:	Spring-loaded, telescoping tensioner maintains chain tension and compensates for wear; manual adjustment; 6 inches take-up travel; proximity switch (24VDC or 110VAC - specify) detects when tensioner/chain requires attention. Air-type also available - See to Accessories chapter for detailed information.
Load Capacity:	650# Effective Pull max.
Chain Track Oiler	Magnetic-type, sprays an oil mist (10W, non-detergent) to reduce friction between chain's side plate and the supporting UHMW track. Magnets create a constant contact pressure between the drive chain and the oiler's chain support track section. When the sliding-friction between the two (2) components exceeds a pre-set amount, the spring-loaded, sliding track advances with the moving chain and actuates a 3-way, normally-closed air valve. The released air picks up lubricant from the reservoir and sprays an oil mist onto the bottom surface of the chain. The chain transfers the lubricant onto the track. The unit will lubricate the chain / track until the sliding friction is reduced to an acceptable level. Solenoid-types also available. See Accessories chapter for detailed information.
Oiler Reservoir	The standard reservoir holds 1 liter of SAE 10W non-detergent motor oil. The oil reservoir with float switch is an alternate for the standard, without switch type. It uses SMC Reservoir AL-DUM00277. Note: The float switch is optional.
Operational Zone	One (1) 6-foot-long zone; the zone's powered / non-powered state controlled by zone control components (pneumatic valve and sensor) located in first operational zone of the adjoining downstream section.

Accessory / Options	Optional Air-Actuated Chain Tensioner Optional Solenoid-Controlled Chain Track Lubricator Optional Drip Pan. See Accessories chapter for detailed information.
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Idler Section



AGD0022

Figure 2 - 3 Accuglide Idler Section (LH Assembly Shown)

<p>Frame / Carrier Rollers</p>	<p>3 feet long X 6-1/2 inches (RSH) deep X 1-1/4-inch formed steel rails; mounting holes for 7/16-inch hex axles punched at 2-inch centers; bolted cross members. Right-Hand and Left-Hand assembly. Carrier Rollers at 2-inch centers, bolted crossmembers.</p>
<p>Carrier Rollers - Mounting</p>	<p>AB - Straight (No.G196AB) 1.9-inch O.D. (galv.) ABEC bearings. HS - Straight (No.G196CB) 1.9-inch O.D. (galv.) ABEC bearings with nylon sleeved axles. PR - Straight (No. 6203) 1.9-inch O.D. (galv.) ABEC bearings. Factory-installed into section at 2-inch roller centers; Fixed-type mounting ONLY.</p>

Idler Sprocket	RC50 chain, 39 tooth (hardened) with precision, greased-packed bearing mounted on fixed 1-1/8-inch dia. shaft.
Operational Zone	One (1) 3-foot long operational zone is controlled by a 3-way solenoid valve. Rollers in the last 12 inches driven by transfer belt and O-rings.
Operational / Release Control	3-way, normally-closed Solenoid Valve (24VDC or 120VAC - specify), controls the powered/non-powered state of the Idler Section's operational zone.
Accessory / Options	Drop in Brake Module Blade Stop See Accessories chapter for detailed information.

Intermediate (Straight) Section - 3-Foot Operational Zones

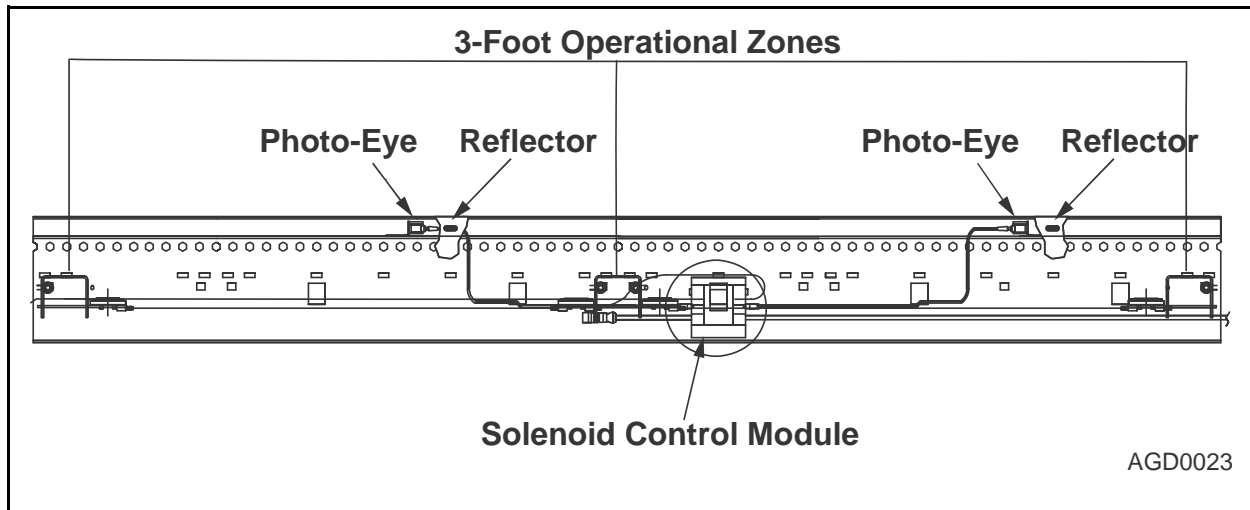


Figure 2 - 4 Intermediate Section (6-Foot Long Operational Zone Shown)

Length	12 feet, 9 feet, 6 feet or 3 feet (multiples of zone length).
Frame	6-1/2 inches (RSH) deep X 1-1/4-inch formed-steel rails; mounting holes for 7/16-inch hex axles at 1-inch centers to provide 2-inch, 3-inch, 4-inch or 6-inch Carrier Roller centers; bolted cross members. Capacity - 100 pounds per foot. Continuous, fixed height return chain/pad support track for full length of section; Right-Hand and Left-Hand assembly.
Operational Zones	Segmented chain support assemblies (UHMW track); and pneumatic actuators (mounted in cross members) hold the drive chain/pad in raised (powered) or lowered (non-powered) positions.
Sequential (Trailing) Zone Control	Standard) Each Operational Zone is controlled by its associated Solenoid Control Module and photo-eye sensor that is located in the next forward downstream zone.
Solenoid Control Module	Two (2) 3-way, normally-closed solenoid-valves (65mA @ 24VDC) with selectable logic to control accumulation and release functions. One (1) SCM controls two (2) Operational Zones.

<p>Photo-Eye/Reflector Sensor Assembly</p>	<p>24VDC (less than 25mA) retro-reflective photo-eye (NPN) with 18-inch long cord (nominal) and 4-pin Pico QD connector; field-mounted on same side of frame as drive chain/pad. Reflector mounted on opposite side of frame with offset determined in field.</p>
<p>Operational Modes</p>	<p>Primary Operational Mode - All zones are factory-set to operate in the “singulation” mode. Each zone can be changed to either Dual-Zone, or Auto-Slug modes if desired. Secondary Operational Mode - All operational zones will operate in the “slug” mode when an external release signal (24VDC or 110VAC) is supplied through the Power Supply or Slug-Module.</p>
<p>Carrier Rollers</p>	<p>AB (ABEC) – Straight 1.9-inch O.D. (galv.) ABEC bearings with a 7/16-inch hexagonal steel axle. Axle is double-sprung (compressible from either side). HS (High Speed) – Straight 1.9-inch O.D. (galv.) ABEC bearings with a 7/16-inch hexagonal nylon sleeve over a 5/16-inch hexagonal steel axle core. Axle is double-sprung (compressible from either side). PR - Straight (No. 6203) 1.9-inch O.D. (galv.) ABEC bearings. Ordered and shipped separate for field installation.</p>
<p>Carrier Roller - Mounting</p>	<p>Fixed-type or Pop-out type (mounting clip inserts are factory-installed into roller axle mounting holes at specified centers).</p>

Intermediate Curve Section - Transportation-Type

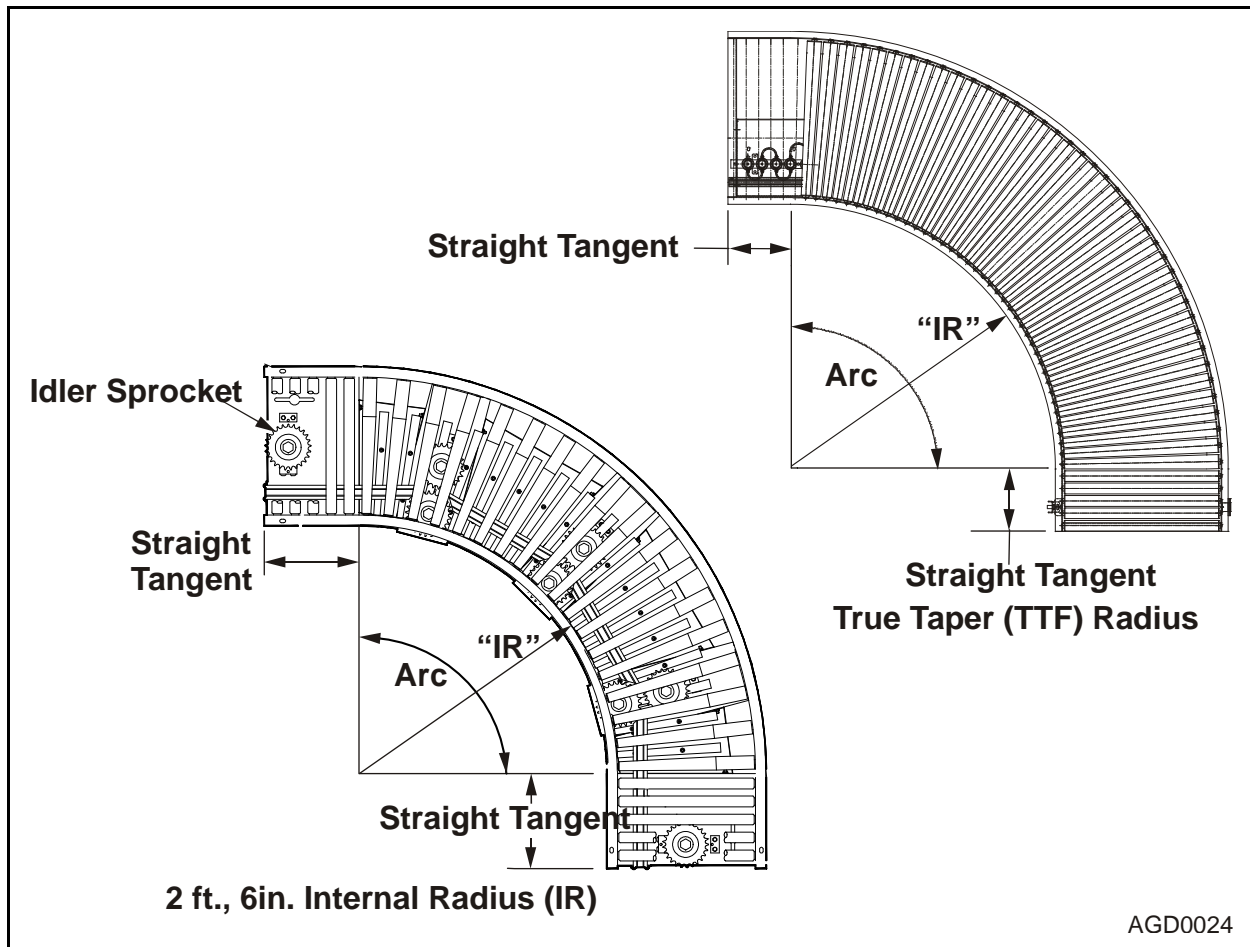


Figure 2 - 5 Intermediate Curve Sections Specifications

Width "W" (BF)	Transportation-type: 16 inches, 22 inches, 28 inches, 34 inches and 40 inches.
Arcs	Transportation-type: 30°, 45°, 60°, 90° and 180°.
Frame Type	<p>Type 26IR: Constant 2 foot-6 inch radius (IR) to face of curve's inner frame rail - all widths.</p> <p>Type TTF: Variable radius (IR) to face of curve's inner frame rail.</p> <p>16 inches: W = 2 foot-6 inch IR; 22 inches: W = 3 foot-4 inch IR; 28 inches: W = 4 foot-2 inch IR; 34 inches & 40 inches: W = 5-foot IR</p>

<p>Frame</p>	<p>6-1/2-inch X 1-1/4 inch formed steel rails; bolted cross members. 7/16-inch hex axle holes punched for rollers set high (RSH); chain support structure (UHMW tracks and RC50 idler sprockets) mounted at fixed height; 11 inches long straight tangent at infeed and discharge ends. Type 26IR and TTF frames (all widths) “Close” (2-inch nom.) or “standard” (2-5/8-inch nom.) roller centers at the inner curve rail, dependent upon curve radius.</p>
<p>Carrier Rollers</p>	<p>AB (ABEC) – Straight 1.9-inch O.D. galvanized ABEC bearings with a 7/16-inch hexagonal steel axle. Axle is double-sprung (compressible from either side). HS (High Speed) – Straight 1.9-inch O.D. galvanized ABEC bearings with a 7/16-inch hexagonal nylon sleeve over a 5/16-inch hexagonal steel axle core. Axle is double-sprung (compressible from either side). Tapered AB (ABEC) – Tapered 2.5-inch/1.62-inch O.D. galvanized ABEC bearings with a 7/16-inch hexagonal steel axle. Axle is double-sprung (compressible from either side). Tapered HS (High Speed) – Tapered 2.5-inch/1.62-inch O.D. galvanized ABEC bearings with a 7/16-inch hexagonal nylon sleeve over a 5/16-inch hexagonal steel axle core. Axle is double-sprung (compressible from either side). Factory-installed into the section.</p>
<p>Carrier Roller - Mounting</p>	<p>Type 26IR: Standard (2-5/8 inch nominal) roller centers only. Type TTF: Rollers available on 2-inch centers only - “close” (2 inch nominal) roller centers only. Fixed-type Mounting ONLY. Note: Roller centers measured at the inner curve rail.</p>

Intermediate Merge (Sawtooth) Section

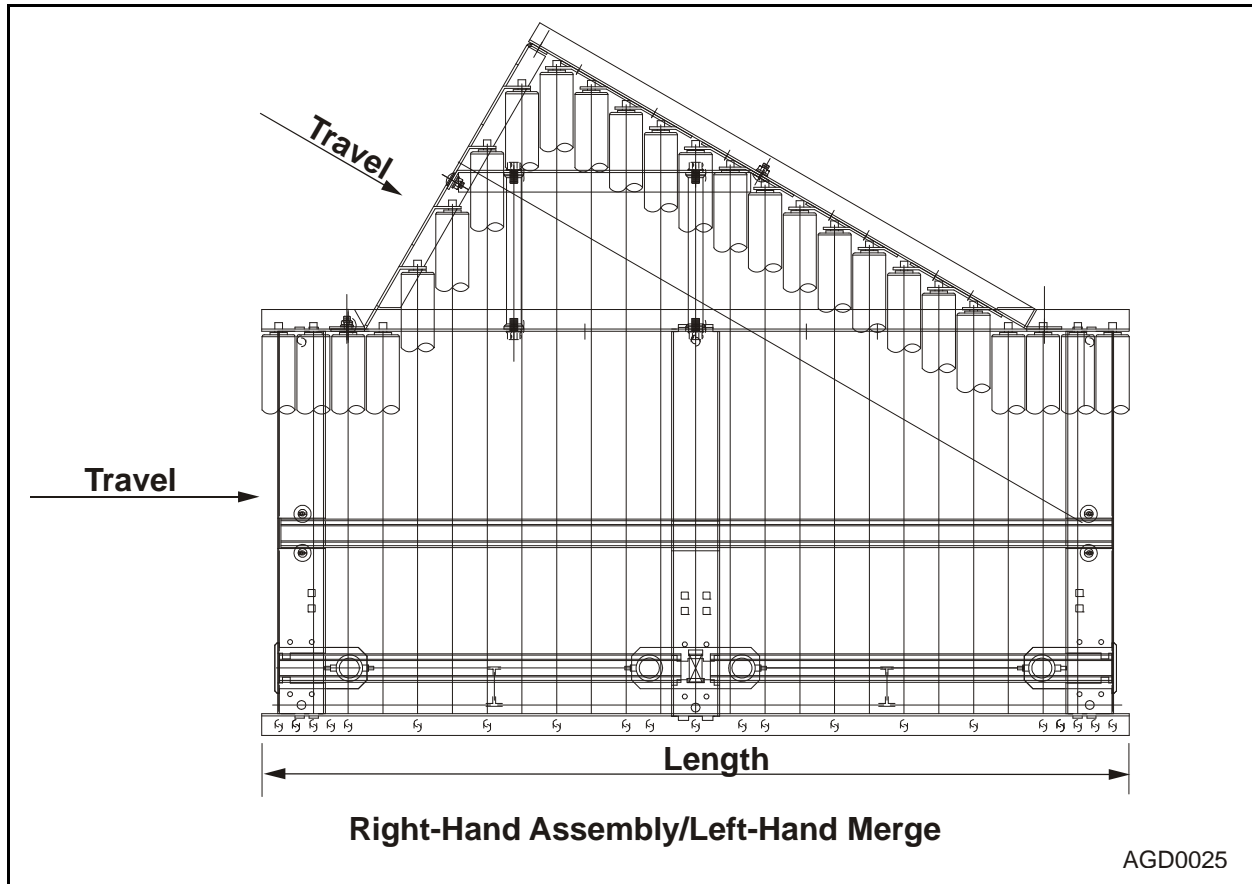


Figure 2 - 6 Accuglide Sawtooth Intermediate Merge Specifications

Width “W” (Main Line / Spur Line)	22 inches/16 inches, 28 inches/22 inches, 34 inches/28 inches & 40 inches/34 inches
Length	Varies based on Width (see Layout Dimensions chapter for additional information)
Frame	6-1/2 inches (RSH) deep X 1-1/4 inch formed steel rails; mounting holes for 7/16-inch hex axles to provide for fixed-type mounting of Carrier Rollers at 2-inch centers; bolted cross members. Right-Hand and Left-Hand assembly, Right-Hand and Left-Hand merge.
Side-Guide - Wheel Faced	Standard frame features either a Type “WFB” (2-5/8 inches deep) or Type “WFD” (10 inches deep) Wheel-Faced Side Guide rail. The rail is factory-assembled to the common merge/main-line frame rail with 1/2-inch long spacers between the rails.

SPECIFICATIONS

Air Supply	Dedicated 30 psi air-supply (Filter/Regulator)
Carrier Rollers	No.G196A1 (ABEC) ONLY
Carrier Roller - Mounting	Fixed-type Mounting ONLY

Solenoid Control Module

Solenoid Control Modules (SCM) control the powered and non-powered state of two (2) in-line operational zones.

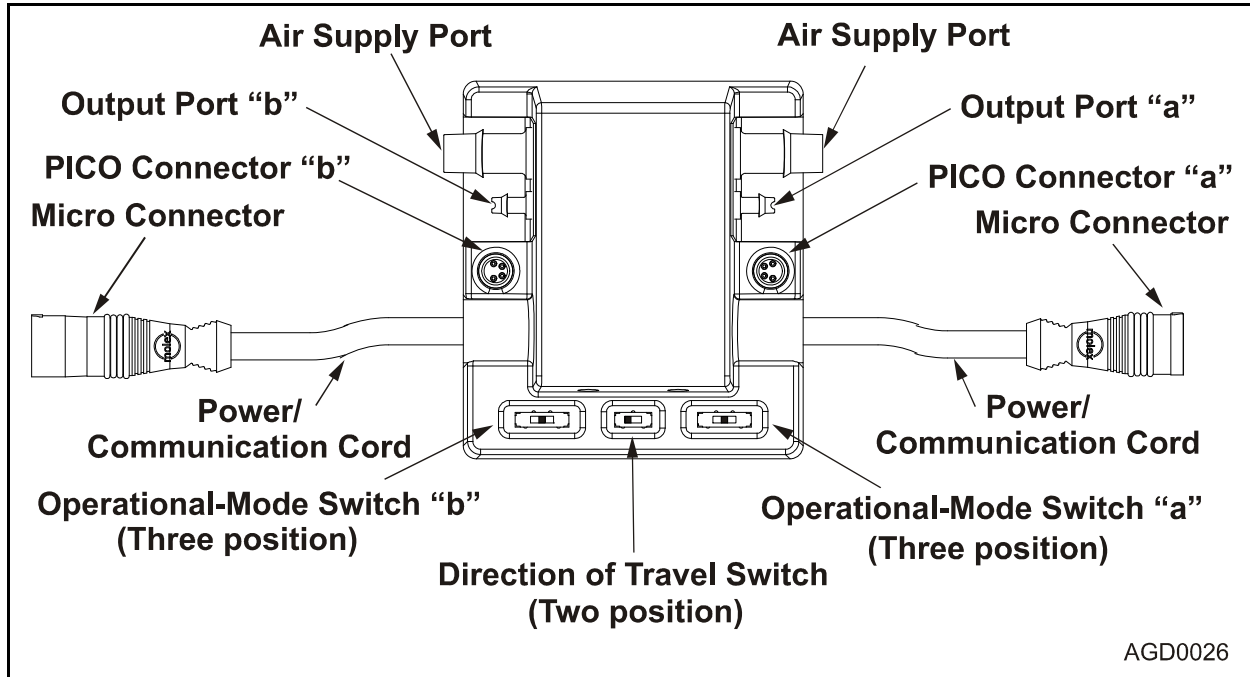


Figure 2 - 7 Solenoid Control Module

Body	Molded-urethane body encapsulates the valve and electronic components. Snap-mounts into frame side rail; molded “output” barb fittings for 5/32-inch I.D. tubing; molded air-supply barb fittings for 3/8-inch I.D. tubing.
Valve(s)	(2) 3-way, normally-closed solenoid-type (poppet); air-flow rate @ 30 psi = 0.55 SCFM.
Power/Communication Cord/ Connectors	Four (4) wire with Yellow PVC jacket. 12mm push-to-connect type Micro Connector for connecting to adjoining (upstream/downstream) SCMs.
Voltage	24 VDC
LED Indicators	Two (2) bi-color LED indicators (one per valve) visible from side of conveyor; “yellow” LED indicates that the SCM is receiving power; “green” LED indicates that the solenoid-valve is actuated.

Connector(s)	4-pin, Long leg of the T-Cord has a female connector that attaches to the male output connector of the Power Supply/Slug-Module and male/female connectors.
Temperature Range	32° to +131°F
Direction of Travel	2-position switch allows for common RH/LH assembly.
Operational Mode(s)	3-position switch selects the operational-mode (Singulation, Dual-Zone, or Auto-Slug) of the next “upstream” valve and its associated “upstream” operational-zone.

NOTE: See Controls chapter for additional information.

Photo-Eyes and Reflectors

Retro-Reflective Photo-Eye

Application	Standard photo-electric sensor used to detect product within the zone.
Voltage	24 VDC
Output	NPN, dark-operated.
Mounting	Mounted to integral brackets in the side guide using a ball mount. Mounting protects the photo-eye from passing product.
Cord / Connector	Four (4) wire with male PICO QD connector; connects to the Solenoid Control Module's female connector.
Cord Length	79 inches (nominal)
Voltage Range	10-30 VDC
Sensing Range	12 feet
Temperature Range	-4° to +158°F
LED Indicators	Red LED "ON" indicates photo-eye is aligned with the reflector and is unblocked. Green LED "ON" indicates sensor has power.
Reflector	Mounted with screws to integral brackets in the side guide. Locating stud correctly aligns reflector.



Figure 2 - 8 Retro-reflective Photo-Eye (Ball Mount)

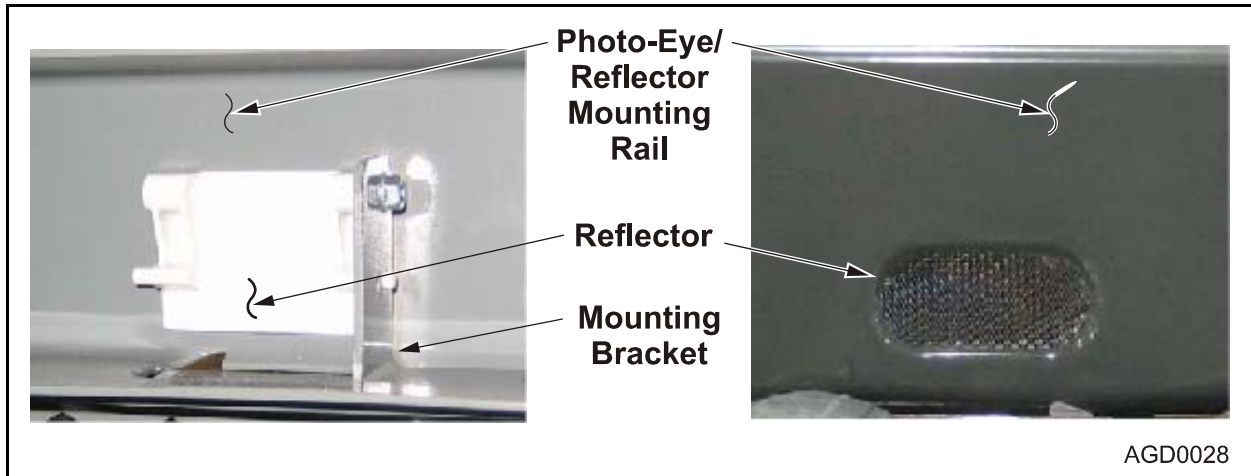


Figure 2 - 9 Reflector

Diffused Photo-Eye

Application	Used in applications where side guide cannot be installed.
Voltage	10-30 VDC
Output	NPN, light-operated.
Mounting	Mounted below the rollers so that the top of the sensor is at least 1/4 inch below the high point of the adjacent rollers.
Cord / Connector	Four (4) wire with male PICO QD connector; connects to the Solenoid Control Module's female connector.
Cord Length	25 inches (nominal)
Voltage Range	10-30 VDC
Sensing Range	Variable, up to 900 mm. Adjust gain using black dial on top of sensor.
Temperature Range	-4° to +158°F
LED Indicators	White LED on top of sensor. Brightness increases when product is sensed.
Reflector	None

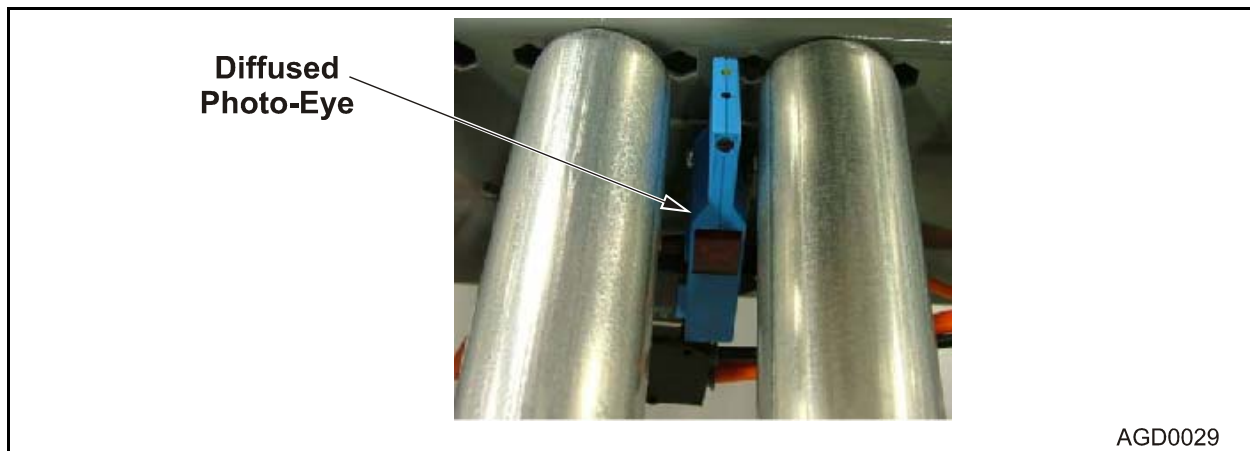


Figure 2 - 10 Diffused Photo-Eye

Power Supply / Slug-Module

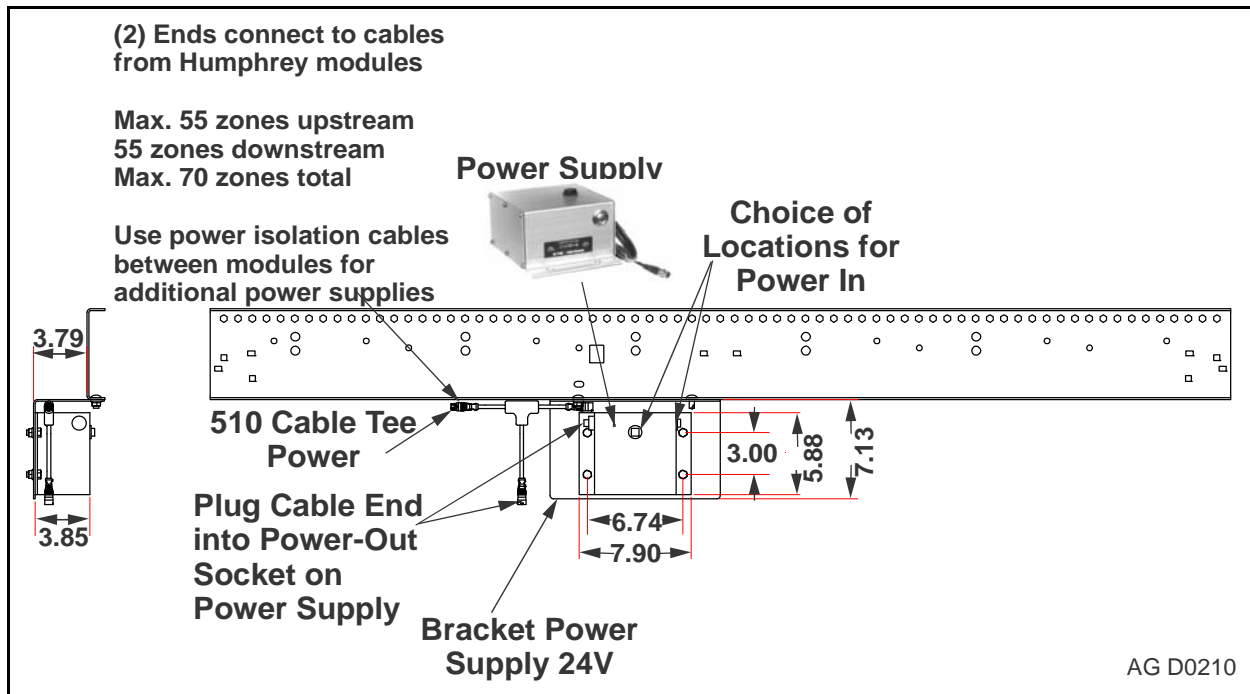


Figure 2 - 11 Power Supply / Slug-Module Kit - (T-Cord not shown)

<p>Application</p>	<p>As a Power Supply - Provides 24VDC zone-control power for seventy (70) operational-zones (max.) and optional slug-release signal. With a maximum of 55 zones on one side of the power supply. The power supply can also be used as a slug-module. As a Slug-Module - Provides slug-release signal (only) when a conveyor cannot be supplied a slug-release signal through the Power Supply. When used as a slug module, the power supply should not be connected to the 110VAC power source.</p>
<p>Enclosure</p>	<p>Die-cast, aluminum (NEMA 1), with On/Off switch, short-circuit, overload protection; reset; LED indicators; and internal terminal block (8-screw) for connecting power input and/or remote slug-release signal. 12 mm., threaded Micro-Connector (male) output connection. UL Approved.</p>
<p>Input / Output</p>	<p>For Power-Supply ONLY 105-132 VAC (1.65 amp, full load) / 27VDC (3.7 amp, 100W).</p>
<p>T-Cord</p>	<p>6-foot X 10-foot "T" Cord has 12 mm., female, push-to-connect, micro-connector connecting the output connector of either the Power Supply or Slug-Module, and male/female connectors for splicing into the conveyor's Power/Communication Cord. For more information See "T-Cord" on page 22.</p>

Slug Release	Units generate a slug-release signal through their output connection in response to a remote signal (15-132 VDC or VAC).
Mounting	Mounting bracket included, mounting hardware not included.
Temperature Range	32° to +131° F (0° to +55° C)

T-Cord

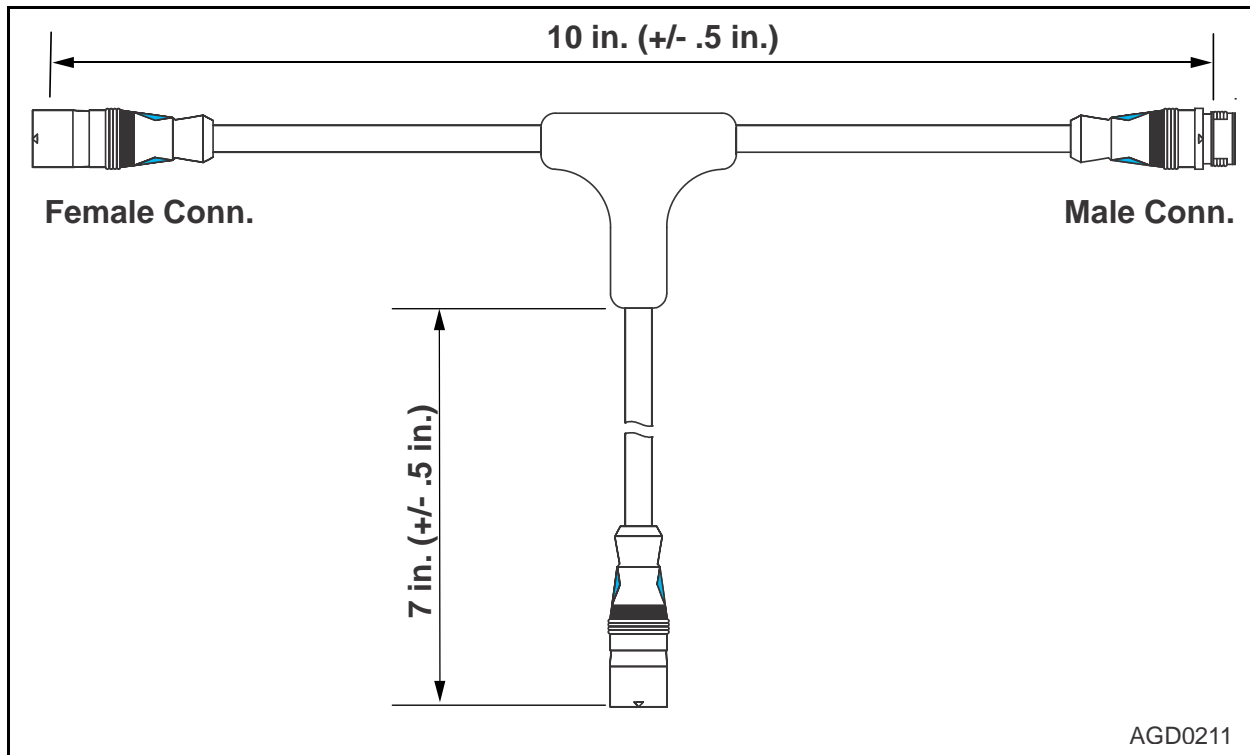


Figure 2 - 12 T-Cord

Application	Required for connecting Power-Supply and/or Slug Module to the Intermediate Straight Section. Transmits slug-release signal and/or power (24VDC) from the Power Supply / Slug Module to the Power/Communication Cord. Transmits power and all inter-zone communication signals between adjoining Solenoid Control Modules (including slug-release).
Cord	Four (4) wire with Yellow PVC jacket.
Connector(s)	4-pin, 12mm push-to-connect Micro Connector. Long leg of the T-Cord has a female connector that attaches to the male output connector of the Power Supply/Slug-Module and male/female connectors for connecting to the connectors of two (2) in-line Solenoid Control Modules.
Length(s)	6 feet X 10 inches (+/- 1 inch)

Power / Communication Cord

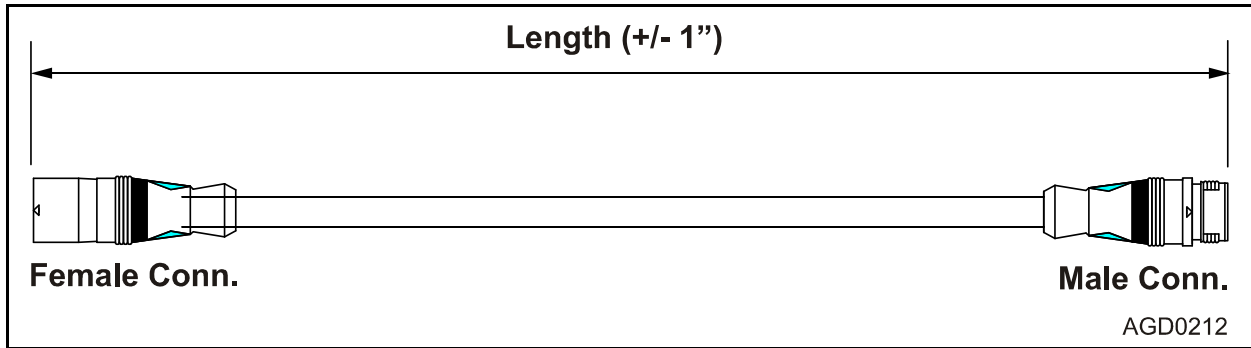


Figure 2 - 13 Power/Communication Cord

Application	Required when distance between Solenoid Control Modules exceeds 6 feet. Transmits all power (24VDC), inter-zone communication signals (including slug-release).
Cord	Four (4) wire with Yellow PVC jacket.
Connector(s)	4-pin, 12mm push-to-connect Micro Connector (male and female).
Length(s)	1 foot, 2 feet, 3 feet, 4 feet, 6 feet, 9 feet and 12 feet.

Slug Termination Cord and Power Isolation Cord

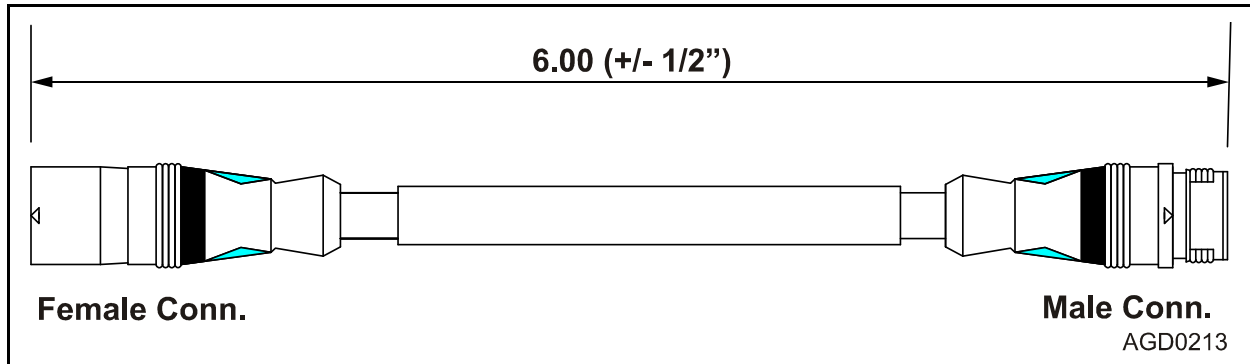


Figure 2 - 14 Slug-Termination Cord / Power Isolation Cord

Application	<p>Slug-Termination Cord - Required to terminate a “slug-release” zone. Transmits power (24VDC) and inter-zone communication signals; does NOT transmit slug-release signal.</p> <p>Power Isolation Cord - Required for isolating portions of a conveyor that receive power from separate Power Supplies. Transmits all inter-zone communication signals including slug-release. Does NOT transmit the 24VDC power between two (2) adjoining Solenoid Control Modules.</p>
Cord	Three (3) wire with Yellow PVC jacket.
Cord I.D. Color	<p>Slug-Termination Cord - Black Shrink-Wrap.</p> <p>Power Isolation Cord - Red Shrink Wrap.</p>
Connector(s)	4-pin, 12mm push-to-connect Micro Connector (male and female).
Length(s)	6 feet

Air Control Kit

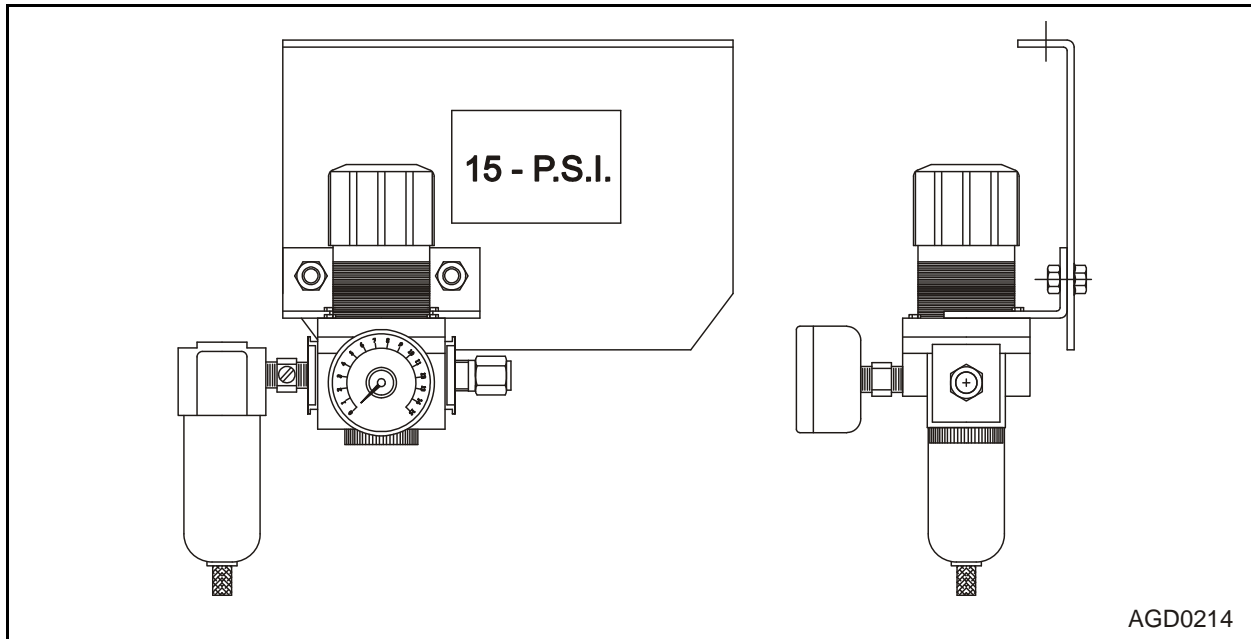


Figure 2 - 15 Air Control Assembly Kit

Application	Air Control Kits condition (filter) the air provided by the facility's air source and regulate its pressure to the required pressure for each particular component.
Operating Range(s)	15 psi.
Mounting	The Air Control Assembly is factory-assembled to a formed mounting bracket.
Field Assembly	Air Control Assembly must be mounted to the conveyor at determined point(s).
Air Supply	Normal Factory Air (60 psi. min.).

Drive/Idler Piping Kit (One per conveyor)

Application	Air connection fittings for connecting the Intermediate Sections' main air-supply line (1/2-inch O.D. - red) to the Drive Sections' chain track lubricator and the Idler Sections' zone control valve (1/4-inch O.D. - yellow)
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3 Accessories

This chapter contains standard and optional accessories and that are available for the conveyor product line.

Standard Accessories

The following components are common for all Accuglide Conveyors.

- Air Control Assembly Kit (Filter/Regular)
- BM Curve Air Control 3-0 - Field Kit GEN 1.5
- BM Curve Solenoid _V_ Field Kit
- BM Intermediate Section System Control
- Drip Pan
- Field Cut Kit Template
- Terminal End Cover
- Interface Head-Tail Field Kit (GEN 1.5)
- Interface Head-Tail Field Kit (GEN 2)
- Power Supply
- Power Isolation Cord
- Power Tap / Slug Module Cord (T-Cord)
- Slug Terminator Cord 0-6 Black
- Blade Stop - Idler Section
- Brake Module - Idler Section
- Brake Module - Intermediate - Straight/Curve Sections
- Brake Module Kits
- Chain RC50 w/ext Pin__
- DriverPadw/WearIndicator

Air Control Assembly Kit (Filter/Regulator)

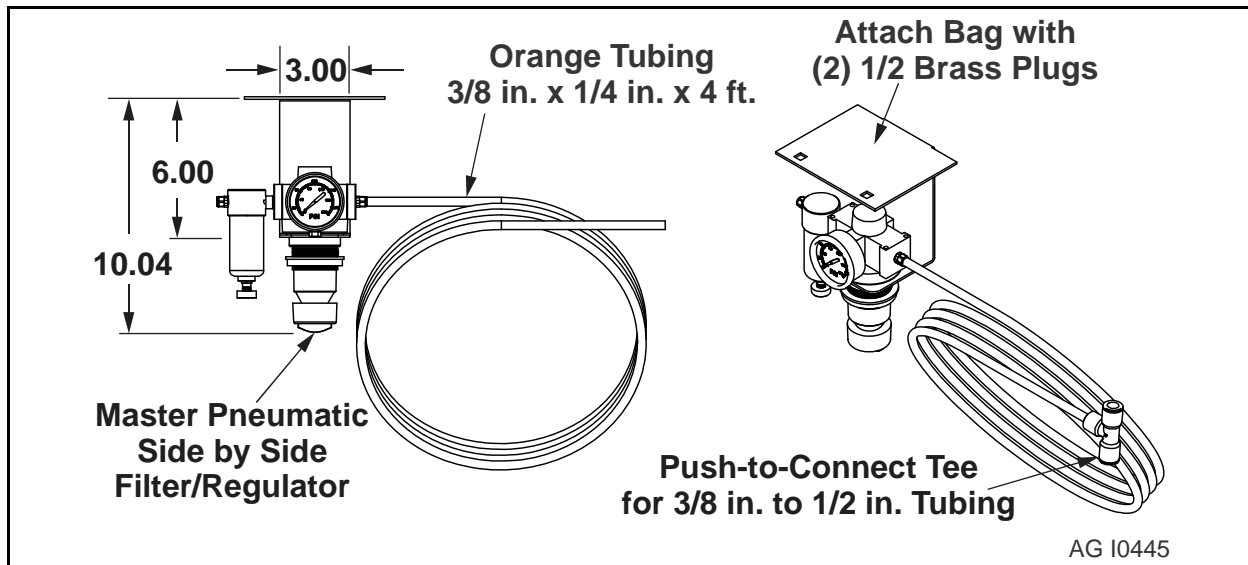


Figure 3 - 1 Air Control Assembly Kit (Filter/Regulator)

Overview	A minimum of one is required for each 200 feet of conveyor; 0 - 15 psi filter/regulator with mounting brackets and hardware.
Operation	Recommended initial setting of operation pressure for intermediates is 12 psi.
Kit Includes	Filter/Regulator/Gauge Assembly: Air filter (10 micron); air regulator and gauge (0-30 psi); mounting bracket; tubing and fittings required for connecting assembly to the conveyor's air supply line. Air Line Plugs: (2) barb fittings (.375 inch OD x 1-8 NPT); and (2) plugs (1/8 inch NPT dome nut).
Installation	The filter regulator gauge (FRG) assembly's mounting bracket bolts to the bottom flange of the conveyor frame rail at a power near the middle of the conveyor. The FRG assembly is connected to the conveyor's main air supply line via the tubing and Adapter and Tee and fittings furnished. Air-Line Plugs - short lengths of the main air supply line tubing (1/2 inch OD) are cut and connected to the terminal ports of the conveyor's first and last Zone Control modules. A barb fitting is connected to each length of tubing and a dome nut is threaded on the barb fitting.
Part Numbers	70074201

BM Curve Air Control 3-0 Field Kit GEN 1.5

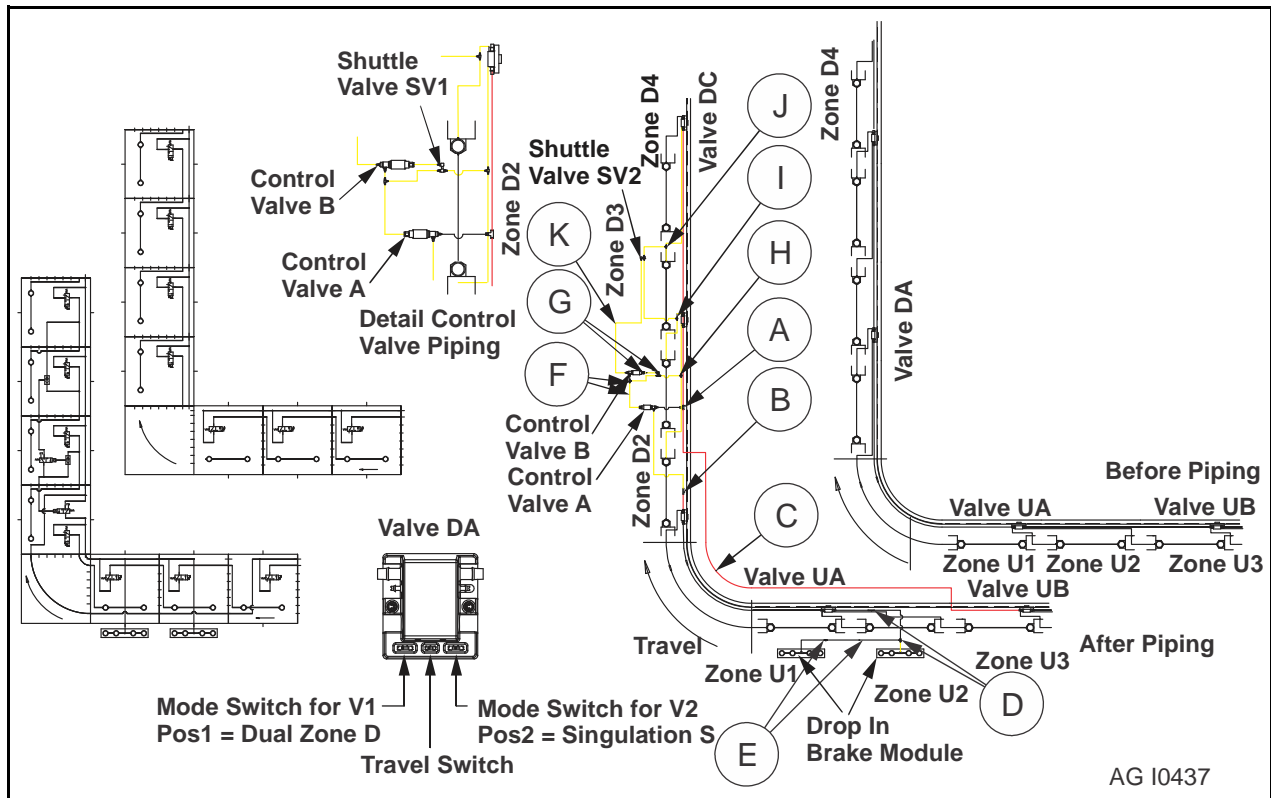


Figure 3 - 2 BM Curve Air Control 3-0 Field Kit GEN 1.5

- Overview** The curve air kit is used to prevent product from entering the transportation curve while product is accumulating.
- Operation** The kit keeps the two downstream zones of the curve clear before allowing upstream product to enter the curve. This allows product in the curve to discharge into these zones to minimize jams and side-by-sides. The upstream brakes minimize the chance of product being pushed into the curve during accumulation.

Installation

Field instructions for 3 ft. and 9 ft. sections after the curve.

- Turn off and lockout power to system (if previously installed) and remove all air from system before working on conveyor.
 - Verify connection of valve "D1" to valve "U1" and diaphragms using appropriate AGP curve airline and cord kit. If missing, then install.
 - Install brake modules in zone "U1" and "U2" upstream of curve.
 - Install two (2) air pilot operated 3-way valves in zone "D2" downstream of curve.
 - All Zone control valves to be set to singulation mode.
- A Cut 1/2 inch red tubing between valve "DA" and valve "DB". Install 1/2 x 1/2 x 1/2 tee onto 1/2 inch tube from valve "DB". Install 1/2 x 1/4 adapter into tee. Install 1/4 inch yellow tube from adapter to input port of control valve "A".
- B Install 1/2 x 1/2 connector onto 1/2 inch red tube to valve "DA". Install 1/2 x 1/4 adapter into connector. Install 1/4 inch yellow tube from adapter to output port of control valve "A".
- C Remove 1/2 inch red tubing between valve "UA" and "UB" from valve "UB". Leaving shorter segment on valve "UA". Connect new 1/2 inch tube from valve "UB" to 1/2 x 1/2 x 1/2 tee previously installed in Step A.
- D Install 1/2 x 1/2 connector onto shortened 1/2 inch tube from valve "UA". Install 1/2 x 1/4 adapter to connector. Install 1/4 inch yellow tube from adapter to input tee (5/32 ID barb) of Brake module in zone "U2".
- E Remove input tee from Brake module in Zone "UA" and replace with straight connector (5/32 ID barb). Install 1/4 inch tube from connector to input tee of Brake module in zone "UB".
- F Connect a length of 1/4 inch yellow tube from output port of control valve "B" to pilot actuator port of control valve "A". Cut tube and install 5/32 barbed tee between control valves.
- G Connect a short length of 1/4 inch yellow tubing from pilot actuator port of control valve "B" to output port of shuttle valve "SV1". Connect a 1/4 inch yellow tube from one input port of shuttle valve "SV1" to 5/32 barbed tee installed in Step F.
- H Cut 1/4 inch yellow tube from upstream output port of valve "DB" and install 5/32 barbed tee between valve "DB" and diaphragms in zone "D1". Install 1/4 inch yellow tube from tee to second input port of shuttle valve "SV1" installed in Step G.
- I Cut 1/4 inch yellow tube from downstream output port of valve "DB" and install 5/32 barbed tee between valve "D3" and diaphragms in zone "D2". Install 1/4 inch yellow tube from tee to one input port of shuttle valve "SV2".

-
- Installation (continued)
- J Cut 1/4 inch yellow tube from upstream output port of valve "DC" and install 5/32 barbed tee between valve "DC" and diaphragms in zone "D3". Install 1/4 inch yellow tube from tee to second input port of shuttle valve "SV2".
 - K Install 1/4 inch yellow tube from output port of shuttle valve "SV2" to input port of control valve "B".
- Part Numbers
- 51043100 - BM Sing Curve Air Control
 - 51043200 - BM Auto Curve Air Control

BM Curve Solenoid _V_ Field Kit

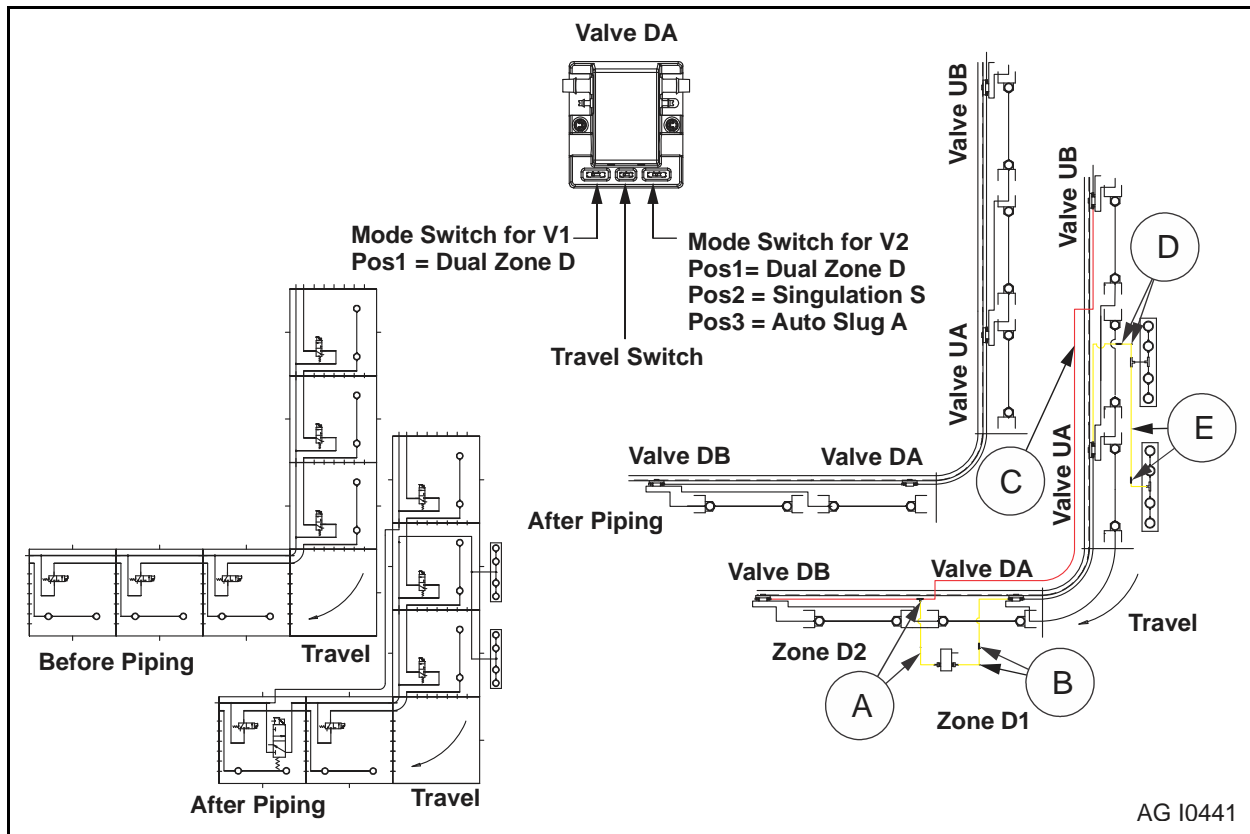


Figure 3 - 3 BM Curve Solenoid _V_ Field Kit

Overview

The curve air kits are only used when there are accumulating straight sections with a transportation curve. The kit looks at the eye three zones upstream, when this eye is blocked it applies the brake in the upstream section of the curve and prevents product from entering a curve. Then, whatever product is in the transportation curve is released to the two downstream zones, and the curve is left empty.

Operation

The kit uses an external signal to keep the two downstream zones of the curve clear before allowing upstream product to enter the curve. This allows product in the curve to discharge into these zones to minimize jams and side by sides. The upstream brakes minimize the chance of product being pushed into the curve during accumulation.

Installation	<p>Field instructions 3 ft. and 9 ft. sections</p> <ul style="list-style-type: none">• Turn off and lockout power to system (if previously installed) and remove all air from system before working on conveyor.• Verify connection of valve D1 to valve U1 and diaphragms using appropriate AGP curve airline and cord kit. If missing, then install.• Install Brake modules in zones U1 and U2 upstream of curve.• Install 3-way solenoid valve in zone D1 or D2 downstream of curve with bracket and hardware in kit. <p>A Cut 1/2 inch tube between valve "DA" and "DB". Install 1/2 x 1/2 x 1/2 tee onto 1/2 inch tube from valve "DB". Install 1/2 to 1/4 adapter onto tee. Install 1/4 inch tube from adapter to input port of 3-2ay solenoid valve.</p> <p>B Install 1/2 x 1/2 connector onto just cut end of 1/2 inch tube to valve "DA" install 1/2 to 1/4 adapter into connector. Install 1/4 inch tube from adapter to output port of 3-way solenoid valve.</p> <p>C Remove 1/2 inch tube between valve "UA" and "UB" from valve "UB". Connect new 1/2 inch tube from valve "UB" to 1/2 x 1/2 x 1/2 tee previously installed in Zone "D2".</p> <p>D Install 1/2 x 1/2 connector onto 1/2 inch tube from valve "UA" (end removed from valve "UB"). Install 1/2 to 1/4 adapter to connector. Install 1/4 inch tube from adapter to input tee or Brake module in zone "U2".</p> <p>E Remove input tee from Brake module in zone "U1" and replace with straight connector. Install 1/4 inch tube from connector to input tee of Brake module in zone "U2".</p>
Part Numbers	51043301 51043302

BM Intermediate Section Solenoid _V_ Field Kit

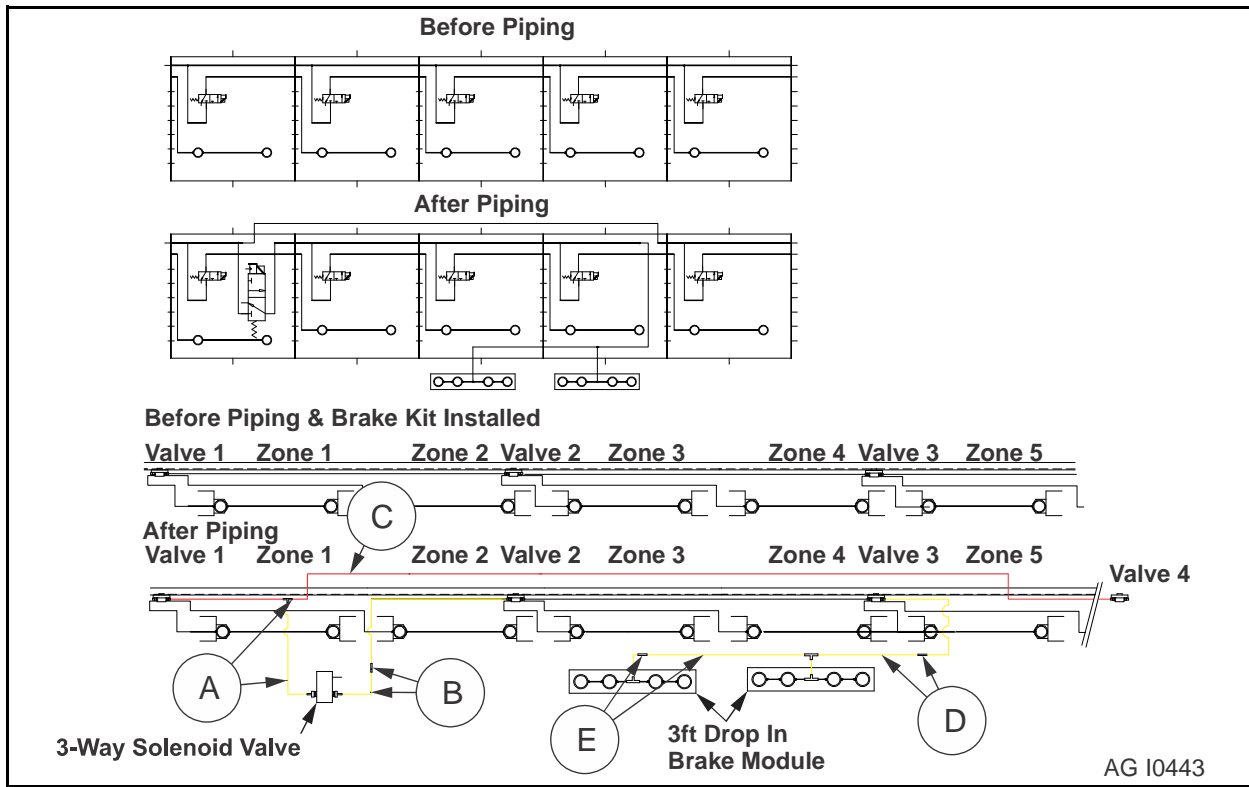
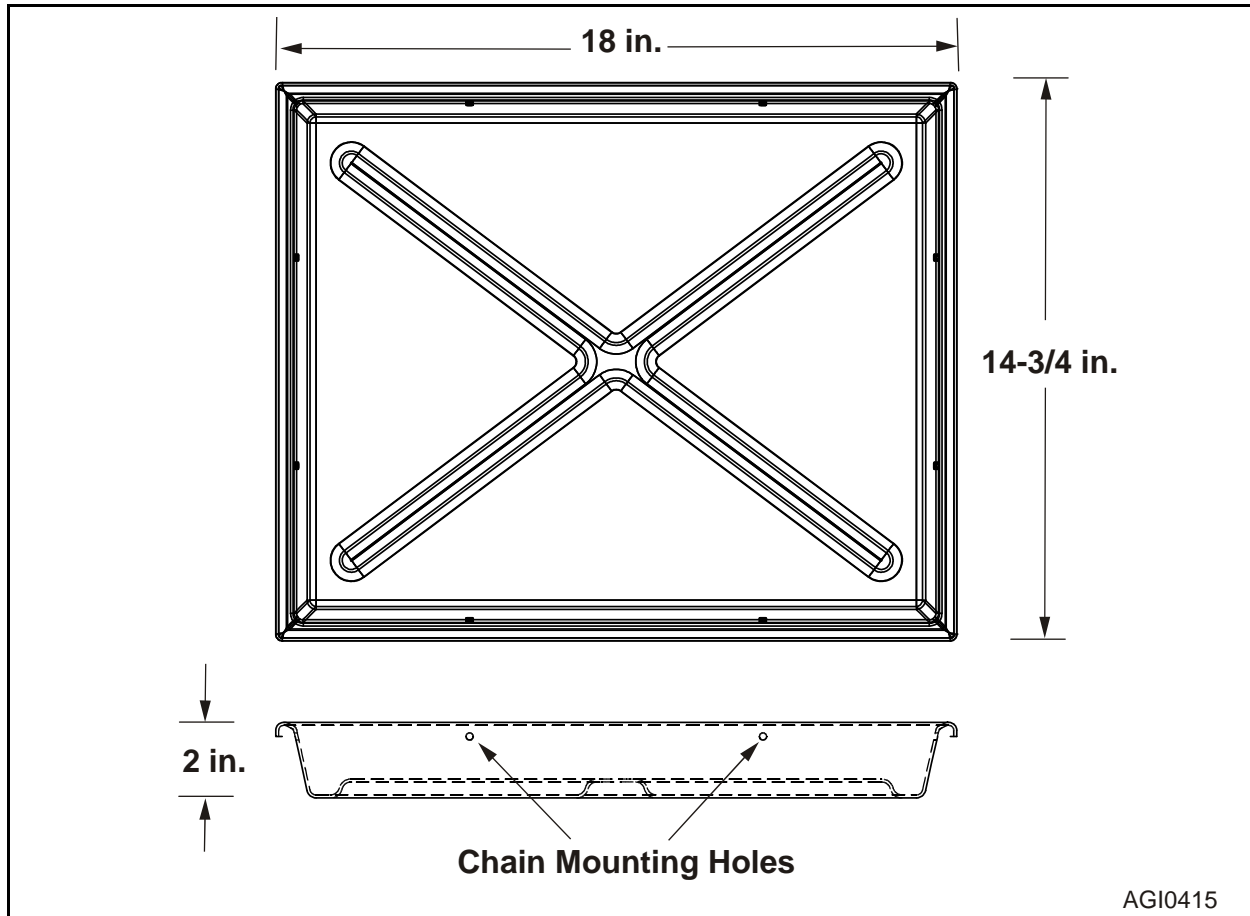


Figure 3 - 4 BM Intermediate Section Solenoid _V_ Field Kit

- Overview** All mechanical, air and electrical components required for installing two (2) Brake modules in any two (2) operational zones in an AGP1 Intermediate Section. BM is controlled by a remote signal (Singulation Release).
- Operation** The intermediate solenoid brake sections allow accumulation of product in any two operational zones along a length of Accuglide through a remote signal. This is typically used for an operation to be performed on the product.

Installation	<p>Field installation instructions.</p> <ul style="list-style-type: none">• Turn off and lockout power to system (if previously installed) and remove all air from system before working on conveyor.• Install Brake modules in zones #3 and #4. For other locations, move all related parts together.• Install 3-way solenoid valve in Zone #1. <p>A Cut 1/2 inch tube between valve #1 and #2. Install 1/2 x 1/2 x 1/2 onto 1/2 inch tube from Valve #1. Install 1/2 to 1/4 adapter onto tee install 1/4 inch tube from adapter to input port of 3-2ay solenoid valve.</p> <p>B Install 1/2 x 1/2 connector onto 1/2 inch tube to valve #2. Install 1/2 to 1/4 adapter into connector. Install 1/4 inch tube from adapter to output port of 3-way solenoid valve.</p> <p>C Remove 1/2 inch tube between valve #3 and valve #4. Connect new 1/2 inch tube from valve #4 to 1/2 x 1/2 x 1/2 tee previously installed in zone #1.</p> <p>D Install 1/2 x 1/2 connector onto 1/2 inch tube from valve #3 (end removed from valve #4). Install 1/2 to 1/4 adapter to connector. Install 1/4 inch tube from adapter to input tee of Brake module in zone #4.</p> <p>E Remove input tee from brake module in zone #3 and replace with straight connector. Install 1/4 inch tube from connector to input tee of Brake module in zone #4.</p>
Part Numbers	51043501 51043502

Drip Pan*Figure 3 - 5 Drip Pan*

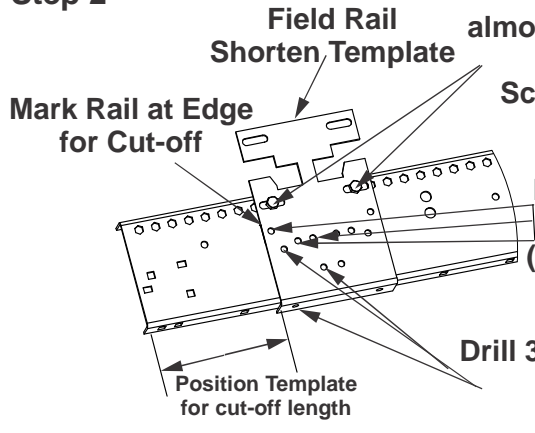
Overview	The drip pan catches oil dripping from the gearbox and/or oiler.
Installation	It is most commonly installed on the drive section of each conveyor. The drip pan hangs from chains mounted on the frame of the drive, or on the reducer itself. Install drip pans as needed, typically one per drive.
Part Numbers	29001300

Field Cut Kit Template

Step 1

Remove the end crossmember and advance/return tracks from the discharge end of the section to be shortened. Remove any hardware in the way of the following steps.

Step 2



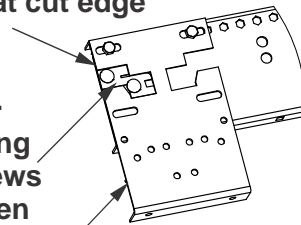
Bring 7/16 in. screws/nuts/washer almost tight. Let template hand down on screws (bottom flange will not locate)
Screws must be bottomed on the hex holes
Tighten screws/nuts

Drill 3/8 in. or 13/32 in. holes through rail (3) locations for moved spreader hardware

Drill 3/8 in. or 13/32 in. holes through rail (3) locations for splice plates/leg hardware

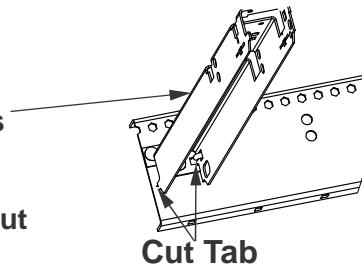
Step 3

Remove template and cut rail. Re-attach template using upper slots
Hang down on bolts as in Step 1 and align at cut edge
Tighten screws/nuts
Template will help maintain critical alignment of field bracket.
Attach field bracket using two 3/8 in. shoulder screws and nuts and fully tighten
Remove template and hardware
Repeat Steps 2 and 3 on the opposite rail



Step 4

Cut off the two short tabs on each end of crossmember
Insert crossmember into the slots of field brackets
Tighten against bracket sides
Re-attach with original J-bolt and nut



Step 5

Cut the advance/return tracks and support channels the same amount as the frame rails
Bevel the tracks in the chain enter/exit areas similar to the factor tracks
Complete re-assembly
Check corner to corner square of assembled frame maintain within +/- 1/32 in.

AG I0426

Figure 3 - 6 Field Cut Kit Template

Overview	<p>The template is used when shortening a section of Accuglide in the field. It ensures that the spreader is re-installed at the proper height maintain proper drive through the zone. The zone closest to the drive is typically shortened and slaved to the next downstream zone.</p> <p>Note: there are 3 feet.-1 inch through 5 feet -11 inch incremental lengths available to minimize cutting in the field.</p>
Installation	<p>See Figure 3 - 6 for installation information.</p> <p>Shortening Ranges:</p> <p>Shorten up to 24 inches - follow instructions as shown in Figure 3 - 6.</p> <p>Shorten 24 inches to 26.5 inches - 1st intermediate spreader must be temporarily removed for work access.</p> <p>Shorten 34.25 inches - Cut off last section, remove 1st intermediate spreader, and move the end spreader over one zone; one tab needs to cut off.</p> <p>Shorten more than 34.25 inches - Delete intermediate spread and hardware; continue with above instructions.</p>
Part Number	51043800

Terminal End Cover

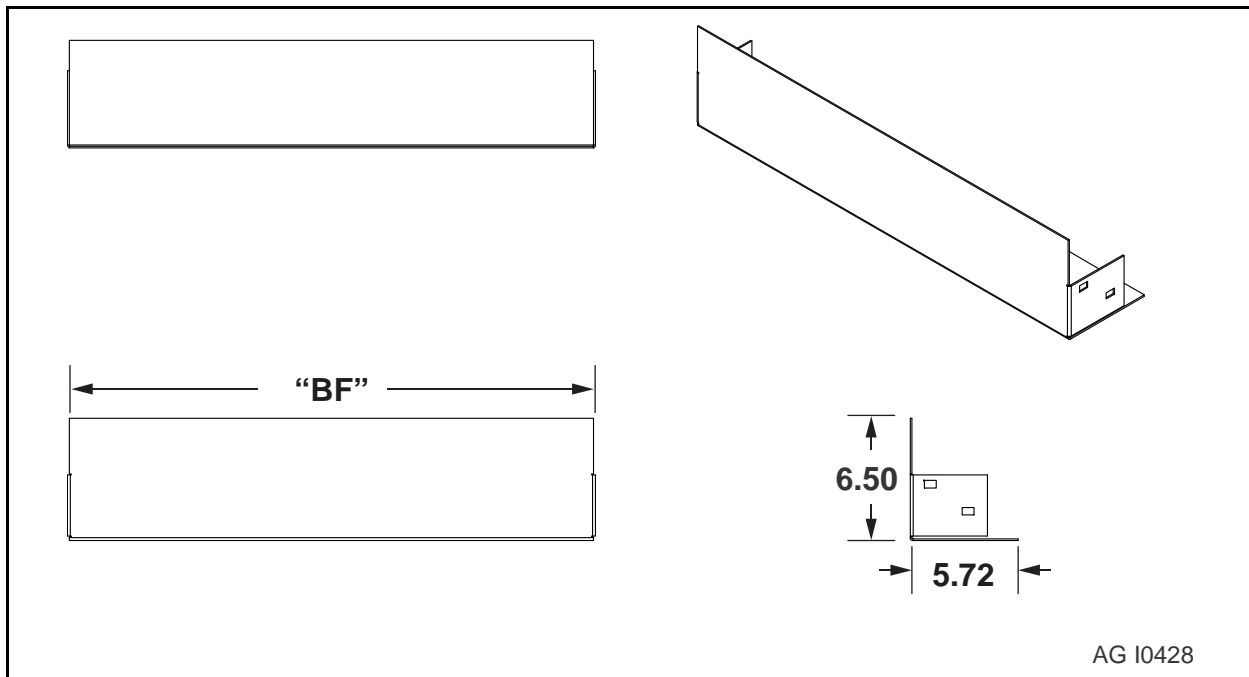


Figure 3 - 7 Terminal End Cover

Overview The Terminal End Cover is used if the drive or idler is not attached to another conveyor. It protects the End Unit from being damaged

Kit Includes End Covers - 5.5 inches high x 1.6 inches wide. LH and RH assemblies, powder coated finish.
 Mounting Clip - Formed angle; plated finish.
 Mounting Hardware - (4) 5/16-18 x .63 inch carriage bolts, (4) 5/16-18 serrated flange nuts.
 Note: The drive and idler sections for GEN 2 already have the control modules and photo-eyes installed, therefore the kit only contains a length of tubing and a extension cable, and it is as simple as connecting the two valves together.

Installation Bolt the end covers to the conveyor frame rails using the hardware supplied.

Part Numbers	Part No.	BF(inches)
	51046501	16
	51046502	22
	51046503	28
	51046504	34
	51046505	40

Interface Head-Tail (GEN1.5) Field Kit

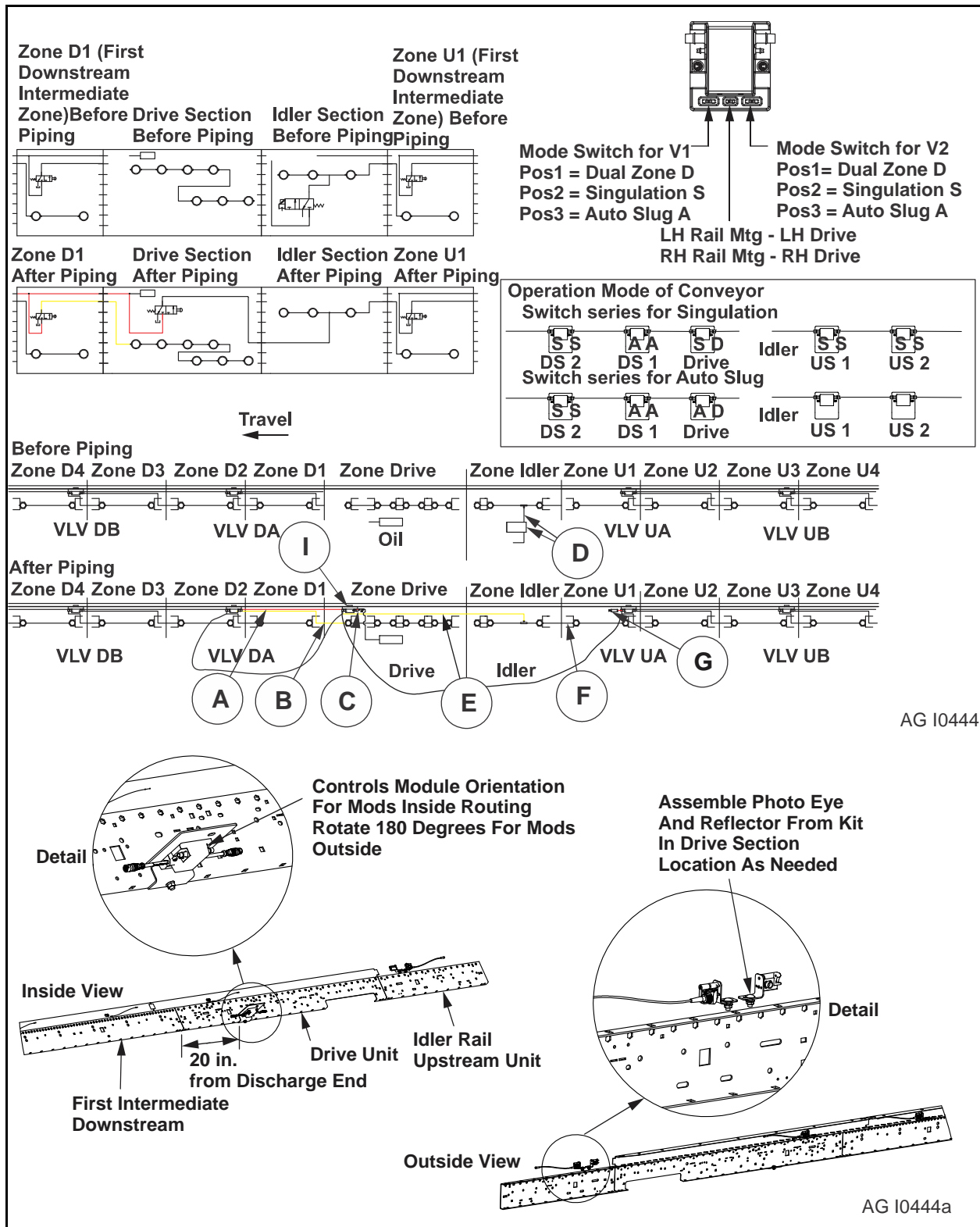


Figure 3 - 8 Interface Head-Tail (GEN 1.5) Field Kit

Overview	The Interface Head-Tail Field Kit GEN2 provides seamless logic across two conveyors that are installed head-to-tail
Operation	The infeed and discharge idlers are piped as if: 1) they are an extension of the intermediate section, and 2) there is no interruption in the conveyor
Installation	<p>Field installation instructions.</p> <ul style="list-style-type: none">• Turn off and lockout power to the system and remove all air from system before working on the conveyor.• Install photo-eye components in the drive section. see illustration on previous page.• Connect electrical cords to connect valve modules, using extension cords where needed. <p>A Install 1/2 inch red tubing from valve "DA" to valve in the drive section.</p> <p>B Connect 1/4 inch yellow tubing from output port of valve "DA" to actuators in the drive section.</p> <p>C Install a short piece of 1/2 inch red tubing to the valve in the drive section. Attach the 1/2 x 1/2 connector to 1/2 inch red tube and the 1/2 x 1/4 adapter to the connector. Connect 1/4 inch tube line from the adapter to the oiler valve. This terminates the downstream air supply line.</p> <p>D Remove the solenoid valve from the end idler section. Do not remove the tee located in the air line between the actuators in the idler section.</p> <p>E Install 1/4 inch yellow tube from the output port of the valve in the drive section to the tee located in the air line between the actuators in the idler section.</p> <p>F Connect the actuators in the idler section to the actuators in zone "U1".</p> <p>G Connect a short length of 1/2 inch red tubing to the valve "UA". Connect 1/2 x 1/2 connector to 1/2 inch red tube. Install plug into connector. This terminates the upstream air supply line.</p> <p>H Set the individual valve module switches for the operating mode desired (singulation or auto slug) as shown.</p> <p>I One port on the valve in the drive zone will not be used, as shown.</p>
Part Number	51043700

Interface Head-Tail Field Kit GEN2

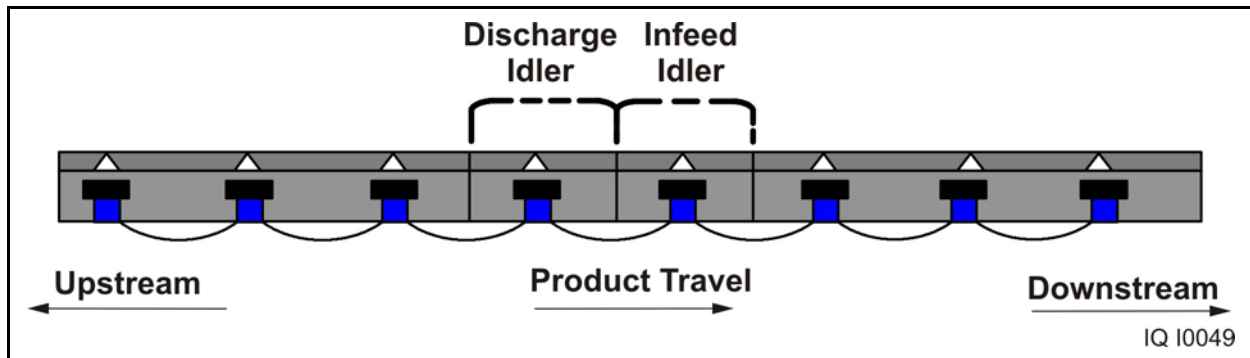


Figure 3 - 9 Interface Head-Tail Field Kit GEN2

Overview	The Interface Head-Tail Field Kit GEN2 provides seamless logic across two conveyors that are installed head-to-tail.
Operation	The infeed and discharge idlers are piped as if: 1) they are an extension of the intermediate section, and 2) there is no interruption in the conveyor.
Kit Includes	The kit consists of two logic modules and the associated mounting and pneumatic hardware.
Installation	The kit consist of a length of tubing and connector chord. The 1/2 inch red tubing is connected from the zone control module in the drive to the zone control module in the adjacent idler. The extension cable is connected between the same two control modules. Insert both the extension cable and tubing through holes in the spreader where possible. Verify that neither the tubing or extension cable is rubbing any moving parts.
Part Number	51048200

Power Supply Kit

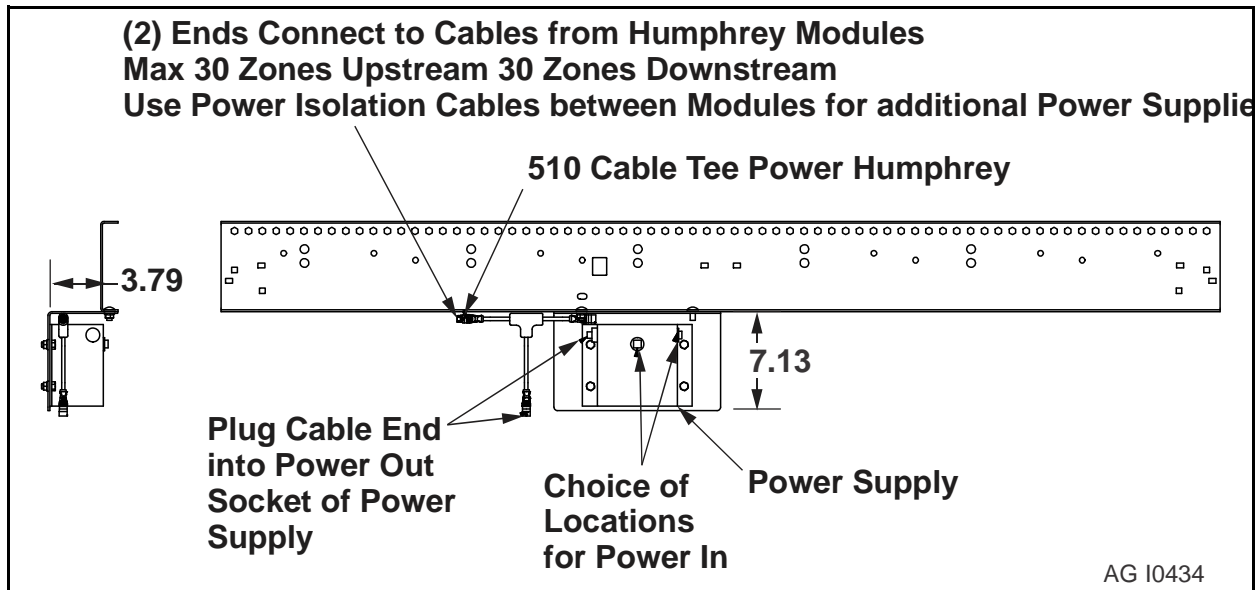


Figure 3 - 10 Power Supply

Overview	The Power Supply Kit consists of a power supply and power tee cable that provides power for the conveyor’s communication network (photo-eyes, zone control logic, etc.).
Operation	<p>With in 6 foot zones the MAX zones would be 44 and 22 max on one side of the power supply. The standard for GEN 1.5 is max 70 zones on a power supply and 55 max on one side of the power supply. For GEN 2 in 3 foot zones the max is 60 zone and 30 max on one side of the power supply.</p> <p>For networks with multiple power supplies, a Power Isolation Cable is required for each additional power supply (ordered separate).</p>
Kit Includes	<p>Power Supply (110VAC input / 24VDC, 4 amp output) with mounting bracket, 4 foot power cord (no connectors), and 20 inches long output cable.</p> <p>Power Tee Cable - connects the Power Supply to the conveyor’s power/network cable.</p>
Installation	<p>The Power Supply/bracket assembly bolts to the bottom flange of the frame rails between two (2) zone controller modules at a point within the grouping of zones serviced.</p> <p>The Power Tee Cable connects to the conveyor’s power/network communication cable.</p> <p>The output connector of the Motor Power Supply connects to the Power Tee Cable.</p>
Part Number	23381000

Power Isolation Cord Red

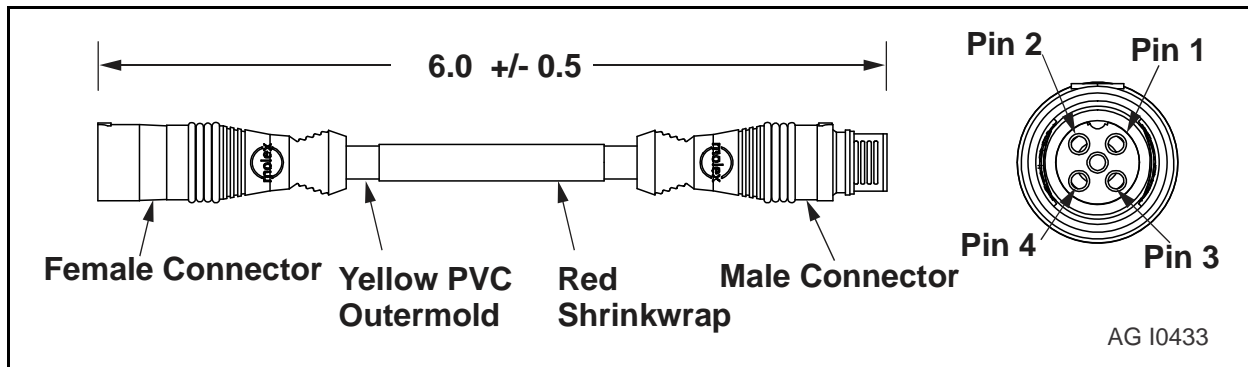


Figure 3 - 11 Power Isolation Cord

Overview	Required for isolating portions of a conveyor that receive power from separate power supplies.
Operation	Transmits all inter-zone communication signals including slug-release. Does NOT transmit the 24VDC power between two (2) adjoining Solenoid Control Modules.
Installation	One 6 inch connector cord is suitable to connect the drive module to the tail module (back-to-back) condition.
Part Number	23380502

Power Tap / Slug Module Cord (T-Cord)

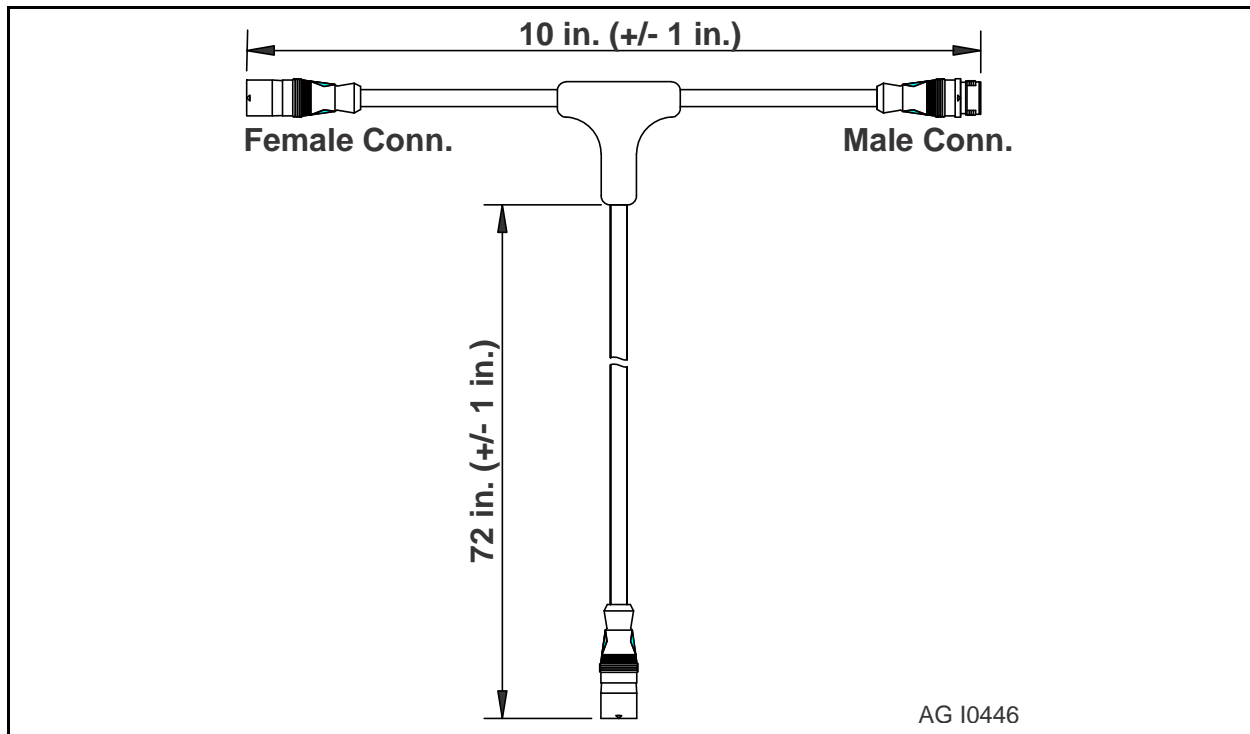


Figure 3 - 12 Power Tap / Slug Module Cord (T-Cord)

Overview	The T-Cord is required for connecting power-supply and/or slug module to the Intermediate Straight Section. One T-cord is provided with each power supply.
Operation	Transmits slug-release signal and/or power (24VDC) from the power supply / slug module to the power/communication cord. Transmits power and all inter-zone communication signals between the adjoining solenoid control modules (including slug-release).
Cord, Connections, Length	<p>Cord - Four (4) wire with Yellow PVC jacket.</p> <p>Connectors - 4-pin, 12mm push-to-connect Micro Connector. Long leg of the T-Cord has a female connector that attaches to the male output connector of the power supply/slug module and male/female connectors for connection to the connectors of two (2) inline solenoid control modules.</p> <p>Length - 7 inches x 10 inches (+/- 1 inch)</p>
Part Number	23381700

Slug Terminator Cord 0-6 Black

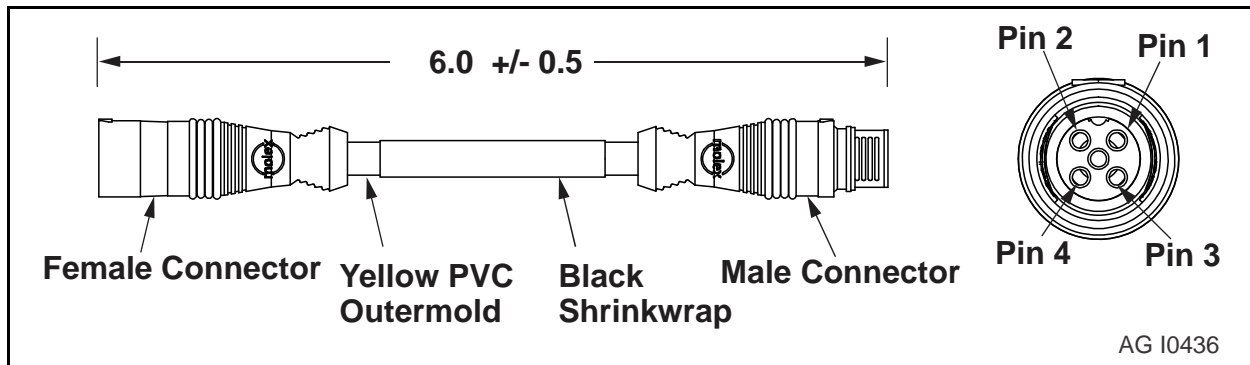


Figure 3 - 13 Slug Terminator Cord 0-6 Black

Overview	Used to terminate the slug signal.
Includes	One slug terminator cord with black cover for quick identification
Installation	Based on the side (RH/LH) of the conveyor on which the controls are located, connect the appropriate connect between control modules where you would like the slug signal to end.
Part Number	23380501

Blade-Stop - Idler Section

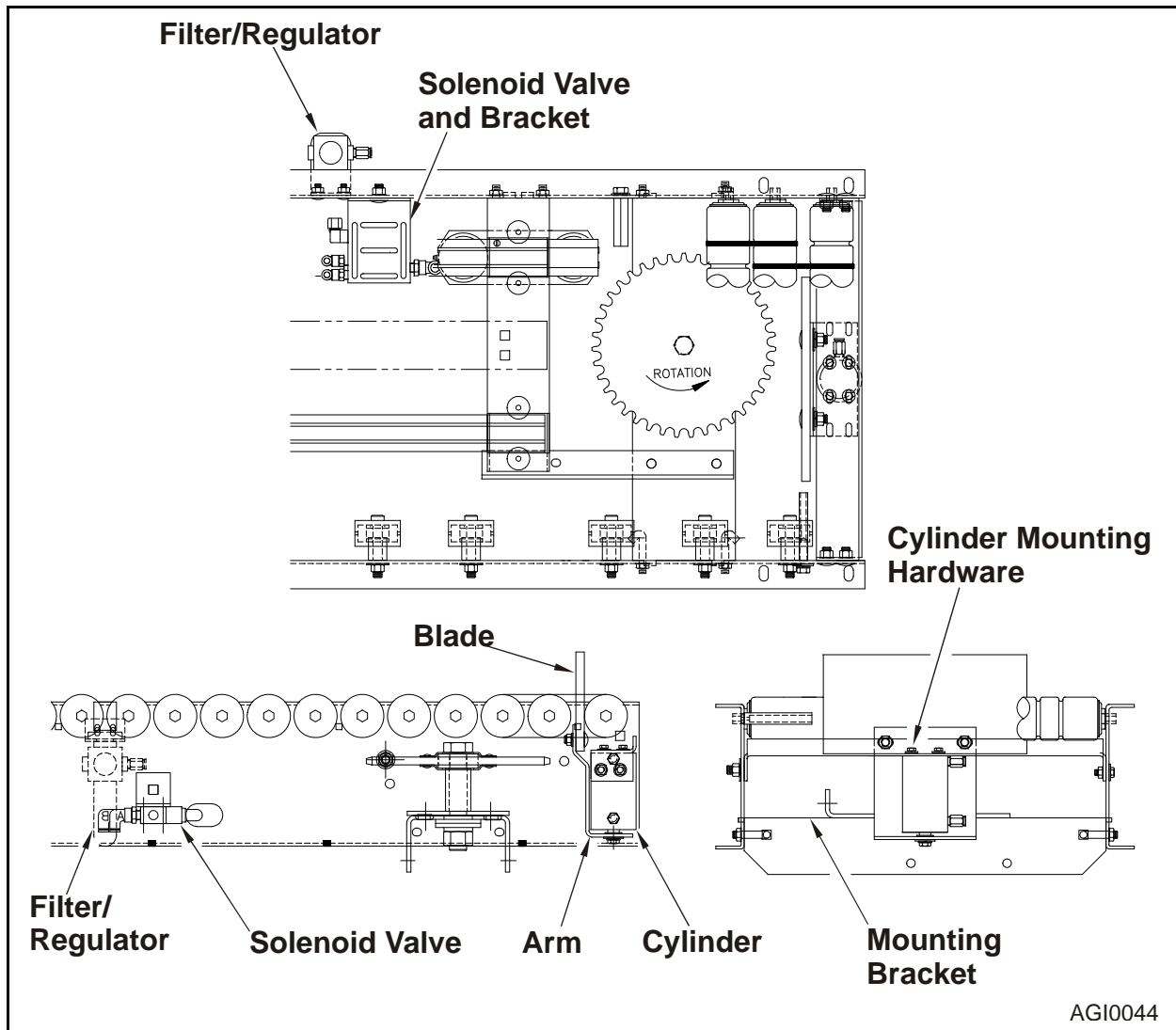


Figure 3 - 14 Blade-Stop (Discharge Idler Section)

Overview The Blade-Stop is an optional flow-control component for the Idler Section. The air-actuated plate-type stop is raised to block accumulated product from advancing onto the adjoining take-away conveyor and is lowered when product is discharged.

Operation A maintained-signal (115VAC / 24VDC) actuates the solenoid-actuated, 4-way valve that controls the double acting air-cylinder.

Power Requirement 24VDC / 115VAC.

Air Requirement Filter, 60 PSI.

Mounting	The Blade-Stop and controlling solenoid-valve are factory-assembled into the Idler Section. The unit's separate filter/regulator is strapped to the unit and must be mounted and piped at installation.
Installation	<p>The Blade Stop is factory-assembled into a Discharge Idler Section and piped to a separate 4-2ay solenoid-valve (115VAC / 24VDC) that is also installed in the section. A separate filter/regulator unit (0-100 psi is required. To install the Blade Stop:</p> <ul style="list-style-type: none">• Mount the unit's separate filter/regulator near the Discharge Idler Section and pipe to the solenoid valve.• Wire the solenoid to the control panel.
Part Numbers	<p>51007701-510: Case Stop Assembly, Idler W16 115V 51007702-510: Case Stop Assembly, Idler W22 115V 51007703-510: Case Stop Assembly, Idler W28 115V 51007704-510: Case Stop Assembly, Idler W34 115V 51007705-510: Case Stop Assembly, Idler W40 115V 51007706-510: Case Stop Assembly, Idler W16 24V 51007707-510: Case Stop Assembly, Idler W22 24V 51007708-510: Case Stop Assembly, Idler W28 24V 51007709-510: Case Stop Assembly, Idler W34 24V 51007710-510: Case Stop Assembly, Idler W40 24V</p>

Brake-Module - Idler Section

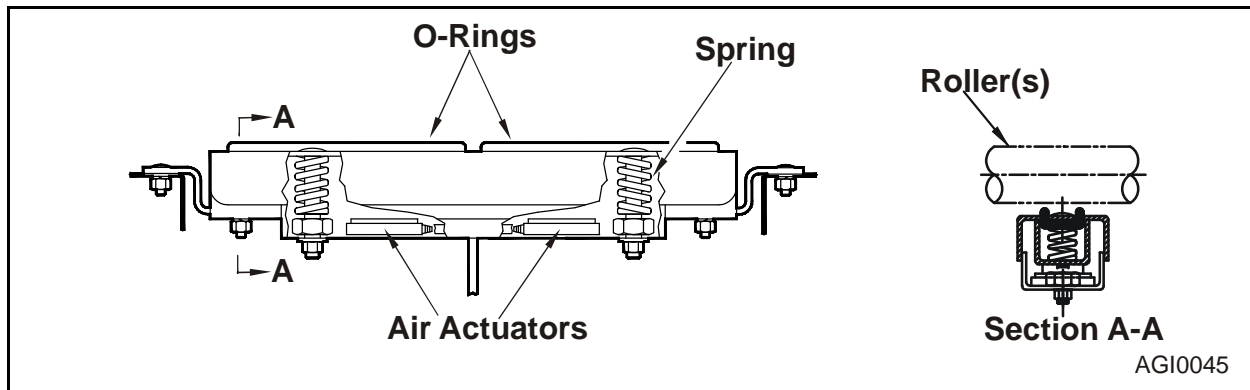


Figure 3 - 15 Brake-Module - Idler Section

Overview	The Brake-Module controls the “accumulation and release” process by stopping products in the conveyor’s discharge-zone and keeping them from advancing onto the adjoining downstream conveyor. Note: A Brake-Module is not a “positive” stopping device. For “positive” control, use either a Blade Stop, Brake Belt or Brake/Meter Belt Conveyor.
Operation	The spring-set, Brake-Module (2 feet long) raises and frictionally-engages the section’s Carrier Rollers when the zone’s controlling solenoid-valve is non-energized and causing the conveyor’s 6-foot-long “discharge zone” to be non-powered. When the valve is energized to release product, the same air that raises the drive chain/pad into roller engagement causes the Brake-Module to lower and disengage the rollers.
Assembly/Piping	The Brake-Module is factory-assembled into the section and its air-supply line is connected to the solenoid-valve.
Field Assembly / Piping / Wiring	No additional field-assembly, or piping is required. The discharge-zone control valve (110VAC / 24VDC) must be wired to the control panel.
Part Numbers	51007800-510: Idler Drop-In Brake Module

The optional “spring-set” Brake Module is factory-assembled into a Discharge Idler Section and its air supply line is connected into the section’s operational-zone piping. No additional wiring or piping is required.

Brake-Module (Intermediate-Straight / Curve Sections)

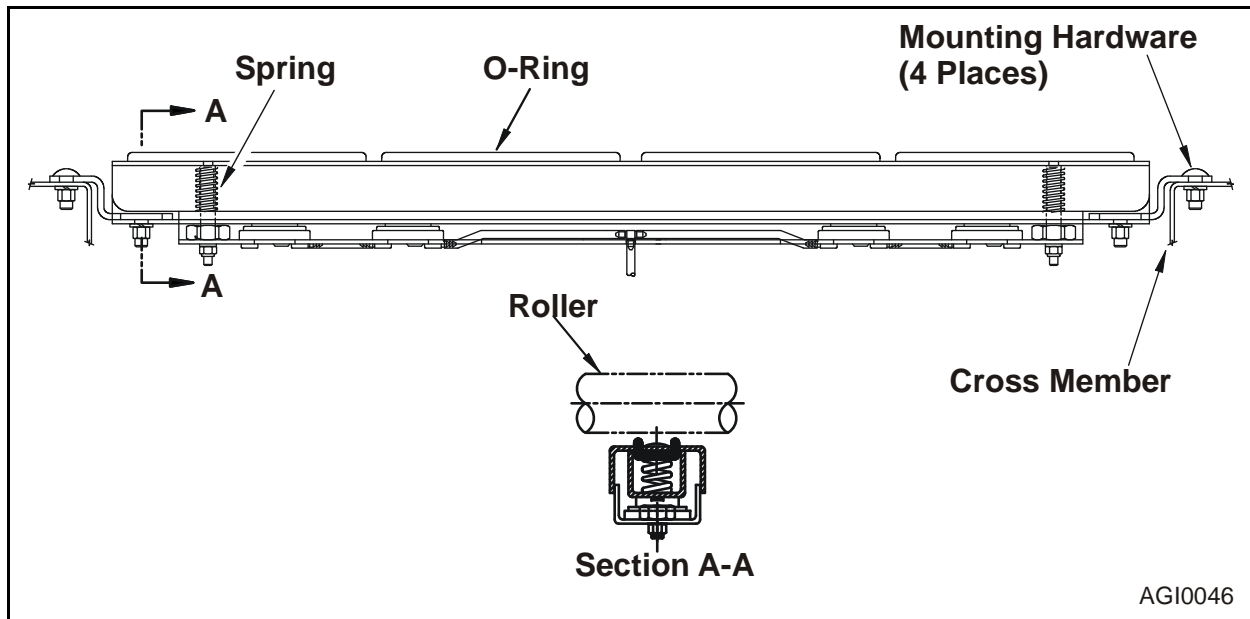


Figure 3 - 16 Brake-Module

Overview	<p>Brake-Modules control product accumulation and release in the Intermediate Straight Sections: 1) at workstations; 2) in batch assembly areas; 3) upstream of an Intermediate Merge Section; and 4) upstream of an Intermediate Curve Section.</p> <p>Kits include two (2) 3-foot-long, spring-set Brake-Modules and the necessary control components for each specific application.</p> <p>A Brake-Module is not a “positive” stopping device. For “positive” control, use a Case Stop.</p>
Operation	<p>Intermediate Straight Section Kits</p> <p>A Brake-Zone (6-foot-long) is controlled by a solenoid-valve (24VDC / 110VAC) that is actuated by an external release signal from: 1) the system’s control program; or 2) a manually actuated switch.</p>
Assembly/Piping	<p>Brake-Modules are shipped as hardware and field-installed into the appropriate zones of an Intermediate Straight Section.</p> <p>Their air supply line must be connected to air-line between a zone’s controlling valve and the air-actuators that raise the drive chain and track.</p>
Power Requirement	<p>Solenoid-controlled Brake-Modules require a maintained signal (24VDC / 110VAC) to disengage the brake and allow the zones to be powered.</p>
Part Numbers	<p>51044100-510: 3-Foot Drop-In Brake Module</p>

Brake Module Kit

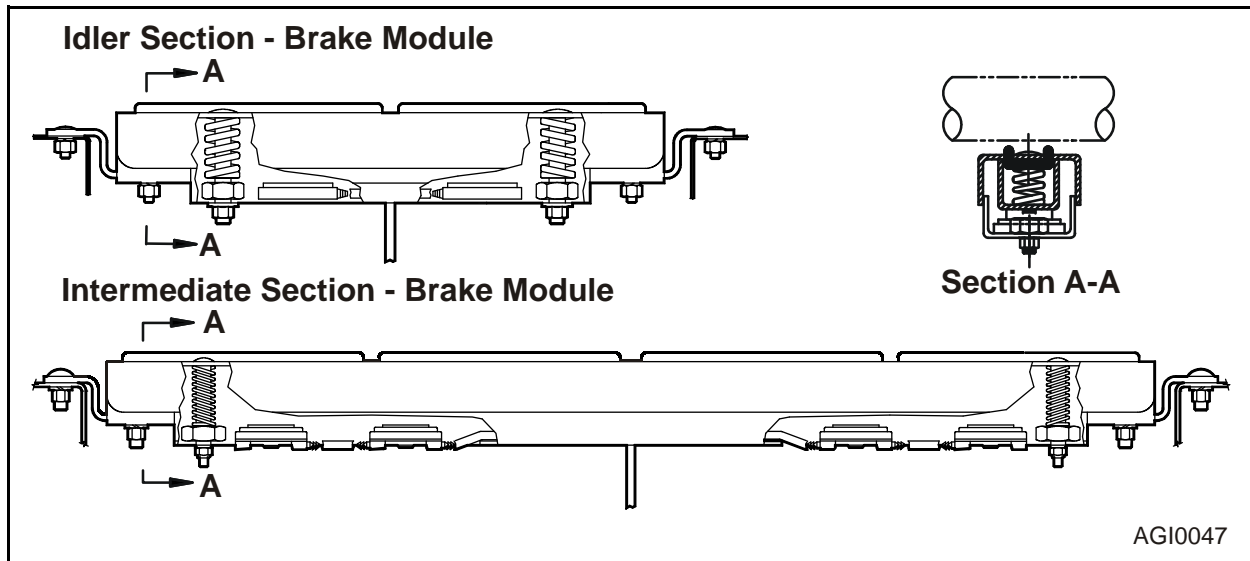


Figure 3 - 17 Brake Module Kit

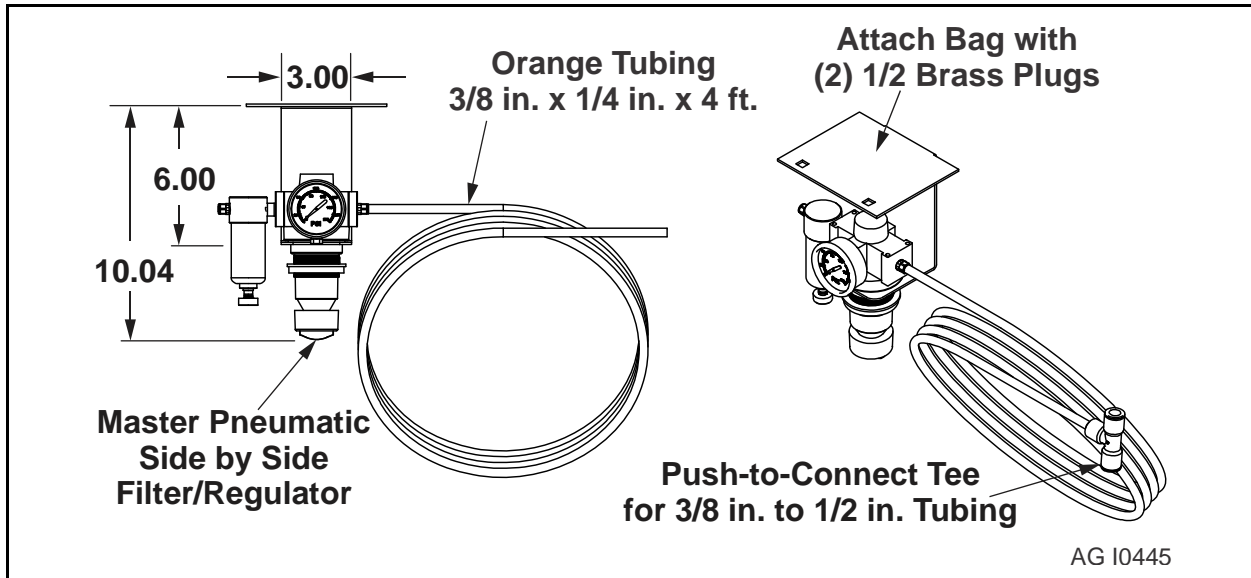
Overview/Installation

Install a brake module kit prior to a curve to prevent product from accumulating through the curve where rollers are continuously driven. The brake module can also be installed in straight sections that are used as a work station. Use the pneumatic controls supplied in the kit only with singulation and auto-slug release modes. An electrically controlled solenoid is also available for singulation and auto-slug release modes.

Part Numbers

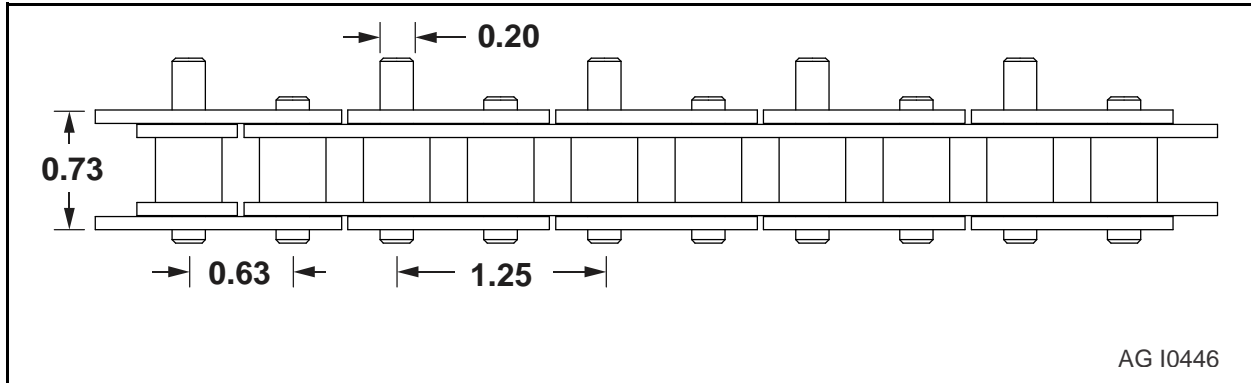
51044000-Field Kit-510: 3-Foot Brake Module

Filter/Regulator



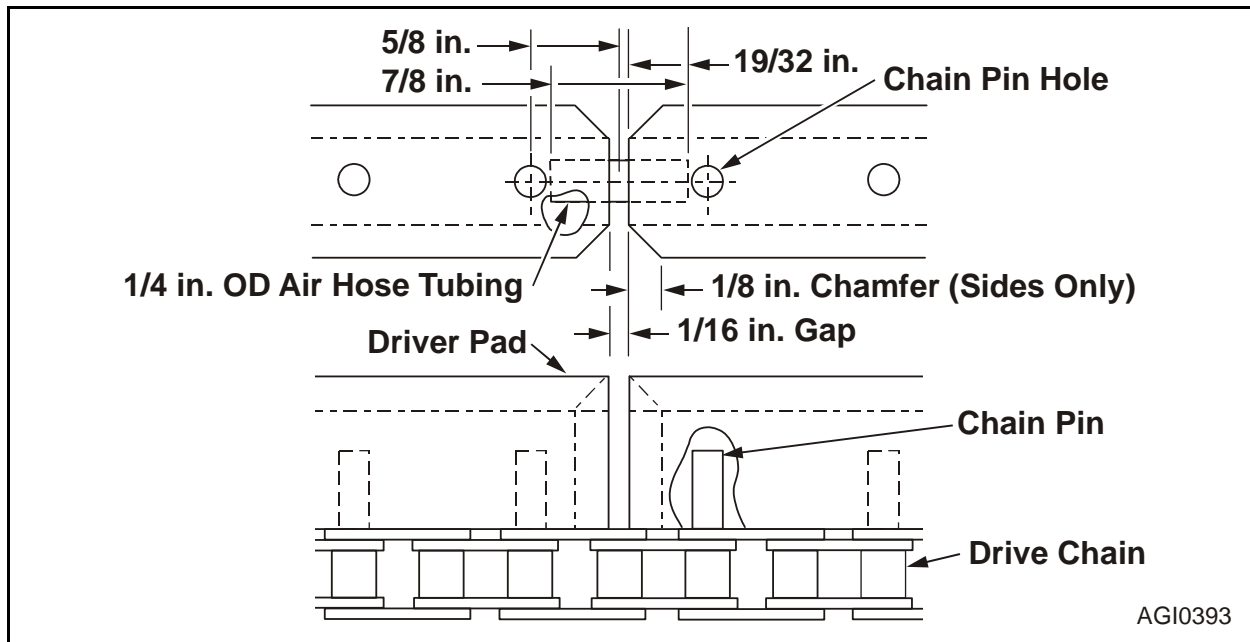
Overview	A minimum of one is required for each 200 feet of conveyor.
Installation	Recommended initial setting of operation pressure for intermediates is 12 psi.
Part Number	70074200

Chain RC50 w/ext Pin



- Overview** A urethane driver pad is attached to a continuous roller chain as a drive medium. The chain is sprocket driven and rides in UHMW tracks. The UHMW tracks are pneumatically lifted with the chain and driver pad to provide drive to the rollers.
- Installation** For complete installation procedures, see Installation Procedures chapter, topic Chain Installation.
- Part Number** 510212__

Driver Pad w/Wear Indicator



Overview

A urethane driver pad is attached on the extended pin of a continuous roller chain as a drive medium. The moving urethane driver pad contacts the bottom surface of the roller to provide the drive force to move the product.

Installation

For complete installation procedures, see Installation Procedures chapter, topic Driver Pad Installation.

Part Number

510213

Optional Accessories

The following accessories are optional, depending upon the configuration of the conveyor:

- Straight Side Guide
- Photo Eye and Reflector Side Guides
- Skate Wheel Side Guide
- Curve Side Guide
- Merge (Sawtooth) Section Side Guide
- Bull Nose Side Guide
- Side Guide Transition
- Side Guide Transition - End
- 9.75/6.5 Transition Bracket Field Kit
- Chain Track Lubricator
- Oil Reservoir and 1 Liter Float Switch
- Air-Actuated Chain-Tension - Drive Section
- Angle End Stop
- Knee Brace Assembly
- Rollers, Fixed ABEC, Fixed High Speed, Fixed Premium and Pop-out ABEC.
- Splice Plate Kit
- Splice Angle for Curves and Drive
- Skew Kit

Straight Side Guides

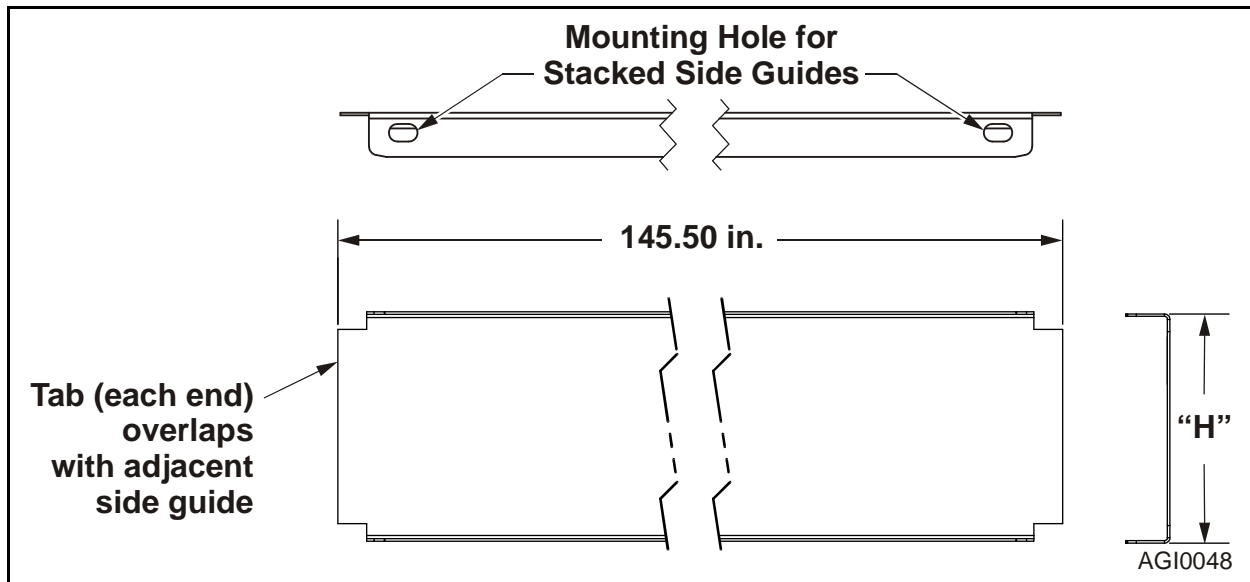


Figure 3 - 18 Straight Side Guide

Overview Used for all straight sections that do not require special guides.

Specifications Length: 12 feet, 1-1/2 inches
 Height varies. See Part Numbers information below. If stacked on other side guides, total height limit of the stack (photo-eye and reflector side guides included) is 10 inches.

Mounting Options

- Direct-Mounted to the frame
- Offset to the outside of the frame - 1 or 1.5 inches
- Mounted to the top of the photo-eye rail.

Mounting Hardware Kits Provided for each mounting option. See Installation Procedures chapter for detailed mounting information.

Available Finishes

- Plain (powder coated)
- Galvanized (low -friction)
- UHMW-Faced (very low -friction)

Part Numbers	Part No.	"H" Height (inches)
	12000101	2.50
	12000102	6.50
	12000103	10.00 (used only in areas without PE/Reflector rails)
	12000104	7.50
	12000105	3.25
	12000106	4.00

Photo-Eye and Reflector Side Guides

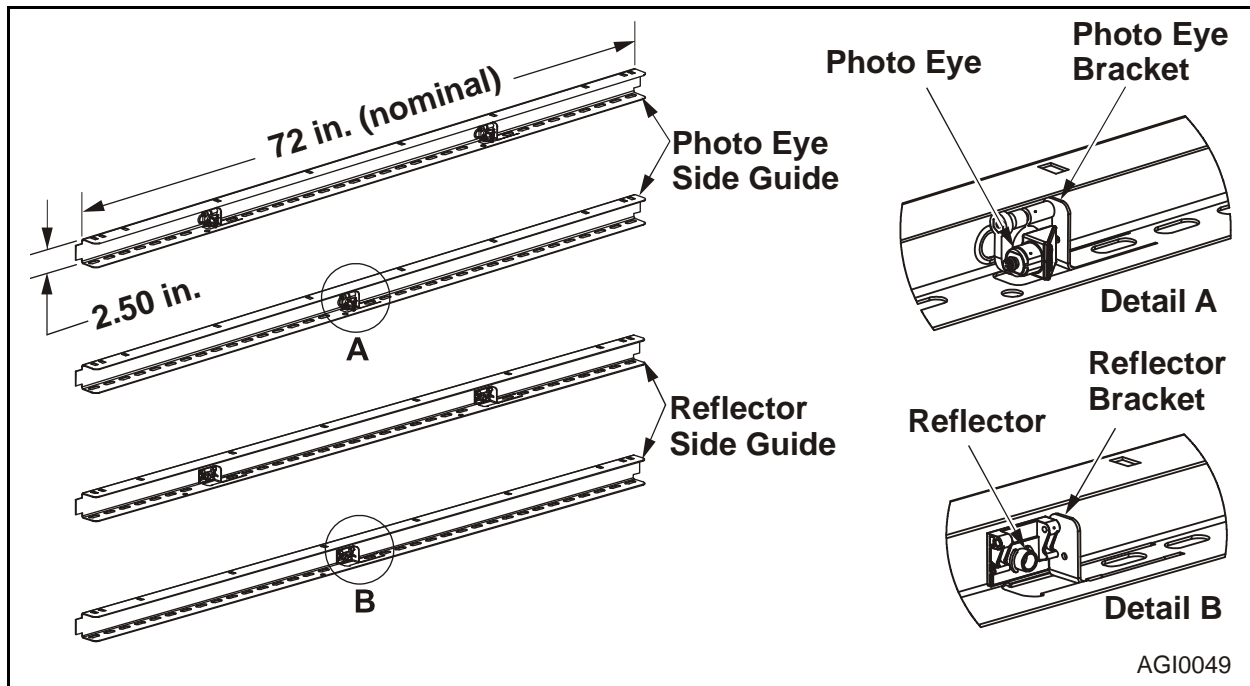


Figure 3 - 19 Photo-Eye and Reflector Side Guides

Overview	Used for mounting photo-eyes and reflectors.
Specifications	Length: 71.9 or 143.9 inches (6 or 12 feet nominal). See Part Numbers information below. Height: 2.50 inches.
Mounting Options	<ul style="list-style-type: none"> • Direct-Mounted to the frame • For Reflector Side Guide only: Offset to the outside of the frame - 1 or 1.5 inches
Mounting Hardware Kits	Provided for each mounting option. See Installation Procedures chapter for detailed mounting information.
Available Finishes	<ul style="list-style-type: none"> • Plain (powder coated)

Part Numbers

Side 2.5 inch Guide Rail PE SICK

PE Options	Length (feet)	Height (inches)	Zone Length (feet)
12019601	6	10	3
12019602	6	10	6
12019701	12	10	3
12019702	12	10	6

Side 10 inch Guide Rail PE SICK

PE Options	Length (feet)	Height (inches)	Zone Length (feet)
12019801	6	10	3
12019802	6	10	6
12019901	12	10	3
12019902	12	10	6

Skate Wheel Side Guides

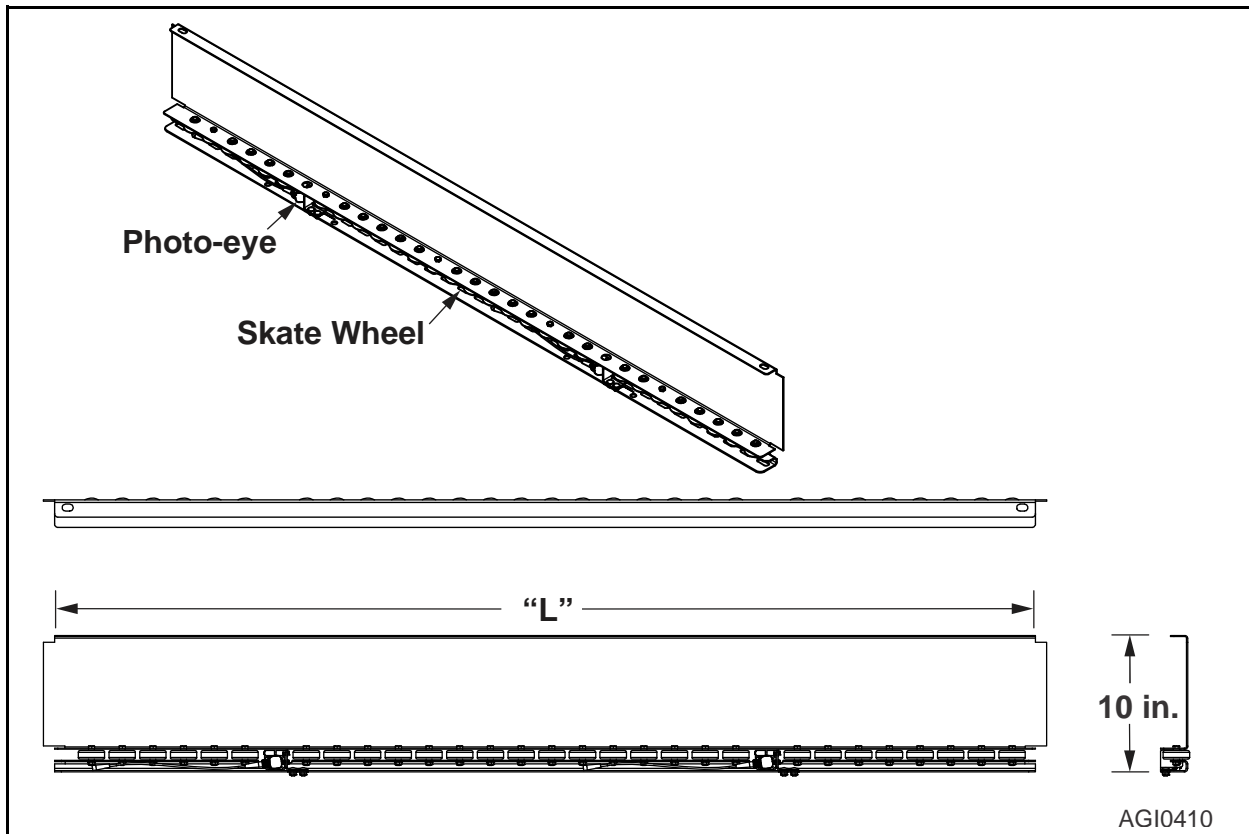


Figure 3 - 20 Skate Wheel Side Guide - 10 inch height shown

- Overview Used for all straight sections where product skewed to one side.
- Specifications Length: 6 and 12 foot lengths
 Height varies. See Part Numbers information below. Distance from the top of roller to the center of the skate wheel is 1 inch, and 11/16 inch to the bottom edge of the wheel .
 Equipped with SICK photo-eyes and reflectors.
- Mounting Options Direct-Mounted to the frame.
- Mounting Hardware Kits Provided for direct mounting. See Installation Procedures chapter for detailed mounting information.
- Available Finishes Plain (powder coated)

Part Numbers	Photo-Eye Part No.	Reflector Part No.	Length (feet)	Height (inches)	Zone Length (feet)
	12017901	12018401	6	2.50	3
	12017902	12018402	6	2.50	6
	12018001	12018501	12	2.50	3
	12018002	12018502	12	2.50	6
	12018101	12018601	6	6.50	3
	12018102	12018602	6	6.50	6
	12018201	12018701	12	6.50	3
	12018202	12018702	12	6.50	6
	12018301	12018801	6	10.00	3
	12018302	1208802	6	10.00	6
	12019501	12018901	12	10.00	3
	12019502	12018902	12	10.00	6

Curve Side Guides

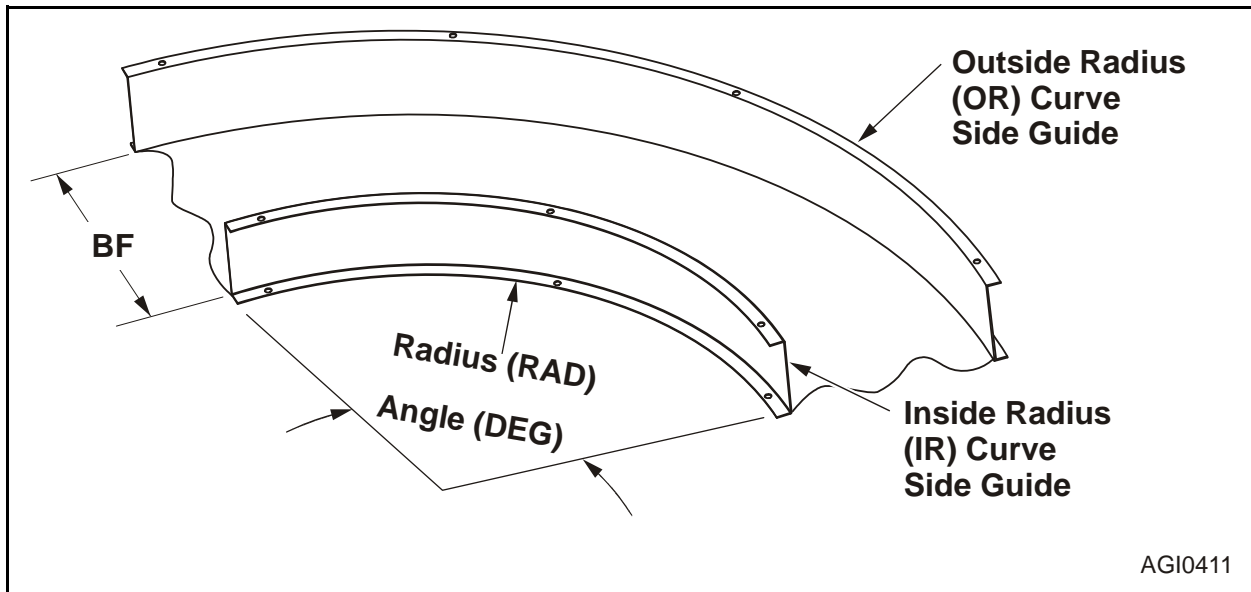


Figure 3 - 21 Curve Side Guide

Overview	Used for all curve sections.
Specifications	<p>Arc - 30°, 45°, 60°, 90° and 180° (180° comprised of two 90°s)</p> <p>Inside Radius - 30, 40, 50, or 60 inches</p> <p>Outside Radius - 46, 62, 78, 94, or 100 inches</p> <p>Height - 2.5, 6.5, or 10 inches. See Part Numbers information below.</p> <p>If stacked on other side guides, total height limit of the stack is 10 inches.</p>
Mounting Options	Direct-Mounted to the frame
Mounting Hardware Kits	Provided for each mounting option. See Installation Procedures chapter for detailed mounting information.
Available Finishes	Plain (powder coated)
Part Numbers	Refer to Table 3 - 1 through Table 3 - 4 for part number information.

Table 3 - 1 30° Curve Side Guide Part Numbers

BF	Part Number	Description	Part Number	Description
16	12002401	SG 30DEG IR CRV 30" RAD 2-1/2" H	12002501	SG 30DEG OR CRV 46" RAD 2-1/2" H
16	12002402	SG 30DEG IR CRV 30" RAD 6-1/2" H	12002502	SG 30DEG OR CRV 46" RAD 6-1/2" H
16	12002403	SG 30DEG IR CRV 30" RAD 10" H	12002503	SG 30DEG OR CRV 46" RAD 10" H
22	12002404	SG 30DEG IR CRV 40" RAD 2-1/2" H	12002516	SG 30DEG OR CRV 62" RAD 2-1/2" H
22	12002405	SG 30DEG IR CRV 40" RAD 6-1/2" H	12002517	SG 30DEG OR CRV 62" RAD 6-1/2" H
22	12002406	SG 30DEG IR CRV 40" RAD 10" H	12002518	SG 30DEG OR CRV 62" RAD 10" H
28	12002407	SG 30DEG IR CRV 50" RAD 2-1/2" H	12002519	SG 30DEG OR CRV 78" RAD 2-1/2" H
28	12002408	SG 30DEG IR CRV 50" RAD 6-1/2" H	12002520	SG 30DEG OR CRV 78" RAD 6-1/2" H
28	12002409	SG 30DEG IR CRV 50" RAD 10" H	12002521	SG 30DEG OR CRV 78" RAD 10" H
34	12002410	SG 30DEG IR CRV 60" RAD 2-1/2" H	12002522	SG 30DEG OR CRV 94" RAD 2-1/2" H
34	12002411	SG 30DEG IR CRV 60" RAD 6-1/2" H	12002523	SG 30DEG OR CRV 94" RAD 6-1/2" H
34	12002412	SG 30DEG IR CRV 60" RAD 10" H	12002524	SG 30DEG OR CRV 94" RAD 10" H
40	12002410	SG 30DEG IR CRV 60" RAD 2-1/2" H	12002525	SG 30DEG OR CRV 100" RAD 2-1/2" H
40	12002411	SG 30DEG IR CRV 60" RAD 6-1/2" H	12002526	SG 30DEG OR CRV 100" RAD 6-1/2" H
40	12002412	SG 30DEG IR CRV 60" RAD 10" H	12002527	SG 30DEG OR CRV 100" RAD 10" H

Table 3 - 2 45° Curve Side Guide Part Numbers

BF	Part Number	Description	Part Number	Description
16	12002601	SG 45DEG IR CRV 30" RAD 2-1/2" H	12002701	SG 45DEG OR CRV 46" RAD 2-1/2" H
16	12002602	SG 45DEG IR CRV 30" RAD 6-1/2" H	12002702	SG 45DEG OR CRV 46" RAD 6-1/2" H
16	12002603	SG 45DEG IR CRV 30" RAD 10" H	12002703	SG 45DEG OR CRV 46" RAD 10" H
22	12002604	SG 45DEG IR CRV 40" RAD 2-1/2" H	12002716	SG 45DEG OR CRV 62" RAD 2-1/2" H
22	12002605	SG 45DEG IR CRV 40" RAD 6-1/2" H	12002717	SG 45DEG OR CRV 62" RAD 6-1/2" H
22	12002606	SG 45DEG IR CRV 40" RAD 10" H	12002718	SG 45DEG OR CRV 62" RAD 10" H
28	12002607	SG 45DEG IR CRV 50" RAD 2-1/2" H	12002719	SG 45DEG OR CRV 78" RAD 2-1/2" H
28	12002608	SG 45DEG IR CRV 50" RAD 6-1/2" H	12002720	SG 45DEG OR CRV 78" RAD 6-1/2" H
28	12002609	SG 45DEG IR CRV 50" RAD 10" H	12002721	SG 45DEG OR CRV 78" RAD 10" H
34	12002610	SG 45DEG IR CRV 60" RAD 2-1/2" H	12002722	SG 45DEG OR CRV 94" RAD 2-1/2" H
34	12002611	SG 45DEG IR CRV 60" RAD 6-1/2" H	12002723	SG 45DEG OR CRV 94" RAD 6-1/2" H
34	12002612	SG 45DEG IR CRV 60" RAD 10" H	12002724	SG 45DEG OR CRV 94" RAD 10" H
40	12002610	SG 45DEG IR CRV 60" RAD 2-1/2" H	12002725	SG 45DEG OR CRV 100" RAD 2-1/2" H
40	12002611	SG 45DEG IR CRV 60" RAD 6-1/2" H	12002726	SG 45DEG OR CRV 100" RAD 6-1/2" H
40	12002612	SG 45DEG IR CRV 60" RAD 10" H	12002727	SG 45DEG OR CRV 100" RAD 10" H

Table 3 - 3 60° Curve Side Guide Part Numbers

BF	Part Number	Description	Part Number	Description
16	12002801	SG 60DEG IR CRV 30" RAD 2-1/2" H	12002901	SG 60DEG OR CRV 46" RAD 2-1/2" H
16	12002802	SG 60DEG IR CRV 30" RAD 6-1/2" H	12002902	SG 60DEG OR CRV 46" RAD 6-1/2" H
16	12002803	SG 60DEG IR CRV 30" RAD 10" H	12002903	SG 60DEG OR CRV 46" RAD 10" H
22	12002804	SG 60DEG IR CRV 40" RAD 2-1/2" H	12002916	SG 60DEG OR CRV 62" RAD 2-1/2" H
22	12002805	SG 60DEG IR CRV 40" RAD 6-1/2" H	12002917	SG 60DEG OR CRV 62" RAD 6-1/2" H
22	12002806	SG 60DEG IR CRV 40" RAD 10" H	12002918	SG 60DEG OR CRV 62" RAD 10" H
28	12002807	SG 60DEG IR CRV 50" RAD 2-1/2" H	12002919	SG 60DEG OR CRV 78" RAD 2-1/2" H
28	12002808	SG 60DEG IR CRV 50" RAD 6-1/2" H	12002920	SG 60DEG OR CRV 78" RAD 6-1/2" H
28	12002809	SG 60DEG IR CRV 50" RAD 10" H	12002921	SG 60DEG OR CRV 78" RAD 10" H
34	12002810	SG 60DEG IR CRV 60" RAD 2-1/2" H	12002922	SG 60DEG OR CRV 94" RAD 2-1/2" H
34	12002811	SG 60DEG IR CRV 60" RAD 6-1/2" H	12002923	SG 60DEG OR CRV 94" RAD 6 1/2" H
34	12002812	SG 60DEG IR CRV 60" RAD 10" H	12002924	SG 60DEG OR CRV 94" RAD 10" H
40	12002810	SG 60DEG IR CRV 60" RAD 2-1/2" H	12002925	SG 60DEG OR CRV 100" RAD 2-1/2" H
40	12002811	SG 60DEG IR CRV 60" RAD 6-1/2" H	12002926	SG 60DEG OR CRV 100" RAD 6-1/2" H
40	12002812	SG 60DEG IR CRV 60" RAD 10" H	12002927	SG 60DEG OR CRV 100" RAD 10" H

Table 3 - 4 90° and 180° Curve Side Guide Part Numbers

BF	Part Number	Description	Part Number	Description
16	12003201	SG 90DEG IR CRV 30" RAD 2-1/2" H	12003301	SG 90DEG OR CRV 46" RAD 2-1/2" H
16	12003202	SG 90DEG IR CRV 30" RAD 6-1/2" H	12003302	SG 90DEG OR CRV 46" RAD 6-1/2" H
16	12003203	SG 90DEG IR CRV 30" RAD 10" H	12003303	SG 90DEG OR CRV 46" RAD 10" H
22	12003204	SG 90DEG IR CRV 40" RAD 2-1/2" H	12003316	SG 90DEG OR CRV 62" RAD 2-1/2" H
22	12003205	SG 90DEG IR CRV 40" RAD 6-1/2" H	12003317	SG 90DEG OR CRV 62" RAD 6-1/2" H
22	12003206	SG 90DEG IR CRV 40" RAD 10" H	12003318	SG 90DEG OR CRV 62" RAD 10" H
28	12003207	SG 90DEG IR CRV 50" RAD 2-1/2" H	12003319	SG 90DEG OR CRV 78" RAD 2-1/2" H
28	12003208	SG 90DEG IR CRV 50" RAD 6-1/2" H	12003320	SG 90DEG OR CRV 78" RAD 6-1/2" H
28	12003209	SG 90DEG IR CRV 50" RAD 10" H	12003321	SG 90DEG OR CRV 78" RAD 10" H
34	12003210	SG 90DEG IR CRV 60" RAD 2-1/2" H	12002722	SG 45DEG OR CRV 94" RAD 2-1/2" H - QTY (2)
34	12003211	SG 90DEG IR CRV 60" RAD 6-1/2" H	12002723	SG 45DEG OR CRV 94" RAD 6-1/2" H - QTY (2)
34	12003212	SG 90DEG IR CRV 60" RAD 10" H	12002724	SG 45DEG OR CRV 94" RAD 10" H - QTY (2)
40	12003210	SG 90DEG IR CRV 60" RAD 2-1/2" H	12002425	SG 45DEG OR CRV 100" RAD 2-1/2" H - QTY (2)
40	12003211	SG 90DEG IR CRV 60" RAD 6-1/2" H	12002726	SG 45DEG OR CRV 100" RAD 6-1/2" H - QTY (2)
40	12003212	SG 90DEG IR CRV 60" RAD 10" H	12002727	SG 45DEG OR CRV 100" RAD 10" H - QTY (2)

Merge (Sawtooth) Section Side Guides

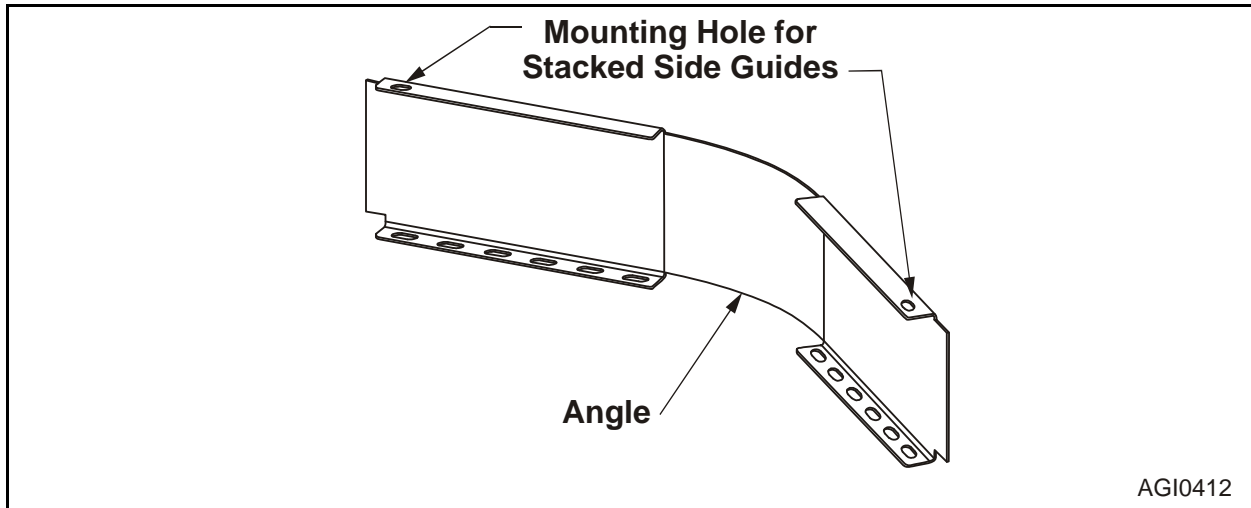


Figure 3 - 22 Merge (Sawtooth) Side Guide

Overview Used for all merge (sawtooth) sections.

Specifications Length - varies
 Height - 2.5, 6.5, or 10 inches. See Part Numbers information below.
 If stacked on other side guides, total height limit of the stack is 10 inches.
 Angle - 20°, 30°, or 45°

Mounting Options • Direct-Mounted to the frame

Mounting Hardware Kits Provided for each mounting option. See Installation Procedures chapter for detailed mounting information.

Available Finishes • Plain (powder coated)

Part Numbers	Part No.	Height	Angle	Part No.	Height	Angle
		(inches)			(inches)	
	12012601	2.50	20°	12012606	6.50	45°
	12012602	2.50	30°	12012607	10.00*	20°
	12012603	2.50	45°	12012608	10.00*	30°
	12012604	6.50	20°	12012609	10.00*	45°
	12012605	6.50	30°			

*Used only in areas without PE/Reflector guard rails.

Bull Nose Side Guides

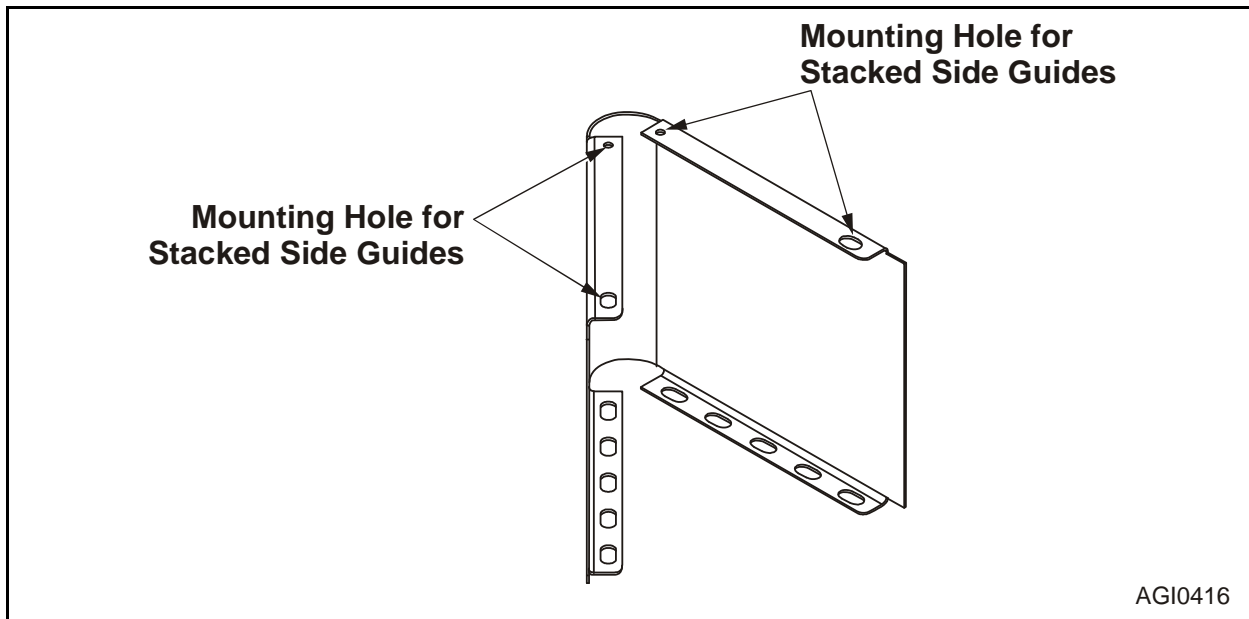


Figure 3 - 23 Bull Nose Side Guide

Overview	Used on all merge (sawtooth) sections for the acute angle between the Accuglide and the connecting conveyor.								
Specifications	Length - varies Height - 2.5, 6.5, or 10 inches. See Part Numbers information below. If stacked on other side guides, total height limit of the stack is 10 inches.								
Mounting Options	<ul style="list-style-type: none"> • Direct-Mounted to the frame 								
Mounting Hardware Kits	Provided for each mounting option. See Installation Procedures chapter for detailed mounting information.								
Available Finishes	<ul style="list-style-type: none"> • Plain (powder coated) 								
Part Numbers	<table border="0" style="margin-left: 20px;"> <thead> <tr> <th style="text-align: left;">Part No.</th> <th style="text-align: left;">Height (inches)</th> </tr> </thead> <tbody> <tr> <td>12012501</td> <td>2.50</td> </tr> <tr> <td>12012502</td> <td>6.50</td> </tr> <tr> <td>12012503</td> <td>10</td> </tr> </tbody> </table>	Part No.	Height (inches)	12012501	2.50	12012502	6.50	12012503	10
Part No.	Height (inches)								
12012501	2.50								
12012502	6.50								
12012503	10								

Transition Side Guides

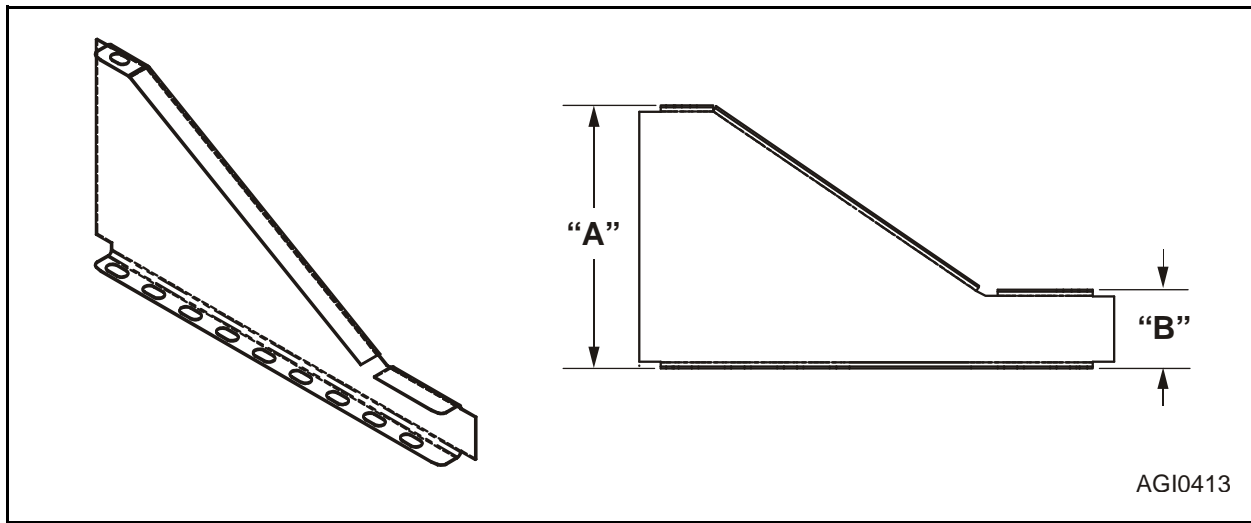


Figure 3 - 24 Transition Side Guide

Overview The Side Guide Transition with both ends larger than 0 inches is used when the side guide changes height.

Specifications Left-Hand and Right-Hand designations.
 Length - varies
 Height, Short Side of Transition - 2.50 and 6.5 inches
 Height, Long Side of Transition - 6.50 and 10 inches
 See Part Numbers information below.

Mounting Options

- Direct-Mounted to the frame
- Offset to the outside of the frame - 1 or 1.5 inches

Mounting Hardware Kits Provided for each mounting option. See Installation Procedures chapter for detailed mounting information.

Available Finishes

- Plain (powder coated)
- Galvanized (low -friction)
- UHMW-Faced (very low -friction)

Part Numbers	"A"	"B"	
Part No.	(inches)	(inches)	Designation
12013201	10	2.50	RH
12013202	6.50	2.50	RH
12013203	10	6.50	RH
12013204	10	2.50	LH
12013205	6.50	2.50	LH
12013206	10	6.50	LH

Transition - End Side Guides

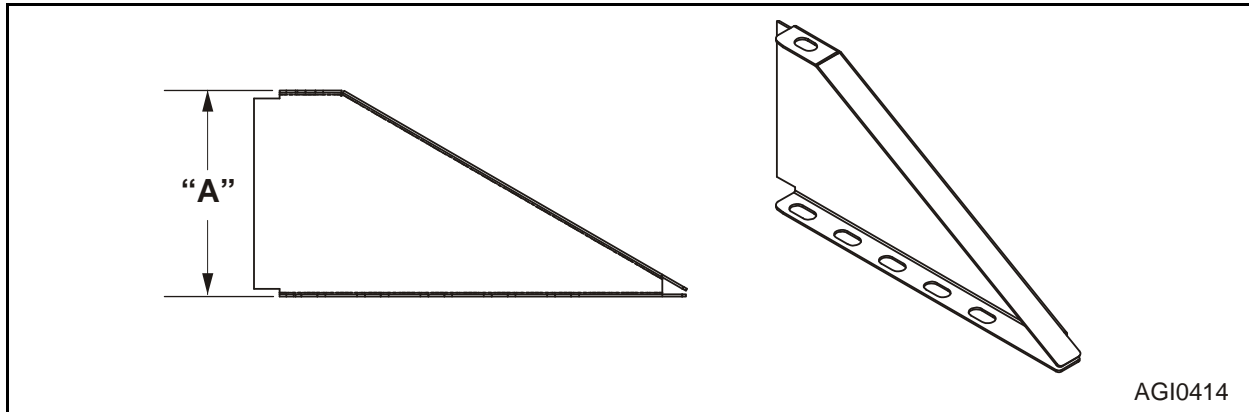


Figure 3 - 25 Transition - End Side Guide

Overview The Side Guide Transition with one end at 0 inches is used to end a side guide at the end of a conveyor line, or to transition from a conveyor section with side guides to a section without side guides.

Specifications Left-Hand and Right-Hand designations.
 Length - varies
 Height, Short Side of Transition - 0 inches
 Height, Long Side of Transition - 2.50, 6.50, 7.50, and 10 inches
 See Part Numbers information below.

Mounting Options • Direct-Mounted to the frame
 • Offset to the outside of the frame - 1 or 1.5 inches

Mounting Hardware Kits Provided for each mounting option. See Installation Procedures chapter for detailed mounting information.

Available Finishes • Plain (powder coated)
 • Galvanized (low -friction)
 • UHMW-Faced (very low -friction)

Part Numbers	"A"	
Part No.	(inches)	Designation
12012001	2.50	RH
12012002	6.50	RH
12012003	10	RH
12012007	7.50	RH
12012101	2.50	LH
12012102	6.50	LH
12012103	10	LH
12012107	7.50	LH

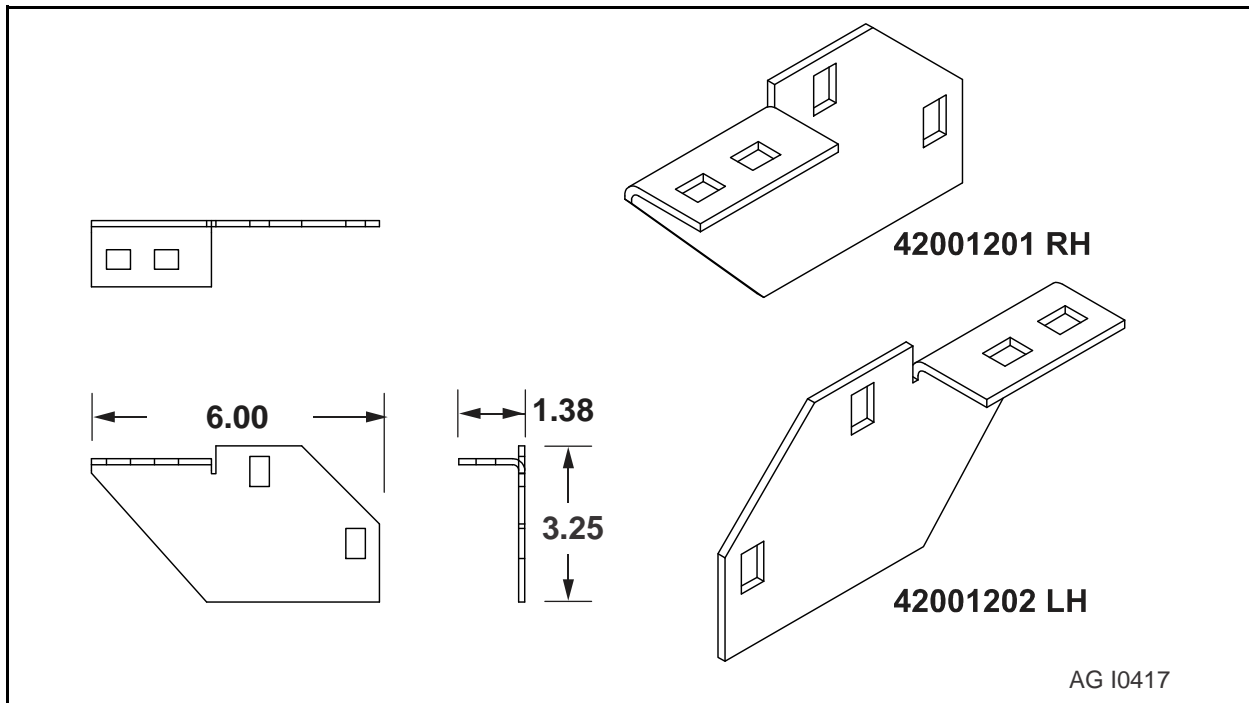
9.75/6.5 Transition Bracket Field Kit

Figure 3 - 26 9.75/6.5 Transition Bracket Field Kit

Overview

The Brackets can be ordered to reinforce the coupling of a 6.5 inch or a 9.75 inch frame conveyor.

Note: Any changes in frame height, in a single conveyor line, the brackets will be included at the factory.

For example, this accessory can be ordered when transitioning from a 6.5 inch conveyor frame to a 9.75 inch conveyor frame.

Part Numbers

42001201 - Right Hand

42001202 - Left Hand

Chain Track Lubricator - Solenoid-Controlled (Drive Section)

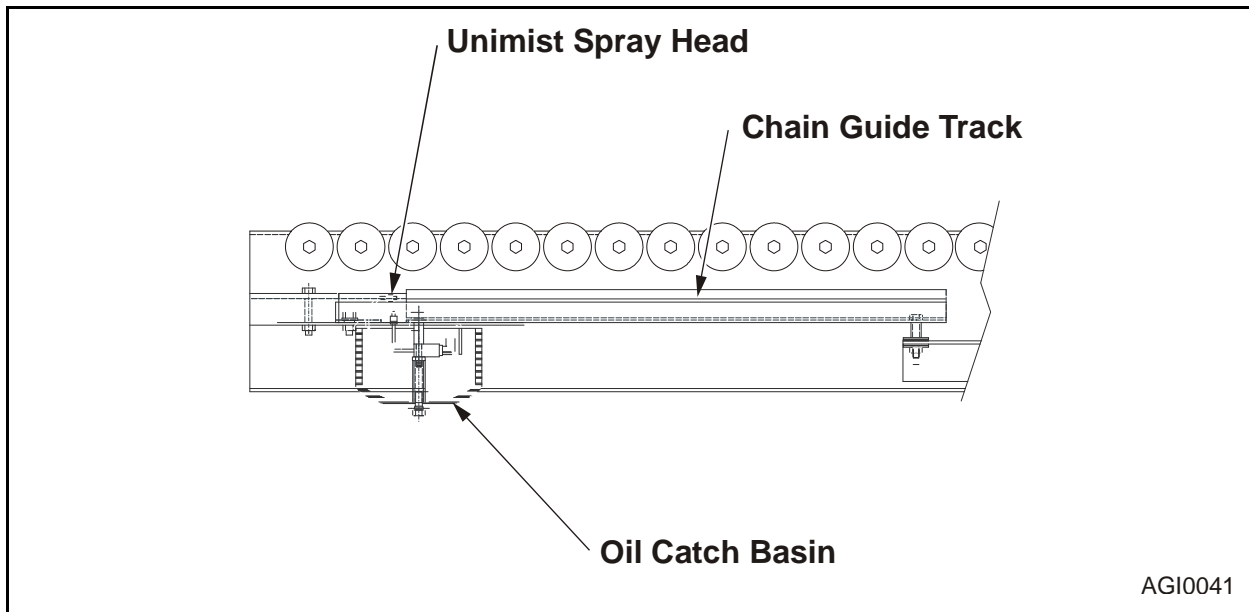


Figure 3 - 27 Chain Track Lubricator - Solenoid-Controlled

Overview	The solenoid-controlled Chain-Track Lubricator is an alternate for the standard, Magnetic-type Track Lubricator that sprays lubricant onto the drive chain track in response to a programmed external signal.
Operation	A maintained external signal (24VDC / 110VQAC) actuates and opens the solenoid-valve (2-way, normally-closed) to pressurize the lubricant-reservoir and spray nozzle.
Air Requirement	The solenoid-valve is connected to the conveyor's main-air supply line. No additional air-supply.
Mounting	The solenoid-valve, chain-track, and spray nozzle are factory-assembled into the Infeed Drive Section. The oil reservoir is piped to the solenoid-valve and the spray nozzle. The oil reservoir with its mounting bracket is strapped to the underside of the drive section.
Installation	The oil reservoir assembly must be bolted to the bottom flange of the side rail. No additional piping is required.
Field Wiring	The solenoid-valve (110VAC / 240VDC) must be wired to the control panel.
Part Numbers	51023501-510: Track Solenoid-Oil AC115V 51023502-510: Track Solenoid-Oil 24V 51020300-510: Magnetic Sensor Chain Lubricator Assembly

Oil Reservoir One (1) Liter - Float Switch

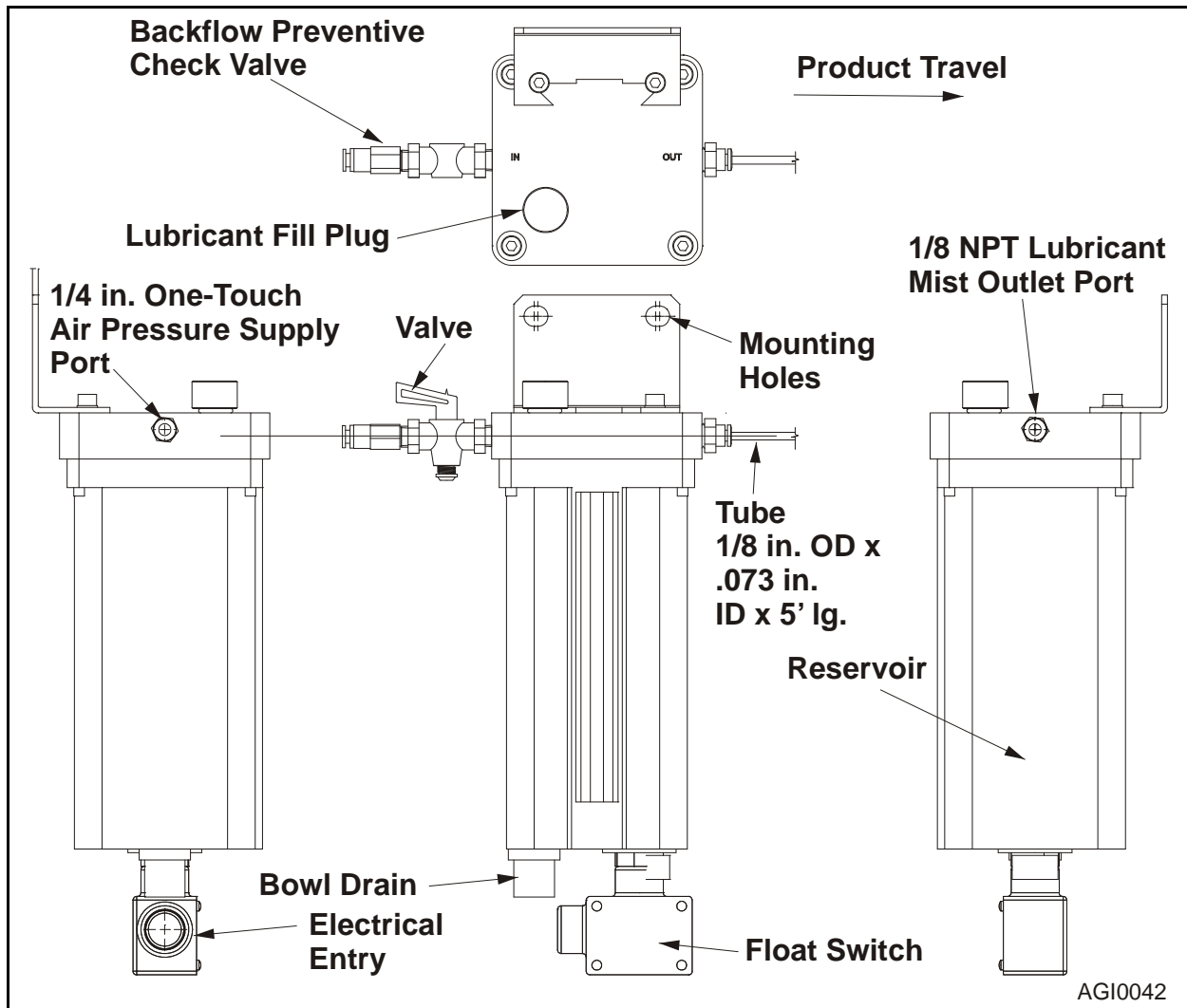
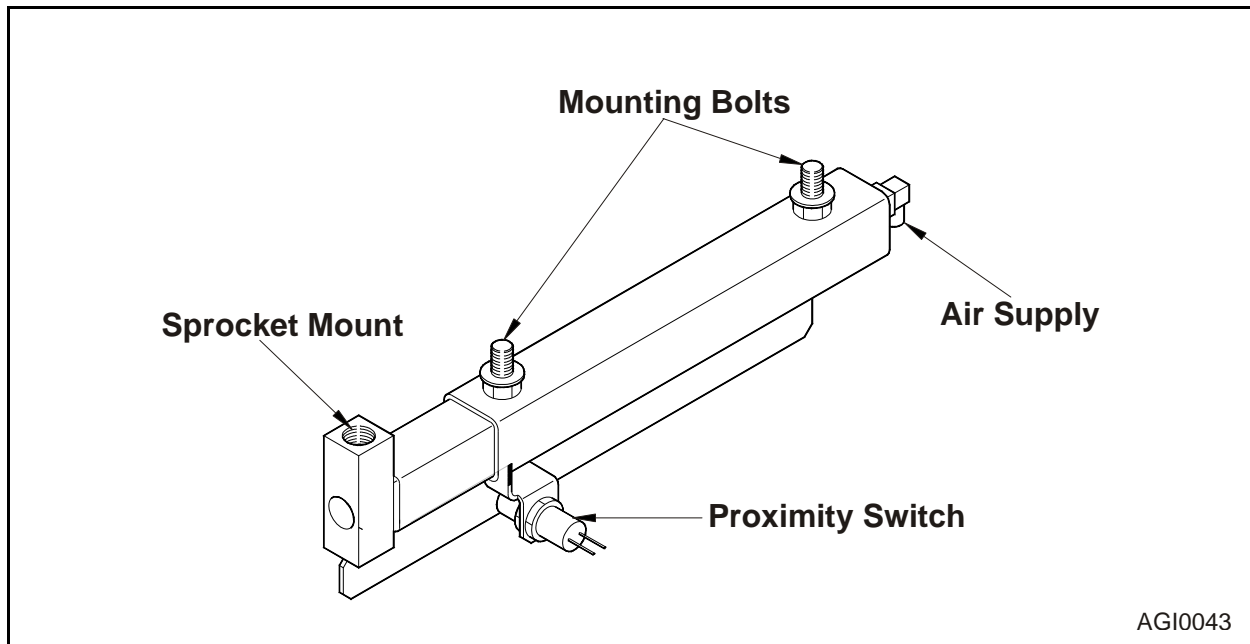


Figure 3 - 28 Oil Reservoir - One (1) Liter - Float Switch

- Overview** The Oil Reservoir with float switch is an alternate for the standard, without switch type. It uses SMC Reservoir AL-DUM00277
- Operation** An external signal is sent when the oil is below 2 fluid ounces. Switching condition is switched off with float down.

Installation	<p>The chain lubricator is factory assembled into the drive section. The oil reservoir is shipped separate and must be assembled at the time of installation.</p> <p>The illustration shows the oil reservoir mounting location on the drive section's frame and the air and oil lines that must be connected.</p> <ul style="list-style-type: none">• Attach the oil reservoir and its mounting bracket to the bottom flange of the drive section's frame rail.• Connect the air and oil as shown in Figure 3 - 28.• Fill the oil reservoir with SAE 10 weight non-detergent motor oil.
Part Numbers	<p>51023300-510: Oil Reservoir Assembly 1 Liter 51023400-510: Oil Reservoir Assembly 1 Liter with Float Switch</p>

Air-Actuated, Chain-Tensioner (Drive Section)



AGI0043

Figure 3 - 29 Air-Actuated, Chain-Tensioner

Overview	The air-actuated Chain-Tensioner is an alternate for the standard, spring-type chain tensioner that provides constant tension to the drive chain.
Operation	The tensioner extends 10 inches to provide constant tension to the drive chain. A proximity switch (110VAC / 24VDC) senses the amount of extension and signals when it is necessary to shorten the drive chain/pad length.
Air Requirement	A separate high-pressure air-supply (80 psi) is required. Note: The tensioners of several conveyors can utilize a common filter/regulator unit.
Mounting	The air-tensioner is factory-assembled into the Infeed Drive Section.
Field Assembly	The chain-tensioner is fully-assembled into the section from the factory. No field assembly is required.
Field Piping	The chain-tensioner's air-supply port must be connected to the filter/regulator.
Part Numbers	5102200-HD: Spring Tensioner 5102300-510: Cylinder Tensioner 51025700-Switch Assembly 24024200-High Pressure Regulator

Angle End Stop

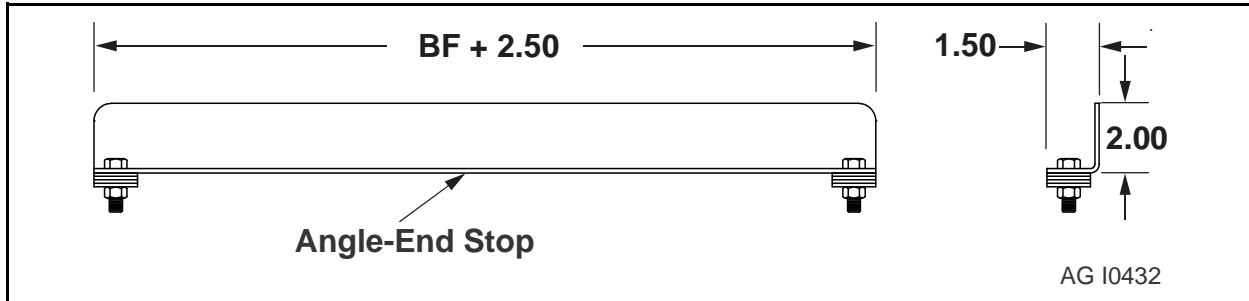


Figure 3 - 30 Angle End Stop

Overview	Bolts across top flange to keep product from running off the end.
Mounting	Washers are stacked above rollers.
Installation	The flat washers are installed between the side rail and the angle stops to clear the rollers.
Part Number	6-09723-016 6-09723-022 6-09723-028 6-09723-034 6-09723-040

Knee Brace Assembly

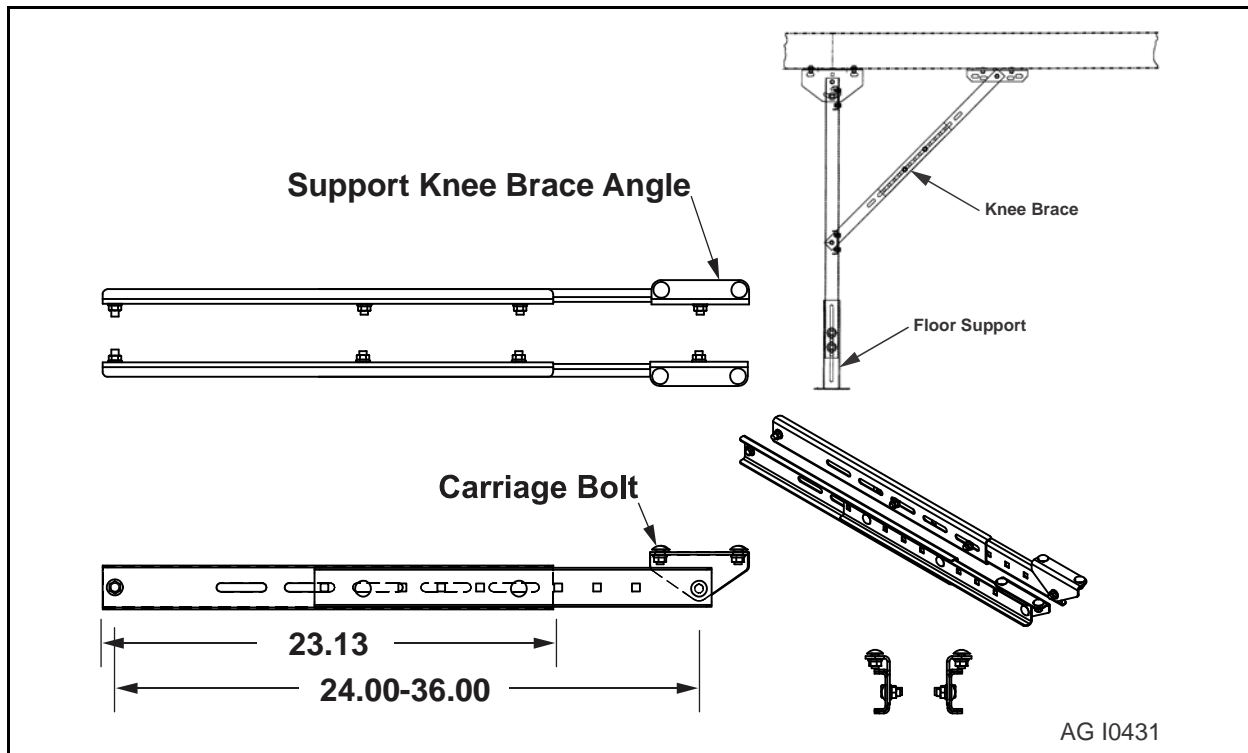
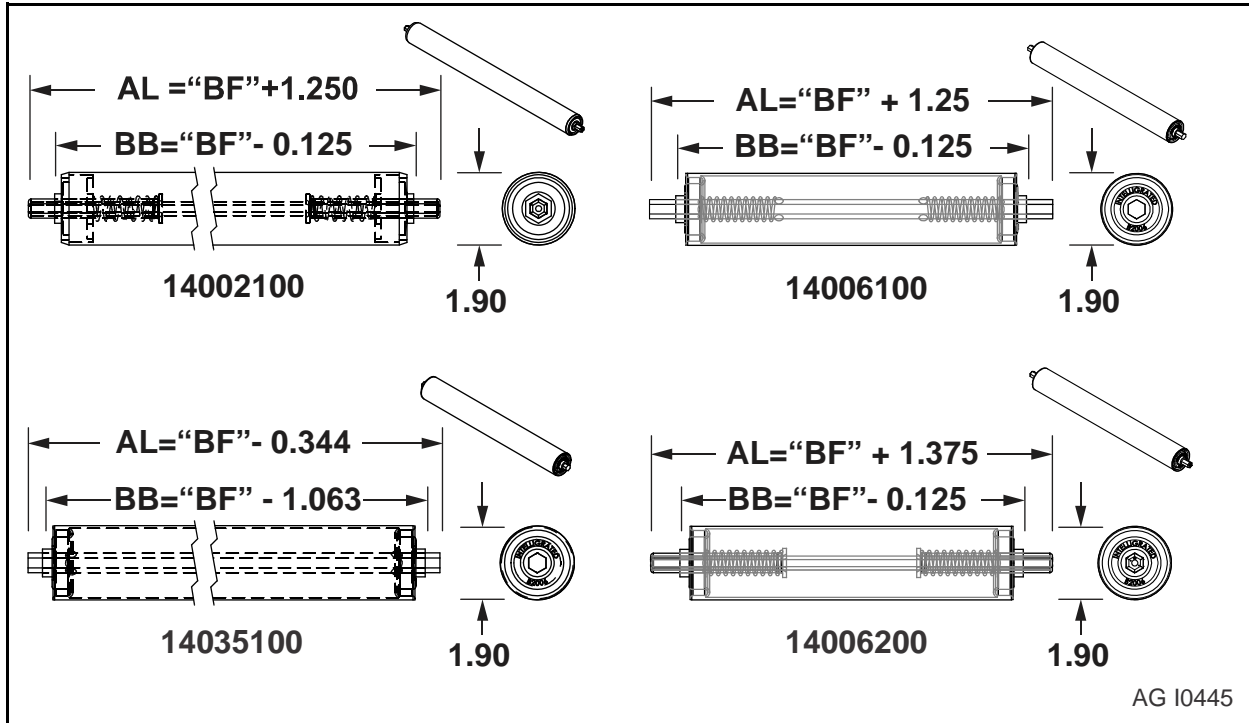


Figure 3 - 31 Knee Brace Assembly

Overview	The knee braces add longitudinal stability. The knee brace eliminates stress caused by flow direction, stops, and starts. Every support does not require bracing.
Operation	Use knee braces: at the ends of straight runs, before case stops, near the drive, and approximately every 50 feet on a long straight run.
Installation	<p>Locate the knee braces on the downstream side of the supports, putting them in tension. However, starting the conveyor stresses the legs in the opposite direction. To resist these stresses, install braces near to, and upstream from the drive.</p> <p>For best results, keep the strap-to-frame angle between 30° and 45°. On shorts supports, where a small angle results, shorten the brace strap - this is optional.</p>
Part Number	10005900

Rollers - ABEC, High Speed, Premium High Speed and Pop-Out



AG I0445

Rollers, Fixed, ABEC

- Tubing** 1.9 in. dia. x 16 ga. galvanized
- Bearing** Intelligrated B2006 - ABEC-1 rated
- Lubrication** Grease packed and sealed (no re-lubrications necessary)
- Axle:** 7/16 in. nylon sleeve over 5/16 in. steel core (steel core is thru shaft)
- Roller Capacity** 100 lbs
- Environment** -20°F to 150°F
- Application Notes** Intelligrated standard. Use up to 300 fpm
- Part Number** 140061__*

*The last 3 digits of roller part numbers are the conveyor width in 1/8 in. increments.

Rollers, Fixed, High Speed

Tubing	1.9 in. dia. x 16 ga. galvanized
Bearing	Intelligrated B2006 - ABEC-1 rated
Lubrication	Grease packed and sealed (no re-lubrications necessary)
Axle:	7/16 in. nylong sleeve over 5/16 in. steel core. (steel core is thru shaft)
Roller Capacity	100 lbs
Environment	-20°F to 150°F
Application Notes	Low noise and eliminates frame wear. Standard for speeds 300 fpm and above
Part Number	140062__*

*The last 3 digits of roller part numbers are the conveyor width in 1/8 in. increments.

Rollers, Fixed, Premium

Tubing	1.9 in. dia. x 16 ga. galvanized
Bearing	SST RC190 6203 - ABEC-1 rated
Lubrication	Grease packed and sealed. (no re-lubrication necessary)
Axle:	7/16 in. nylon sleeve over 5/16 in. steel core (steel core is thru shaft)
Roller Capacity	100 lbs
Environment	-20°F to 150°F
Application Notes	Nominal noise and aesthetic improvement over standard High Speed
Part Number	140021__*

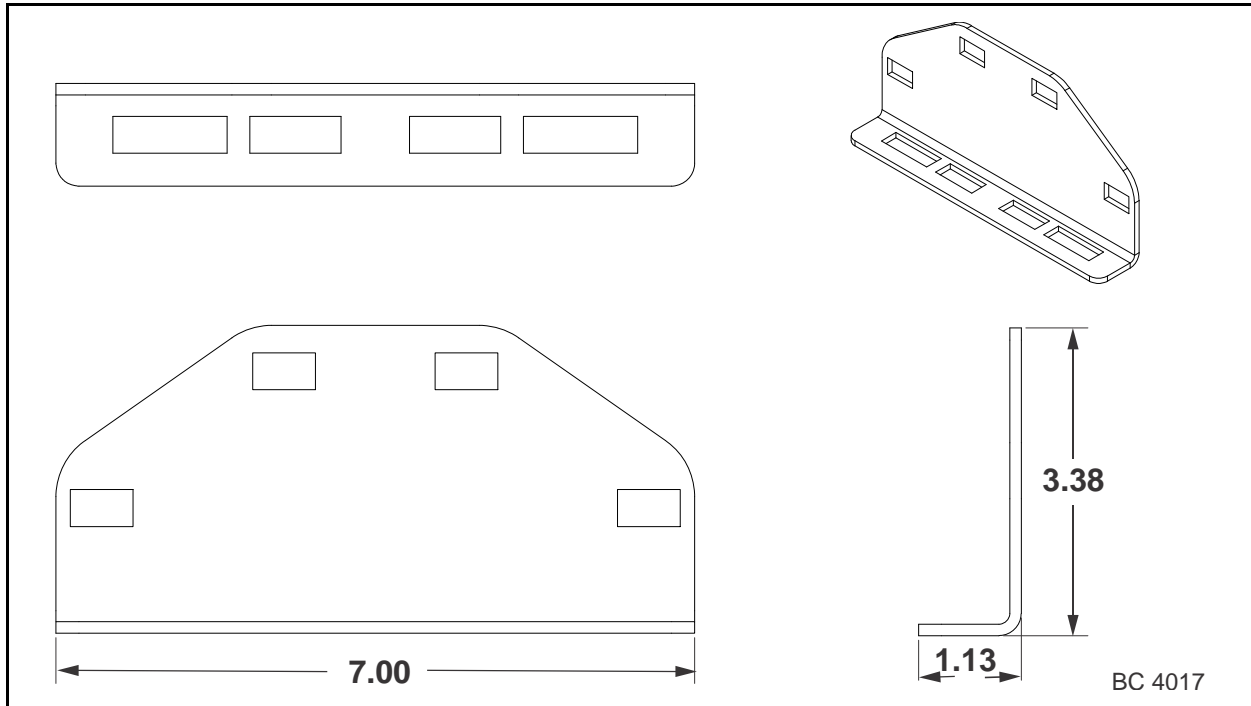
*The last 3 digits of roller part numbers are the conveyor width in 1/8 in. increments.

Rollers, Fixed, Pop-Out

Tubing	1.9 in. dia. x 16 ga. galvanized
Bearing	SST RC190 6203 - ABEC-1 rated
Lubrication	Grease packed and sealed. (no re-lubrication necessary)
Axle:	non-spring loaded 7/16 in. hex axle, no sleeve for the pop-out rollers.
Roller Capacity	100 lbs
Environment	-20°F to 150°F
Application Notes	Nominal noise and aesthetic improvement over standard High Speed
Part Number	140351__* Pop-out rollers are not recommended for over 6 ft. elevation.

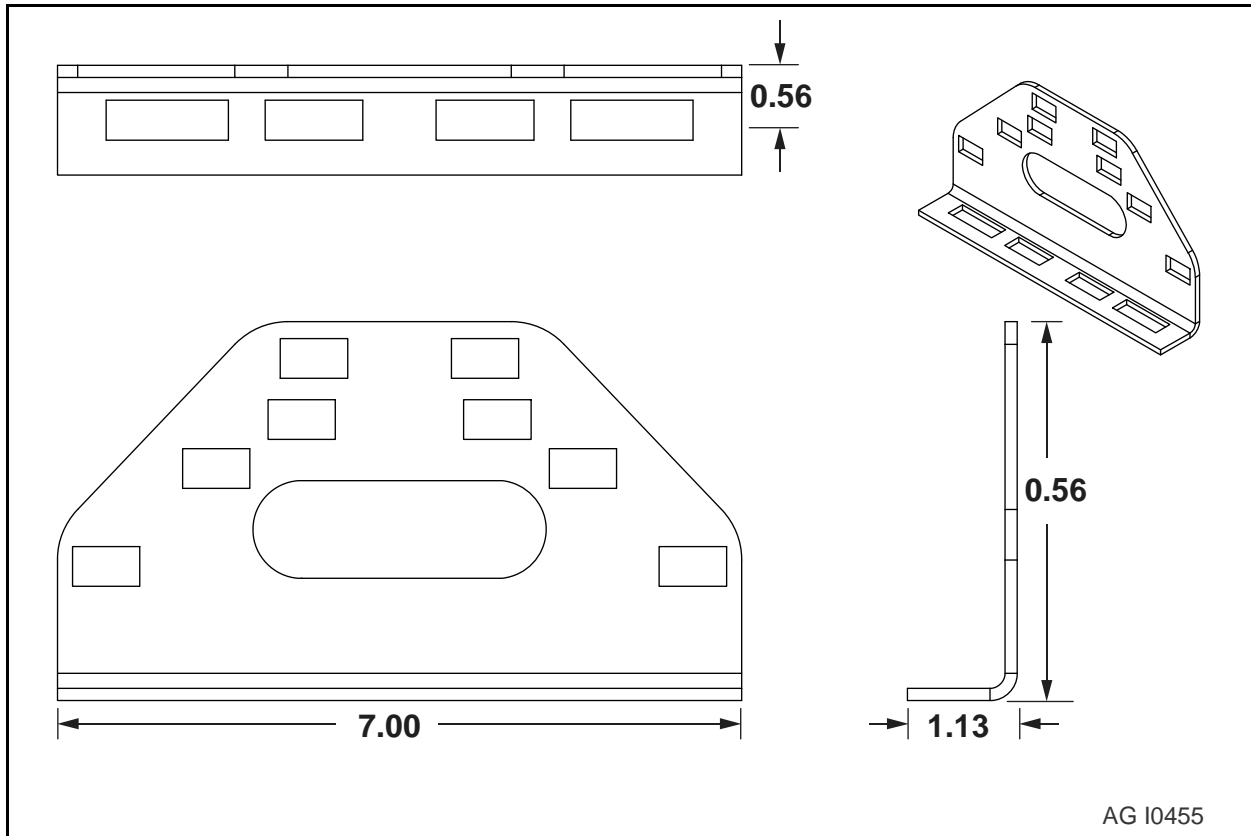
*The last 3 digits of roller part numbers are the conveyor width in 1/8 in. increments.

Splice Plate Kit



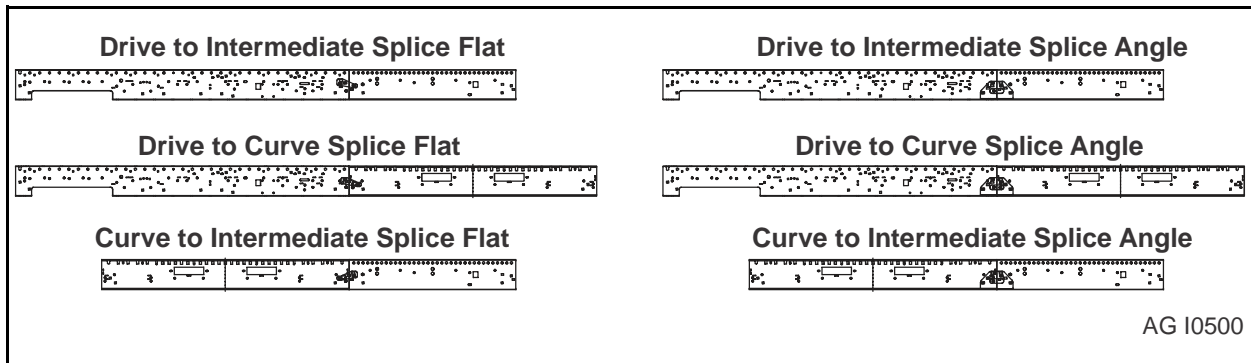
Overview	Standard plate for splicing sections together.
Installation	Use the splice plate to connect adjacent conveyor beds together.
Part Number	FK410241 (Kit) - 18000800 (plate only)

Splice Angle for Curves and Drive



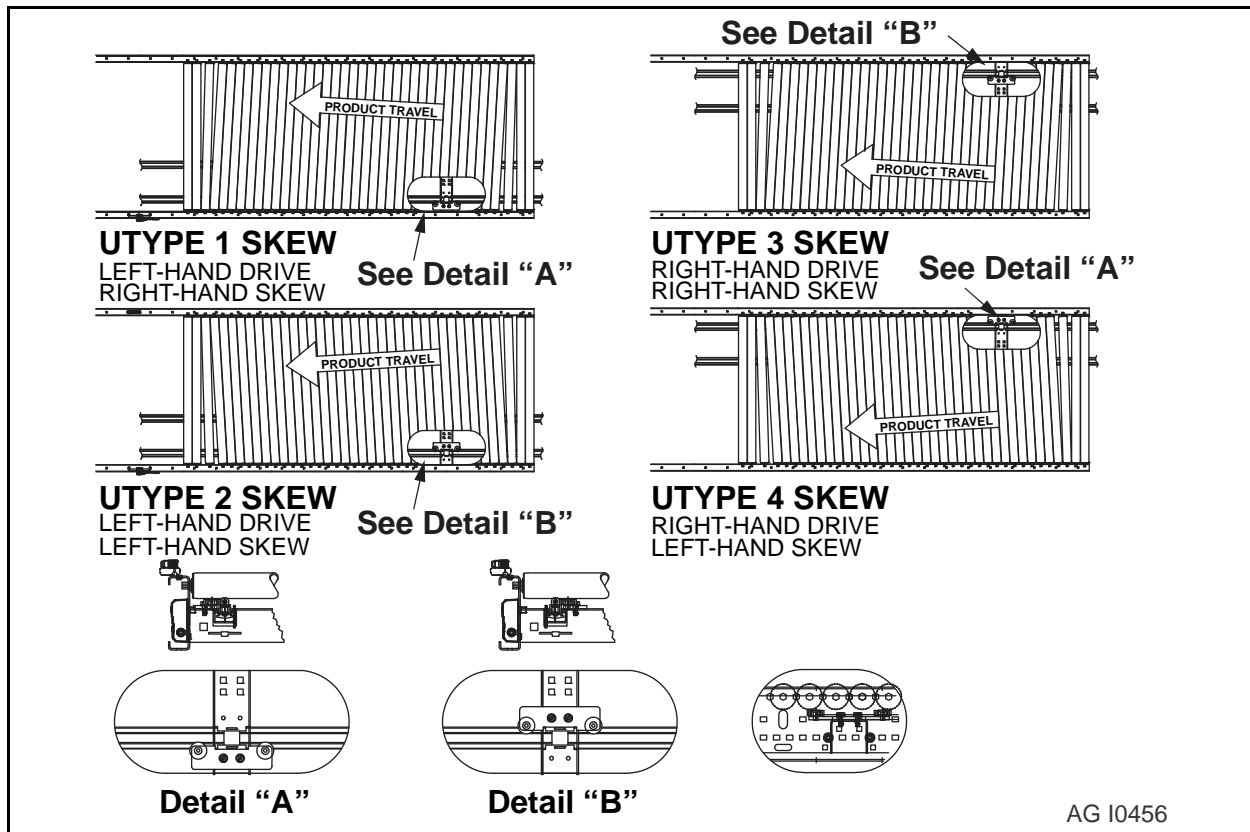
Overview	The splice angle is used between a curve and intermediate, curve and drive, or a drive and intermediate when a support cannot be used directly under the joint of two sections.
Installation	For complete installation procedures, see Installation Procedures chapter.
Part Number	FK510384

Splice Flat for Curves and Drives



Overview	The splice flat is used between a curve and intermediate, curve and drive, or a drive and intermediate when a support is used directly under the joint of two sections.
Installation	For complete installation procedures, see Installation Procedures chapter.
Part Number	51038500

Skew Kit



Overview Moving packages in a more uniform pattern.

Installation If a roller sits directly over a bearing, check clearance between roller and screw when chan and driver are in lowest position.
 If a roller hits screw when turned, switch it with a more concentric roller from the same conveyor.
 When skewing rollers more than proper amount, it may create a pinch point between the roller and the urethane driver.
 Maximum length of skew is based on moving the narrowest carton from one side of the conveyor to the other side. Maximum length of the skew is required only when cartons enter the conveyor randomly positioned.

Part Number 51045100

4 Engineering Data

Introduction

Follow these steps to properly apply an Accuglide Conveyor in a case handling system.

Step 1 - Determining Conveyor Width (W)

Select a standard conveyor width (16 inches, 22 inches, 28 inches, 34 inches, or 40 inches) that is at least 2 inches wider than the widest product being conveyed. This minimizes the chance of product hanging up on the side guides and/or contacting the photo-eye sensors. The width-dimension of the product is the dimension that is perpendicular to the conveyor's direction of travel.

For conveyors that include Intermediate Curve Section(s), the selected width is based on the curve's required width. (Refer to Table 4 - 1 or Table 4 - 2 or the formula shown in Figure 4 - 1).

The formula in Figure 4 - 1 takes into account the curve section's Inside Radius (IR), the product's width (W) and length (L). After working the formula, use the next larger standard width curve section (16-inch, 22-inch, 28-inch, 34-inch or 40-inch).

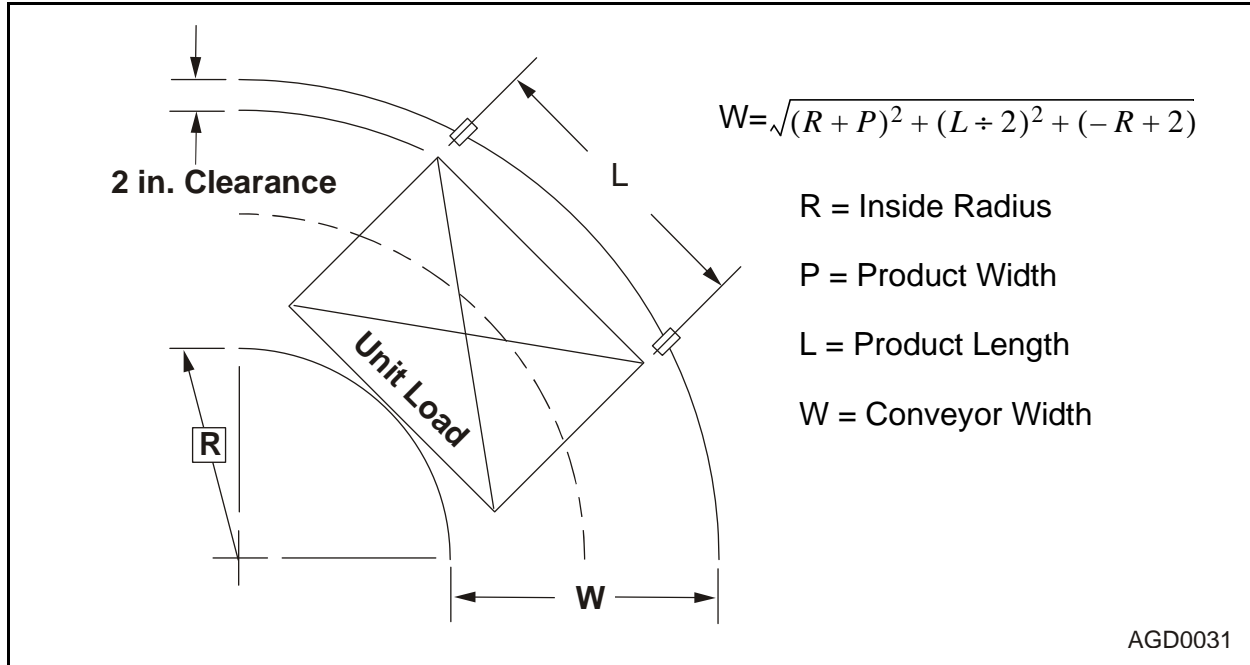


Figure 4 - 1 Determine Curve Width Requirements

Widths for Standard Curves, 30-Inch Inside Radius

Two standard Intermediate Curve Sections are available.

Use either Table 4 - 1 or Table 4 - 2 to determine the proper standard curve width based on product length and width.

Table 4 - 1 Type 26IR Curve Widths

Product Width (inches)	Product Length (inches)												
	12	16	20	24	28	32	36	40	44	48	52	56	60
6	16	16	16	16	16	16	16	16	16	16	22	22	22
8	16	16	16	16	16	16	16	16	22	22	22	22	22
10	16	16	16	16	16	16	22	22	22	22	22	22	28
12	16	16	16	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	--	--	--	--	--	--	--	--	--	--

Table 4 - 2 Type TTF Curve Widths

Product Width (inches)	Product Length (inches)												
	12	16	20	24	28	32	36	40	44	48	52	56	60
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	22	22	22	22	22	22
12	16	16	16	16	22	22	22	22	22	22	22	22	22
14	22	22	22	22	22	22	22	22	22	22	22	28	28
16	22	22	22	22	22	22	22	22	28	28	28	28	28
18	22	22	22	22	22	28	28	28	28	28	28	28	28
20	28	28	28	28	28	28	28	28	28	28	28	28	34
22	28	28	28	28	28	28	28	28	28	28	34	34	34
24	28	28	28	28	28	28	34	34	34	34	34	34	34
26	34	34	34	34	34	34	34	34	34	34	34	34	34
28	34	34	34	34	34	34	34	34	34	34	34	40	40
30	34	34	34	34	34	34	34	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	40	40		
36	40	40	40	40	40	40	40						

Step 2 - Determine the Live Load

Use the following formula to calculate the conveyor's "live load" (LL) requirement.

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

Note: Assume the conveyor to be fully-loaded with the heaviest product being conveyed.

DO NOT exceed 100 lbs./ft. Live Load (max.)

Step 3 - Determine the Release-Rate/Speed Requirement

An Accuglide Conveyor must be capable of releasing product at a rate (Release Rate) that meets the Flow Rate (FR) requirement of the adjoining downstream conveyor.

$$\begin{aligned} \text{Flow Rate (FR)} &= \text{Case Feet Per Minute (CFPM)} \\ &= \text{Number of cases per minute (max)} \times \text{Average Case Length} \end{aligned}$$

A conveyor's Release-Rate is determined by its Speed and Operational-Mode.

Calculate the conveyor's Release-Rate/Speed requirement using the following formula.

$$\text{Speed/Release} = \frac{\text{Flow Rate of Downstream Conveyor/Equipment}}{\text{Release Rate Factor}}$$

NOTE: Refer to Table 4 - 3 and Table 4 - 4 for Release Rate Factor information.

Table 4 - 3 Release Rate Factors*

Speed (FPM)	Operational Modes						Slug
	Singulation		Dual Zone (Note C)	Auto-Slug ZONE Length (Note A)			
	(Note A)	(Note B)		4-Zone	3-Zone	2-Zone	
90	.54	.62	.66	.70	.66	.65	.90
90	.54	.62	.66	.70	.66	.65	.90
125	.51	.62	.66	.74	.70	.64	.90
150	.49	.61	.66	.75	.70	.66	.90
175	.48	.59	.66	.75	.69	.63	.90
200	.46	.56	.66	.73	.67	.61	.90
225	.44	.53	.66	.763	.65	.59	.90
250	1.142	.48	.66	.71	.64	.57	.90

(*) All Factors shown are derived from information provided for Accuglide AGP Conveyor.
 Note A - Factors based on testing using uniform 12-inch-long corrugated cartons weight 25 lb.
 Note B - Factors based on testing using uniform 24-inch-long corrugated cartons weight 245 lb.
 Note C - Factors estimated based on 2/3 of zones always being powered. (Actual rates may vary.)

A conveyor's Release Rate capability is adversely affected when the weight of the product being conveyed increases. To compensate for these affects, multiply the calculated Release Rate (previous page) by the appropriate factor (below).

Table 4 - 4 Product Weight Compensation Factors*

Item	Product Weight			
	0 - 25 lbs.	25 - 35 lbs.	35 - 50 lbs.	50 - 100 lbs.
Factor	1.00	0.95	0.90	0.85

(*) All Factors shown are derived from information previously published for Accuglide AGP Conveyor.

Step 4 - Determine the Acceptance-Rate / Speed Requirement

An Accuglide Conveyor must also be capable of accepting product at a rate that meets the Flow Rate (FR) requirement of the adjoining upstream conveyor.

$$\begin{aligned} \text{Flow Rate (FR)} &= \text{Case Feet Per Minute (CFPM)} \\ &= \text{Number of cases per minute (max)} \times \text{Average Case Length} \end{aligned}$$

A conveyor's Acceptance-Rate is determined by its Speed and Operational-Mode.

If the calculated Release-Rate/Speed (See “Step 3 - Determine the Release-Rate/Speed Requirement” on page 6.) was based on a “primary” Operational-Mode (Singulation, Dual-Zone, Auto-Slug), first calculate the Acceptance-Rate/Speed using the same Operational-Mode factor (Table 4 - 5).

If the conveyor's Acceptance-Rate is greater than the Release-Rate, then consider using partial-length Slug Operational-Mode at the infeed end of the conveyor.

Calculate the conveyor's Acceptance-Rate/Speed requirement using the following formula:

$$\text{SPEED/Acceptance} = \frac{\text{Flow Rate of Upstream Conveyor/Equipment}}{\text{Acceptance Rate Factor}}$$

NOTE: Refer to Table 4 - 5 for Acceptance Rate Factors information.

Table 4 - 5 Acceptance Rate Factors*

Speed (FPM)	Operational Modes				
	Primary				Secondary
	Singulation		Dual Zone (Note E)	Auto-Slug (Note F)	Slug
	(Note E)	(Note E)			
90	.54	.62	66	1.0	1.0
125	.51	.62	.66	1.0	1.0
150	.49	.61	66	1.0	1.0
175	.48	.59	.66	1.0	1.0
200	.46	.56	66	1.0	1.0
225	.44	.53	.66	1.0	1.0
250	.42	.48	66	1.0	1.0

(*) All Factors shown are derived from information provided for Accuglide AGP Conveyor.
 Note E - Release Rate Factors shown; Acceptance Rate factors should be equal to or better.
 Note F - Factors based on conveyor functioning as a single, full-length Auto-Slug Zone.

Step 5 - Determine the Conveyor Speed Requirement

Use the higher of the two (2) speed requirements to determine the power unit horsepower requirement. (See “Step 7 - Determine the Power Unit Horsepower” on page 22).

Step 6 - Determine the Effective Pull (EP)

Use the following formula(s) to determine the Effective Chain Pull for Accuglide Conveyors. Determine the pull prior to determining the conveyor's horsepower requirement.

For Straight Conveyor (without Skewed Rollers)

$$\text{Total Effective Pull (EP)} = 1.05(L \times F_1)$$

DO NOT exceed 650 lbs. Effective Chain Pull (max.).

Nomenclature Key:

EP = Effective (Chain) Pull (pounds)

L = Straight Conveyor Length (feet)

F_1 = Chain Pull Factor (see Table 4 - 6, Table 4 - 7 or Table 4 - 8)

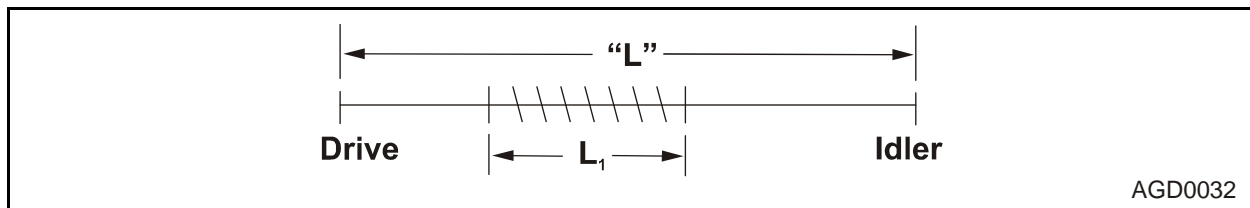


Figure 4 - 2 Calculating EP - Straight Conveyors

Effective Pull: Straight Conveyor-Skewed Rollers

$$\begin{aligned} \text{Total Effective Pull (EP)} &= [\text{EP}_{\text{Straight Conveyor}}] + [\text{Additional EP}_{\text{Skewed Rollers}}] \\ &= 1.05 (L \times F_1) + SF (L_1) \end{aligned}$$

DO NOT exceed 650 lbs. Effective Chain Pull (max.).

Nomenclature Key:

EP = Effective (Chain) Pull (lbs.)

L = Straight Conveyor Length (ft.)

L₁ = Skewed Roller Length (ft.)

(see Table 4 - 7 for length requirement)

F₁ = Chain Pull Factor (see Figure 4 - 6, Figure 4 - 7 or Table 4 - 8)

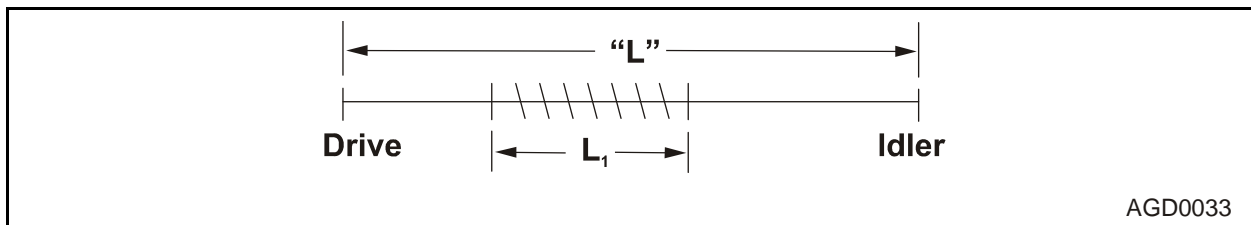
SF = Skew Factor

SF = 8.4 (for 2-inch carrier roller centers)

SF = 5.6 (for 3-inch carrier roller centers)

SF = 4.2 (for 4-inch carrier roller centers)

SF = 2.8 (for 6-inch carrier roller centers)



AGD0033

Figure 4 - 3 Calculating EP - Straight Conveyor with Skewed Rollers

Effective Pull: Straight Conveyor-One Curve

Total Effective Pull (EP) = $1.05 (L \times F_1 \times F_2) + CPF$

DO NOT exceed 650 lbs. Effective Chain Pull (max.).

Nomenclature Key:

EP = Effective (Chain) Pull (lbs.)

L = Straight Conveyor Length (ft.) (A + B)

F_1 = Chain Pull Factor (see Table 4 - 6, Table 4 - 7 or Table 4 - 8)

F_2 = Curve Factor (see below)

CPF = Curve Pull Factor

CPF = 30 for 2 foot -6 inch inside radius curves

CPF = 50 for "True Taper" radius curves with 2-inch centers

CPF = 40 for "True Taper" radius curves with 3-inch, 4-inch and 6-inch centers

Calculating F_2 Curve Factor.

$$F_2 = \frac{[A + (1.06B)]}{A + B}$$

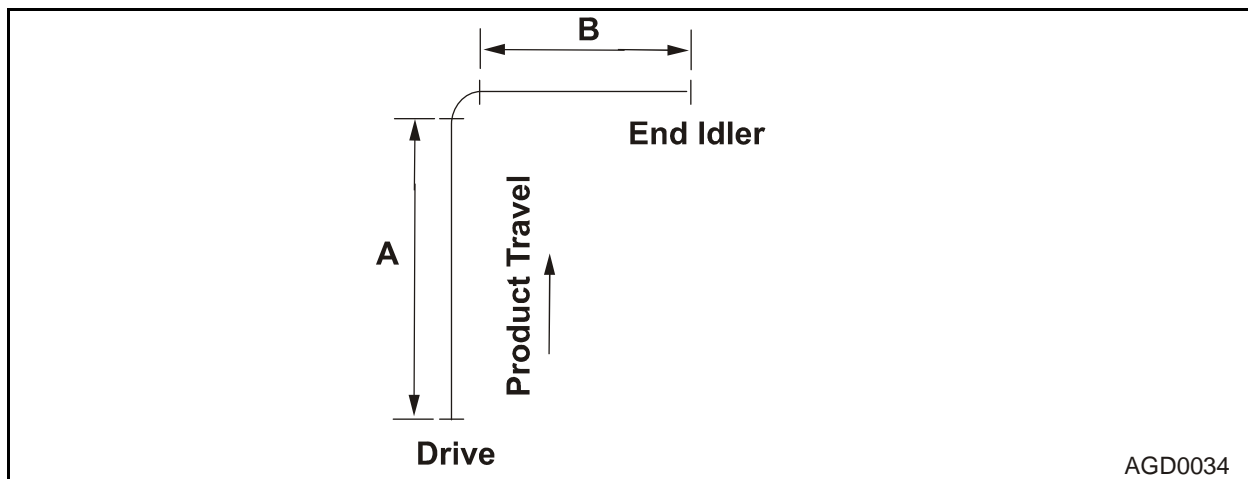


Figure 4 - 4 Calculating EP - Straight Conveyor with 1 Curve

Effective Pull: Straight Conveyor-One Curve, Skewed Rollers

$$\begin{aligned} \text{Total Effective Pull (EP)} &= (\text{EPStd.Conveyor}) + (\text{Additional EPSkewed Rollers}) \\ &= 1.05 (L \times F_1 \times F_2) + (\text{CPF} + [\text{SF} \times L_1]) \end{aligned}$$

DO NOT exceed 650 lbs. Effective Chain Pull (max.).

Nomenclature Key:

EP = Effective (Chain) Pull (lbs.)

L = Straight Conveyor Length (ft.) (A + B)

L₁ = (Total) Skewed Roller Length (ft.)

(See Table 4 - 7 on page 17 for length requirement)

F₁ = Chain Pull Factor

(See Table 4 - 6, Table 4 - 7, or Table 4 - 8)

F₂ = Curve Factor (see below)

CPF = Curve Pull Factor

CPF = 30 for 2 foot-6 inch inside radius curves

CPF = 50 for “True Taper” radius curves with 2-inch centers

CPF = 40 for “True Taper” radius curves with 3-inch, 4-inch & 6-inch centers

SF = Skew Factor

SF = 8.4 (for 2-inch carrier roller centers)

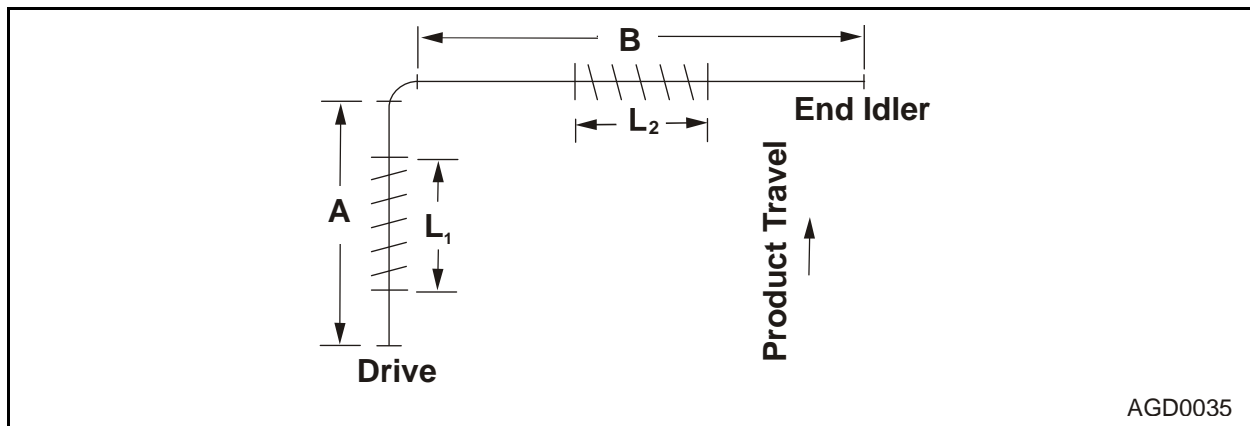
SF = 5.6 (for 3-inch carrier roller centers)

SF = 4.2 (for 4-inch carrier roller centers)

SF = 2.8 (for 6-inch carrier roller centers)

Calculating F₂ Curve Factor.

$$F_2 = \frac{[A + (1.06(B + SFL_2))]}{A + B}$$



AGD0035

Figure 4 - 5 Calculating EP - Straight Conveyor with 1 Curve & Skewed Rollers

Effective Pull: Straight Conveyor-Two Curves

$$\text{Total Effective Pull (EP)} = 1.05 (L \times F_1 \times F_2) + \text{CPF}$$

DO NOT exceed 650 lbs. Effective Chain Pull (max.).

Nomenclature Key:

EP = Effective (Chain) Pull (lbs.)

L = Straight Conveyor Length (ft.) (A + B + C)

F₁ = Chain Pull Factor (see Table 4 - 6, Table 4 - 7, or Table 4 - 8)

F₂ = Curve Factor (see below)

CPF = Curve Pull Factor

CPF = 60 for 2 foot-6 inch inside radius curves

CPF = 80 for "True Taper" radius curves with 2-inch carrier roller centers

CPF = 70 for "True Taper" curves with 3-inch, 4-inch and 6-inch carrier roller centers

Calculating F₂ Curve Factor

$$F_2 = \frac{[A + (1.06B) + (1.12C)]}{A + B + C}$$

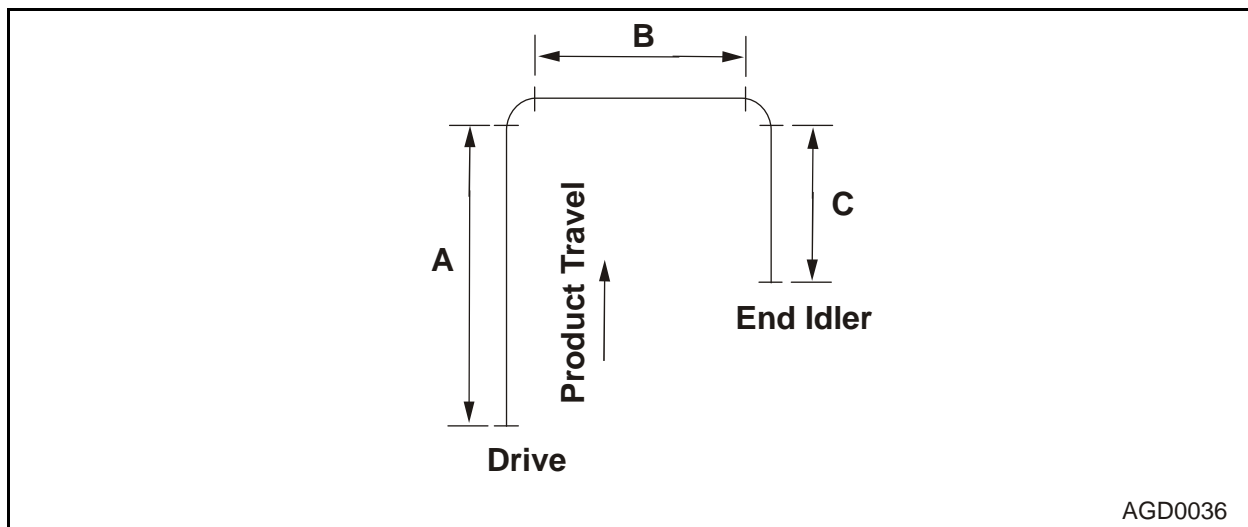


Figure 4 - 6 Calculating EP - Straight Conveyor with 2 Curves

Effective Pull: Straight Conveyor-Two Curves, Skewed Rollers

$$\begin{aligned} \text{Total Effective Pull (EP)} &= (\text{EP}_{\text{Std.Conveyor}}) + (\text{Additional EP}_{\text{Skewed Rollers}}) \\ &= 1.05 (L \times F_1 \times F_2) + (\text{CPF} + [\text{SF} \times L_1]) \end{aligned}$$

DO NOT exceed 650 lbs. Effective Chain Pull (max.).

Nomenclature Key:

- EP = Effective (Chain) Pull (lbs.)
- L = Straight Conveyor Length (ft.)
- L₁ = (Total) Skewed Rollers Length (ft.) (see Table D-7 for length requirement)
- F₁ = Chain Pull Factor (see Figure 4 - 6, Figure 4 - 7, or Figure 4 - 8)
- F₂ = Curve Factor (see below)
- CPF = Curve Pull Factor
 - CPF = 60 for 2 foot-6 inch inside radius curves
 - CPF = 80 for “True Taper” radius curves with 2-inch centers
 - CPF = 70 for “True Taper” curves with 3/4/6-inch carrier roller centers
- SF = Skew Factor
 - SF = 8.4 (for 2-inch carrier roller centers)
 - SF = 5.6 (for 3-inch carrier roller centers)
 - SF = 4.2 (for 4-inch carrier roller centers)
 - SF = 2.8 (for 6-inch carrier roller centers)

Calculating F₂ Curve Factors.

$$F_2 = \frac{[A + (1.06(B + SFL_2)) + (1.12(C + SFL_3))]}{A + B + C}$$

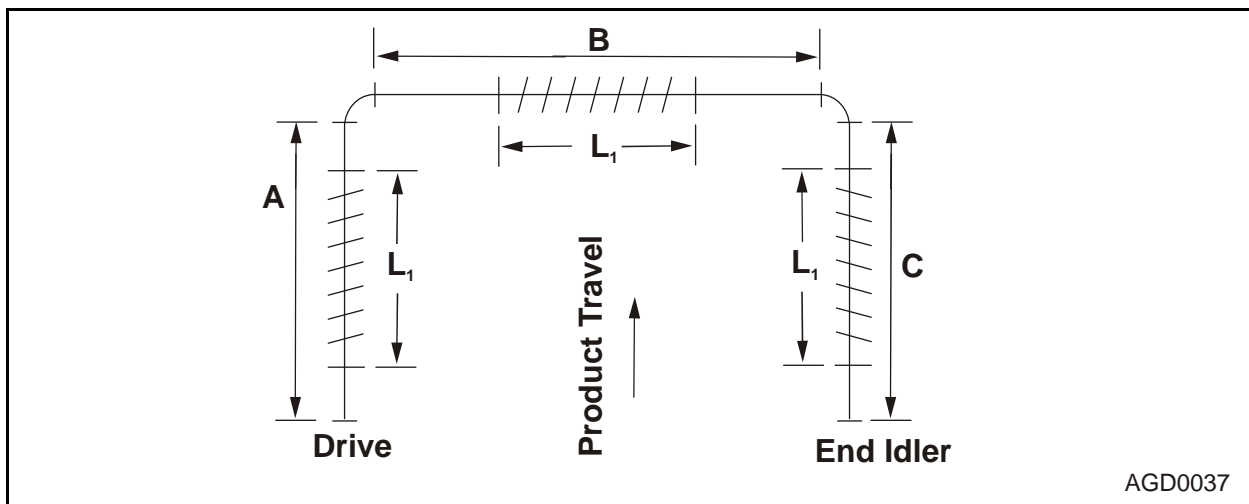


Figure 4 - 7 Calculating EP - Straight Conveyor with 2 Curves & Skewed Rollers

Table 4 - 6 (F_1) Pull Factor* (lbs./ft.) - SINGULATION Operational Mode

Live Load#	16-inch		22-inch		28-inch		34-inch		40-inch	
	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.
2-inch ROLLER CENTERS										
10	2.66	2.27	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
20	2.66	2.27	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
30	2.66	2.27	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
40	2.66	2.34	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
50	2.66	2.51	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
60	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
70	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84
80	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
90	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17
100	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33
3-inch ROLLER CENTERS										
10	2.66	1.85	2.66	2.00	2.66	2.32	2.66	2.65	2.66	2.65
20	2.66	2.01	2.66	2.01	2.66	2.32	2.66	2.65	2.66	2.65
30	2.66	2.18	2.66	2.18	2.66	2.32	2.66	2.65	2.66	2.65
40	2.66	2.34	2.66	2.34	2.66	2.34	2.66	2.65	2.66	2.65
50	2.66	2.51	2.66	2.51	2.66	2.51	2.66	2.65	2.66	2.65
60	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
70	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84
80	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
90	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17
100	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33
4-inch ROLLER CENTERS										
10	2.66	1.80	2.66	1.85	2.66	1.87	2.66	2.11	2.66	2.11
20	2.66	2.01	2.66	2.01	2.66	2.01	2.66	2.01	2.66	2.01
30	2.66	2.18	2.66	2.18	2.66	2.18	2.66	2.18	2.66	2.18
40	2.66	2.34	2.66	2.34	2.66	2.34	2.66	2.34	2.66	2.34
50	2.66	2.51	2.66	2.51	2.66	2.51	2.66	2.51	2.51	2.51
60	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
70	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84
80	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
90	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17
100	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33

(*) Based on ABEC Rollers
Pull factor is for one foot of conveyor length.

Table 4 - 7 (F₁) Pull Factor* (lbs./ft.) - AUTO-SLUG (Up to 8 Zones) Operational Mode

Live Load#	16-inch		22-inch		28-inch		34-inch		40-inch	
	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.
2-inch ROLLER CENTERS										
10	2.66	2.32	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
20	2.66	2.54	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
30	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76
40	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98
50	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
60	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42
70	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64
80	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
90	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
100	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30
3-inch ROLLER CENTERS										
10	2.66	2.32	2.66	2.32	2.66	2.32	2.66	2.65	2.66	2.65
20	2.66	2.54	2.66	2.54	2.66	2.54	2.66	2.54	2.66	2.54
30	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76
40	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98
50	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
60	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42
70	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64
80	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
90	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
100	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30

Table 4 - 7 (F_1) Pull Factor* (lbs./ft.) - AUTO-SLUG (Up to 8 Zones) Operational Mode

Live Load#	16-inch		22-inch		28-inch		34-inch		40-inch	
	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.
4-inch ROLLER CENTERS										
10	2.66	2.25	2.66	2.32	2.66	2.32	2.66	2.32	2.66	2.32
20	2.66	2.54	2.66	2.54	2.66	2.54	2.66	2.54	2.66	2.54
30	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76
40	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98
50	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
60	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42
70	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64
80	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
90	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
100	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30

(*) Based on ABEC Rollers
 Pull factor is for one foot of conveyor length.

Table 4 - 8 (F_1) Pull Factor* (lbs./ft.) - AUTO-SLUG (over 8 Zones) and SLUG Operational Mode

Live Load #	16-inch		22-inch		28-inch		34-inch		40-inch	
	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.
2-inch ROLLER CENTERS										
10	2.66	2.27	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
20	2.66	2.28	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
30	2.66	2.58	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
40	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88
50	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
60	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48
70	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78
80	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
90	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
100	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68
3-inch ROLLER CENTERS										
10	2.66	1.98	2.66	2.00	2.66	2.32	2.66	2.65	2.66	2.65
20	2.66	2.28	2.66	2.28	2.66	2.32	2.66	2.65	2.66	2.65
30	2.66	2.58	2.66	2.58	2.66	2.58	2.66	2.65	2.66	2.65
40	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88
50	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
60	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48
70	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78
80	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
90	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
100	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68

Table 4 - 8 (F₁) Pull Factor* (lbs./ft.) - AUTO-SLUG (over 8 Zones) and SLUG Operational Mode

Live Load #	16-inch		22-inch		28-inch		34-inch		40-inch	
	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.	Fixed	P.O.
4-inch ROLLER CENTERS										
10	2.66	1.94	2.66	1.98	2.66	1.98	2.66	2.11	2.66	2.11
20	2.66	2.28	2.66	2.28	2.66	2.28	2.66	2.28	2.66	2.28
30	2.66	2.58	2.66	2.58	2.66	2.58	2.66	2.58	2.66	2.58
40	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88
50	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
60	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48
70	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78
80	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
90	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
100	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68

(*) Based on ABEC Rollers
 Pull factor is for one foot of conveyor length.

Refer to Table 4 - 9 to find the length of skewed rollers required to move the narrowest package from one side of the conveyor to the other.

Go to the required Conveyor Width row(s) (i.e. 16-inch W, 22-inch W etc.)

Go across to the required Package Width column to find the Conveyor Length for the particular Skew Offset and Package Width combination. All dimensions are in inches.

Table 4 - 9 Length (in.) of Skewed Rollers Required for Conveyor / Package Widths

Roller Advance (Skew Offset)	Package Width (Minimum)								
	6 inches	9 inches	12 inches	15 inches	18 inches	21 inches	24 inches	27 inches	30 inches
16-inch W									
1 inch	160	112	64	16	n.a.	n.a.	n.a.	n.a.	n.a.
22-inch W									
1 inch	352	286	200	154	88	22	n.a.	n.a.	n.a.
28-inch W									
1 inch	616	532	448	364	280	196	112	28	n.a.
2 inch	308	266	224	182	140	98	56	14	n.a.
34-inch W									
1 inch	952	850	748	646	544	442	340	238	136
2 inch	476	425	374	323	272	221	170	119	68
40-inch W									
1 inch	1,360	1,240	1,120	1,000	880	760	640	520	400
2 inch	680	620	560	500	440	380	320	260	200
3 inch	453	413	373	333	293	253	213	173	133

Step 7 - Determine the Power Unit Horsepower

Use either the following formula or Table 4 - 10 (below) to identify the power unit's horsepower requirement based on the conveyor's Speed and Effective Chain Pull requirements.

$$HP = \frac{EP \times V}{31,500}$$

Nomenclature Key:

HP = Horsepower

EP = Effective Chain Pull (pounds)

V = Velocity (conveyor speed - fpm)

To use Figure 4 - 10 to identify the power unit's horsepower requirement:

1. Go down the Conveyor Speed column to the required speed.
2. Select a reducer brand and go across to the first Horsepower column with an effective pull capacity rating that exceeds the conveyor's requirement.

Table 4 - 10 Power Unit Capacity* (Effective Pull - lbs.)

Conveyor Speed	Reducer Brand	Horsepower					
		.75	1.0	1.5	2.0	3.0	5.0
60 FPM	Dodge TiGear2	276	368	550	650*	n.a.	n.a.
70 FPM	Dodge TiGear2	243	324	498	650*	n.a.	n.a.
90 FPM	Dodge TiGear2	203	279	419	572	650	n.a.
120 FPM	Dodge TiGear2	161	219	329	439	650*	n.a.
140 FPM	Dodge TiGear2	137	182	286	382	578	650*
180 FPM	Dodge TiGear2	114	152	238	317	475	650*
200 FPM	Dodge TiGear2	n.a.	140	216	288	422	650*
240 FPM	Dodge TiGear2	n.a.	120	180	242	366	610

(*) Power Unit Capacity ratings limited by the rated capacity of the RC50 Drive Chain.

Step 8 - Determine the Photo-Eye Settings

Three variables determine the correct location and alignment of the photo-eye:

- Control Zone -- the area of the conveyor controlled by the photo-eye,
- Placement of the Photo-Eye -- the distance of the photo-eye from the end of the control zone in which it is located, and
- Placement of the Reflector -- how far upstream the reflector is from the photoeye.

Determine the Operational Zone

The conveyor line is divided into operational zones. An operational zone is a length of conveyor (measured in feet) in which rollers are either “powered” or “non-powered” by a signal based on the status of a particular photo-eye. There are two types of operational zones:

- Sequential-Zone Control: The rollers are powered/non-powered based on the status of the photo-eye located in the operational zone immediately downstream (towards the discharge end of the conveyor).
- Local-Zone Control: The rollers are powered/non-powered based on the status of the photo-eye located in the same operational zone as the rollers it controls.

Refer to Table 4 - 11 to determine the zone control for your application.

Table 4 - 11 Determining the Operational Zone

Operational Zone Length	Zone Control
3 feet	Sequential Zone Control (also know as “One-Zone Look-Ahead”)
6 feet	Local Zone Control (also know as “Zero-Zone Look-Ahead”)

For additional information, see Application Guidelines chapter.

Determine the Placement of the Photo-Eye

For Sequential Zone Control, the product length and the product weight determine the placement of the photo-eye. Refer to Figure 4 - 8 to determine the correct placement of the photo-eye for Sequential Zone Control.

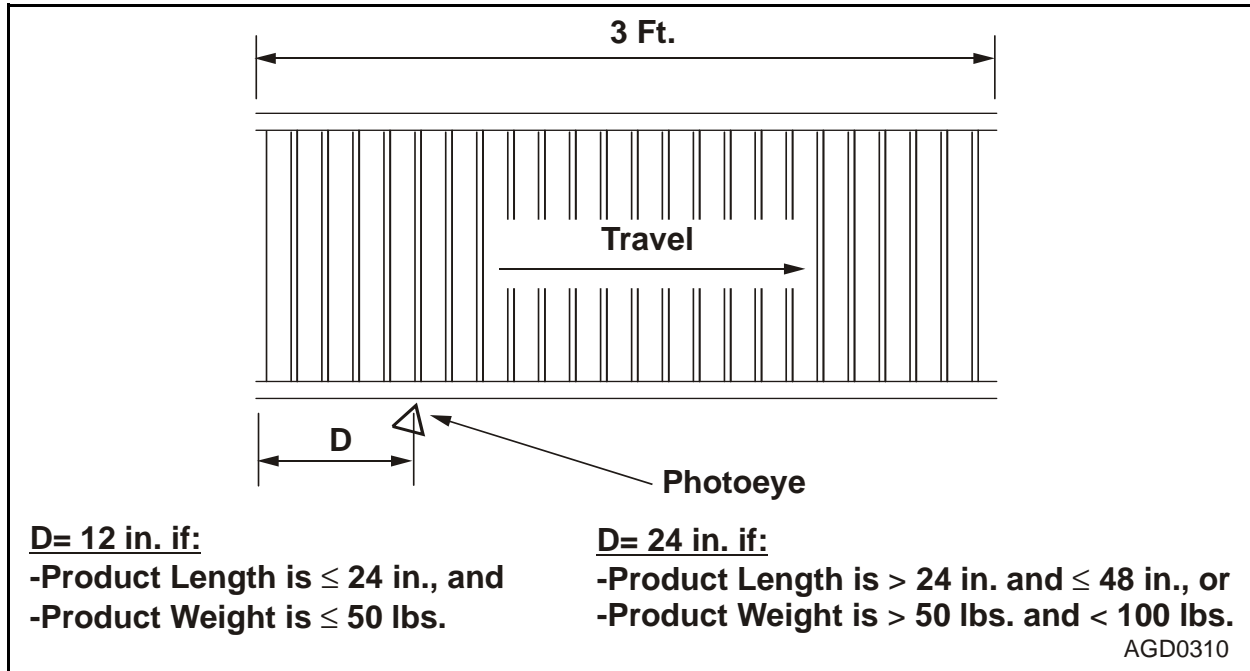


Figure 4 - 8 Photo-Eye Placement for Sequential Zone Control

For Local Zone Control, the photo-eye is always in the same location. Refer to Figure 4 - 9 for the correct placement of the photo-eye for Local Zone Control.

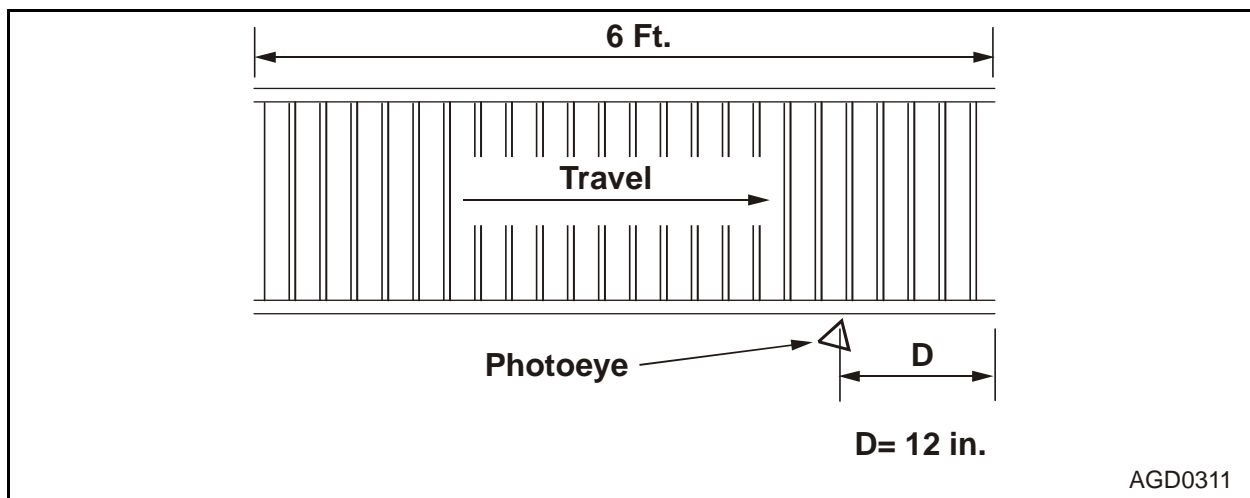


Figure 4 - 9 Photo-Eye Placement for Local Zone Control

Determine the Placement of the Reflector

The reflector is placed a specific distance downstream from the photoeye. The placement of the reflector is determined by the product shape (box or tapered tote).

NOTE: For boxes, the default photo-eye/reflector offset (distance between the photoeye and the reflector) is 2 inches. The offset distance is measured along the axis of the direction of travel.

Refer to Figure 4 - 11 and Figure 4 - 11 to determine the correct placement of the reflector.

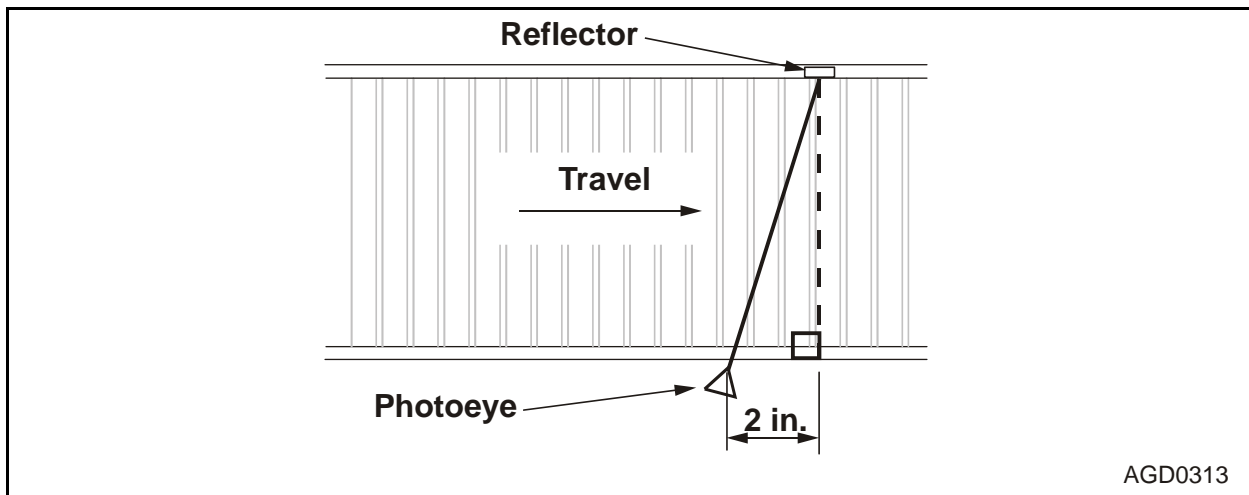


Figure 4 - 10 Reflector Placement for Sequential Zone Control - Boxes

NOTE: For tapered totes, the default photo-eye offset (distance between the photoeye and the reflector) is 6 inches. The allowed photo-eye offset range is 2 to 18 inches. The offset distance is measured along the axis of the direction of travel.

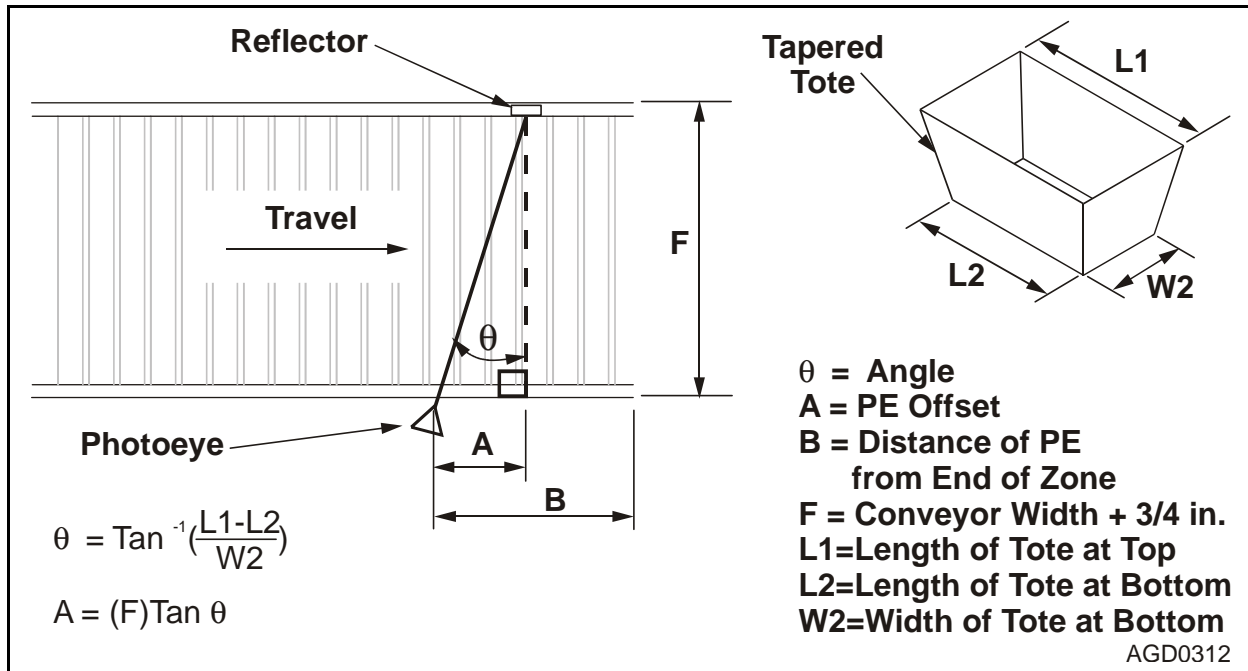


Figure 4 - 11 Reflector Placement for Sequential Zone Control - Tapered Totes

Step 9 - Determine the Air Consumption

Air consumption occurs while product is in transit or being released. Air is not consumed while cases are at rest (accumulated on the conveyor).

Air Consumption When Product Is Being Transported

$$C + 0.00084(LT)$$

Air Consumption When Product Is Being Released

$$C = \frac{0.00084(DLA)}{5}$$

Nomenclature Key:

C = Air Consumption - scfm (standard cubic feet per minute)

P = Production Rate - Cases / minute (rate products are fed onto conveyor)

LT = Length of conveyor over which product is being transported (feet)

LA = Length of conveyor over which product is accumulated (feet)

D = Discharge rate of product in case feet / minute. Discharge rate is either 55% of live roller speed or the metering belt conveyor speed, whichever is less.

Step 10 - Determine the Chain Length

Chain is furnished in 5 foot increments, up to 100 foot lengths. A section of chain can be shortened to fit the actual length for the application. For each conveyor, one special connecting link should be furnished for each 100 feet of chain, or fraction thereof, plus two extras.

To determine the chain length:

1. Multiply the straight lengths (drive, intermediate, and idler sections) by two then add 3 feet for take-up.
2. For each curve section, add the amount of chain specified in Table 4 - 12.
3. Round up the total to the nearest 5 foot increments.

Table 4 - 12 Curve Allowance for Chain Length

Curve Allowance				
Curve	Inside Radius			
	2 feet-6 inches	3 feet-4 inches	4 feet-2 inches	5 feet
30°	7 feet-6 inches	8 feet	8 feet-7 inches	9 feet-6 inches
45°	9 feet inches	10 feet	11 feet-1 inch	12 feet-6 inches
60°	10 feet-6 inches	12 feet	13 feet-7 inches	15 feet-6 inches
90°	14 feet	16 feet	18 feet-6 inches	21 feet-6 inches
180°	23 feet	28 feet-6 inches	33 feet-3 inches	38 feet-6 inches

Chain Pull, Horsepower, and Roller Skew Examples

Intermediate Section with Skewed Rollers

$$CP = [1.05 L F_1 F_2 + CPF N] + [SF L_1]$$

$$HP = \frac{CP V}{29700}$$

Example Given:

Length = L = 200 feet

Live Load = 10 lb./ft.

Width = 22 inches

Velocity = V = 100 fpm.

Roller Centers = 4-inch centers

Discharge Mode = Singulation Release

No Curves = N = 0 and F₂ = 1

F₁ = 1.85

F₂ = 1

N = 0

CPF = 0

SF = Show Factor

SF = 8.4 (for 2-inch carrier roller centers)

SF = 5.6 (for 3-inch carrier roller centers)

SF = 4.2 (for 4-inch carrier roller centers)

SF = 2.8 (for 6-inch carrier roller centers)

$$CP = 1.05 \times 200 \times 1.85 + (30 \times 0) + 5.6 \times 9 =$$

$$HP = \frac{438.9 \times 100}{29700} = 1.478$$

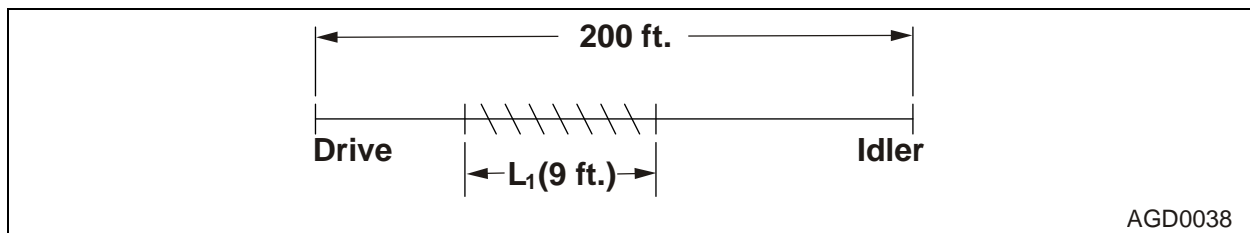


Figure 4 - 12 Intermediate Section with Skewed Roller Example

Intermediate Section with Curve Sections

$$CP = 1.05 L F_1 F_2 + CPF N$$

$$HP = \frac{CP V}{29700}$$

Example Given:

Length = L = 230 feet

Live Load = 30 lb./ft.

Width = 16 inches

Velocity = V = 120 fpm

Roller Centers = 3-inch centers

Discharge Mode = Singulation Release

Drive end Straight = A = 150 feet

BTW Curves Straight = B = 30 feet

End Idler Straight = C = 50 feet

$F_1 = 2.18$

CPF = Curve Pull Factor

CPF = 60 for 2 foot-6 inch inside radius curves

CPF = 80 for "True Taper" radius curves with 2-inch carrier roller centers

CPF = 70 for "True Taper" curves with 3-inch, 4-inch and 6-inch carrier roller centers

$$F_2 = \frac{[150 + [1.06 \times 30] + [1.12 \times 50]}{150 + 30 + 50} = 1.034$$

N = 2

$$CP = 1.05 \times 230 \times 2.18 \times 1.034 + (30 \times 2) = 604$$

$$HP = \frac{604 \times 120}{29700} = 2.44$$

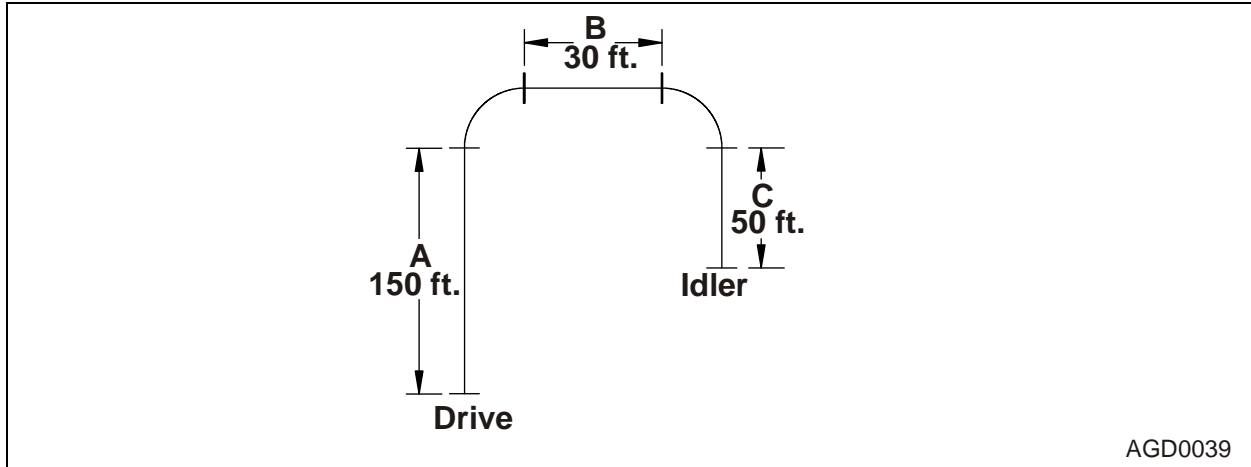


Figure 4 - 13 Intermediate Section with Curve Sections Example



5 Layout Dimensions

Frame Types

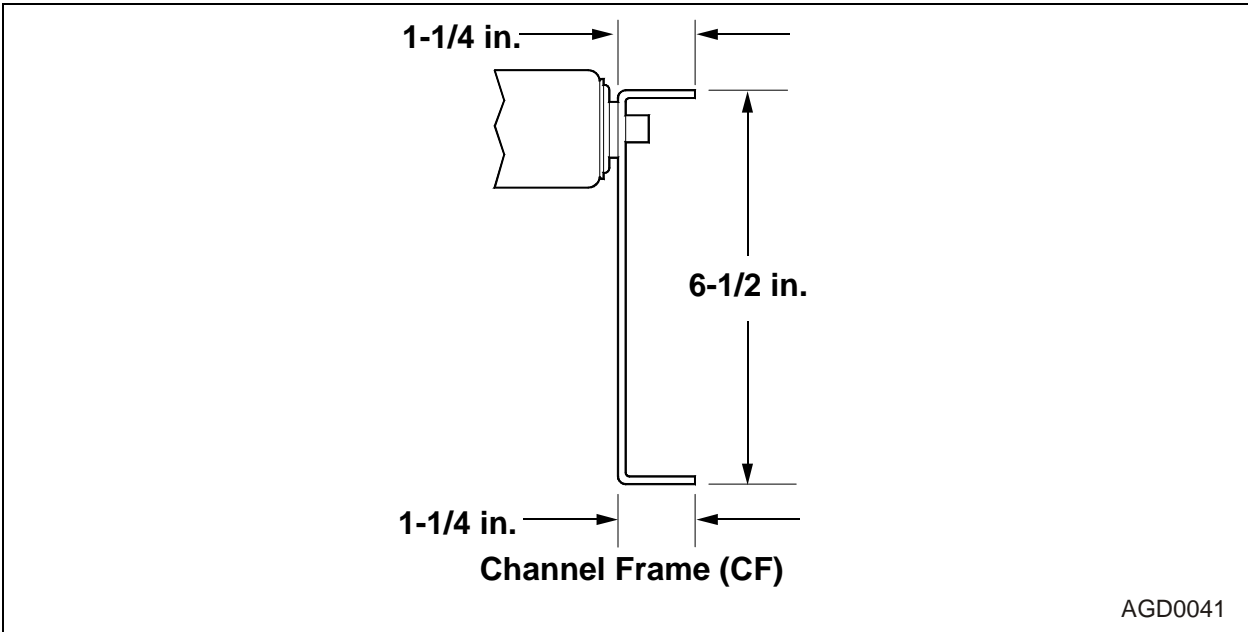


Figure 5 - 1 Frame Types

Drive Section - Standard

Drive Section - Standard

See Table 5 - 1 for Minimum Height Clearances, and Table 5 - 2 through Table 5 - 4 for Aisle Way Clearances.

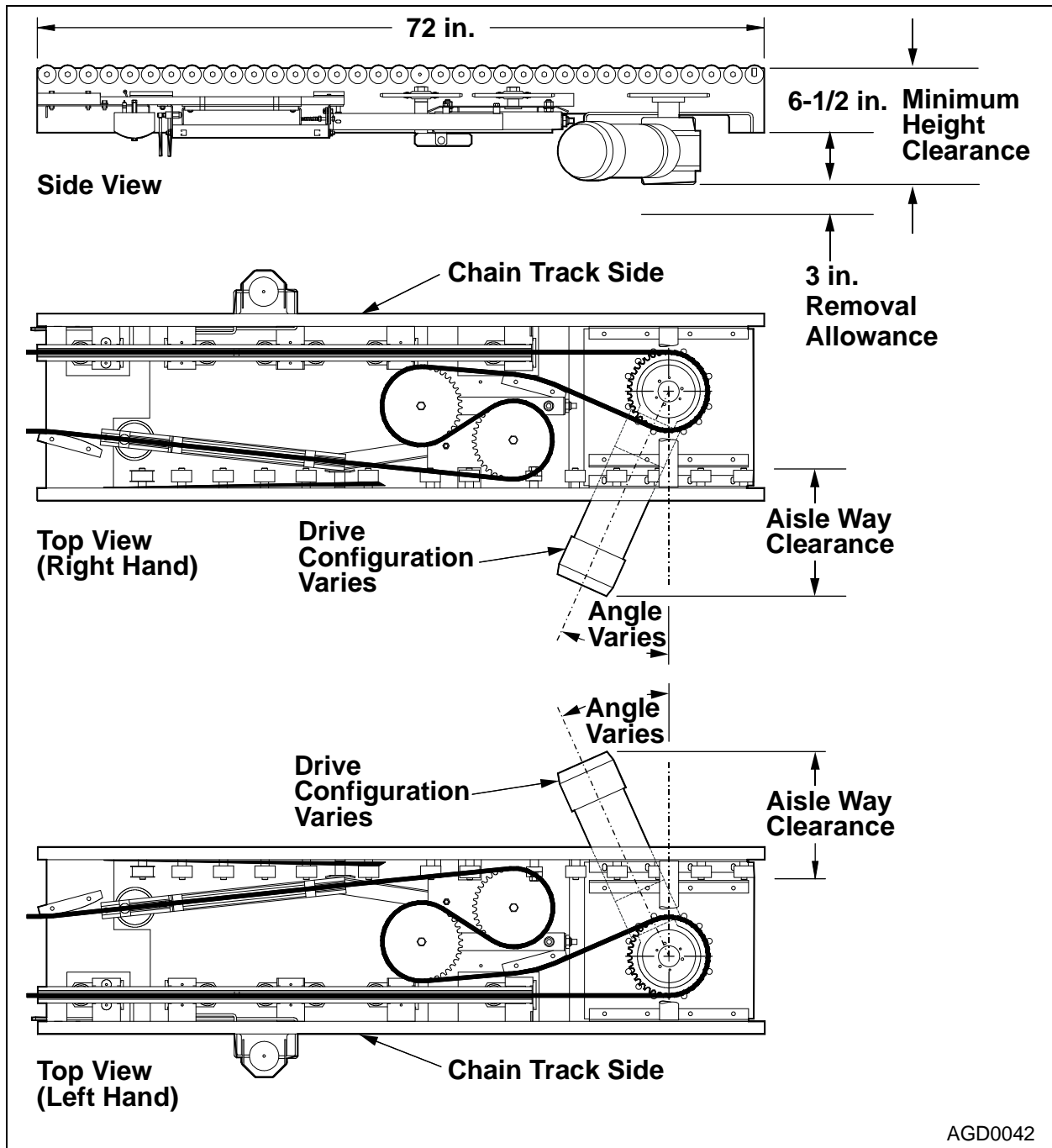


Figure 5 - 2 Drive Section - Standard: Clearances

Table 5 - 1 Dodge Reducer Minimum Height Clearances (in inches)

Dodge						
Reducer Style	202Q	26S	30S	35S	40S	C262
Minimum Height	13	13	--	--	--	--
	13	13	--	--	--	--
	13	13	14	--	--	--
	--	13	14	14	--	--
	--	--	15	15	--	15
	--	--	--	15	16	15

Table 5 - 2 Aisleway Clearance (in inches) - 16-inch Wide Conveyors with Dodge Gear Reducers

W=16	Dodge Reducer Model											
HP	202Q		26S		30S		35S		40S		C262	
	LH	RH	LH	RH	LH	RH	LH	RH	LH	RH	LH	RH
3/4	6	6	9	9	--	--	--	--	--	--	--	--
1	6	6	9	9	--	--	--	--	--	--	--	--
1 1/2	7	7	10	10	11	11	--	--	--	--	--	--
2	--	--	11	11	12	12	13	13	--	--	--	--
3	--	--	--	--	14	14	15	15	--	--	18	18
5	--	--	--	--	--	--	16	16	17	17	18	18

Table 5 - 3 Aisleway Clearance (in inches) - 22-inch Wide Conveyors with Dodge Gear Reducers

W=22	Dodge Reducer Model											
HP	202Q		26S		30S		35S		40S		C262	
	LH	RH	LH	RH	LH	RH	LH	RH	LH	RH	LH	RH
3/4	0	0	3	3	--	--	--	--	--	--	--	--
1	0	0	3	3	--	--	--	--	--	--	--	--
1 1/2	1	1	4	4	5	5	--	--	--	--	--	--
2	--	--	5	5	6	6	7	7	--	--	--	--
3	--	--	--	--	8	8	9	9	--	--	12	12
5	--	--	--	--	--	--	10	10	11	11	12	12

Table 5 - 4 Aisleway Clearance (in inches) - 28-inch Wide Conveyors with Dodge Gear Reducers

W=28	Dodge Reducer Model											
	202Q		26S		30S		35S		40S		C262	
	LH	RH	LH	RH	LH	RH	LH	RH	LH	RH	LH	RH
3/4	0	0	0	0	--	--	--	--	--	--	--	--
1	0	0	0	0	--	--	--	--	--	--	--	--
1 1/2	0	0	0	0	0	0	--	--	--	--	--	--
2	--	--	0	0	0	0	1	1	--	--	--	--
3	--	--	--	--	2	2	3	3	--	--	6	6
5	--	--	--	--	--	--	4	4	5	5	6	6

Drive Section - High Speed

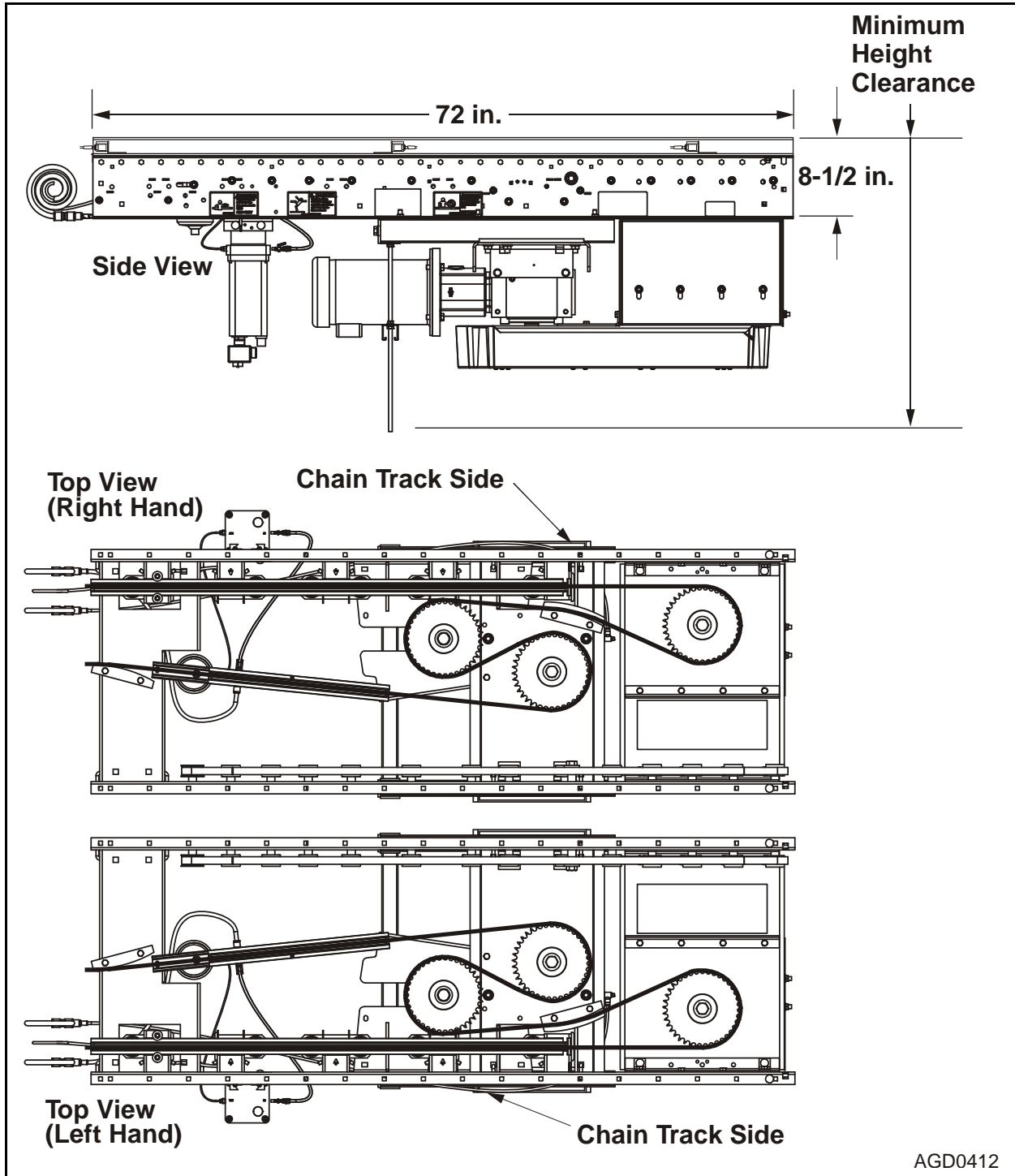


Figure 5 - 3 Drive Section - High Speed: Clearances

Drive Section - Side Mounted

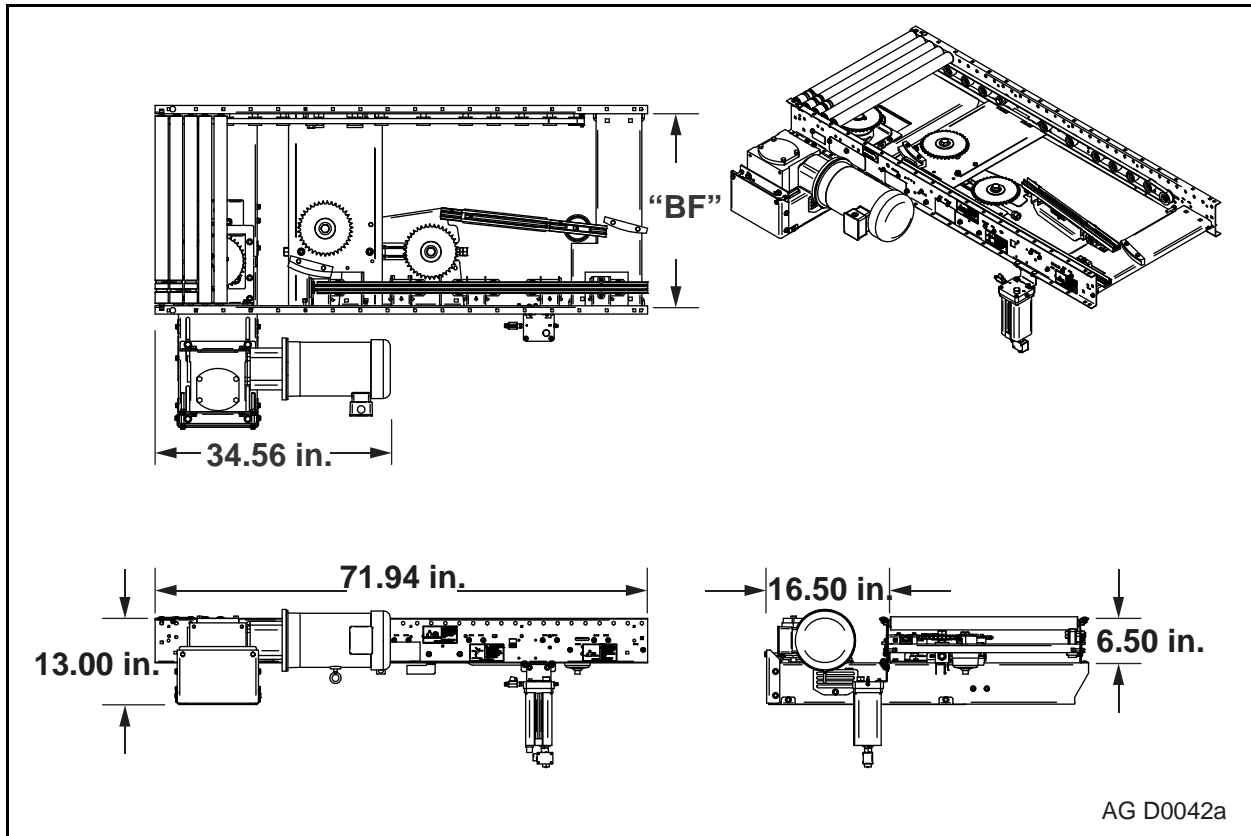


Figure 5 - 4 Drive Section - Side Mounted Clearances

Intermediate Sections

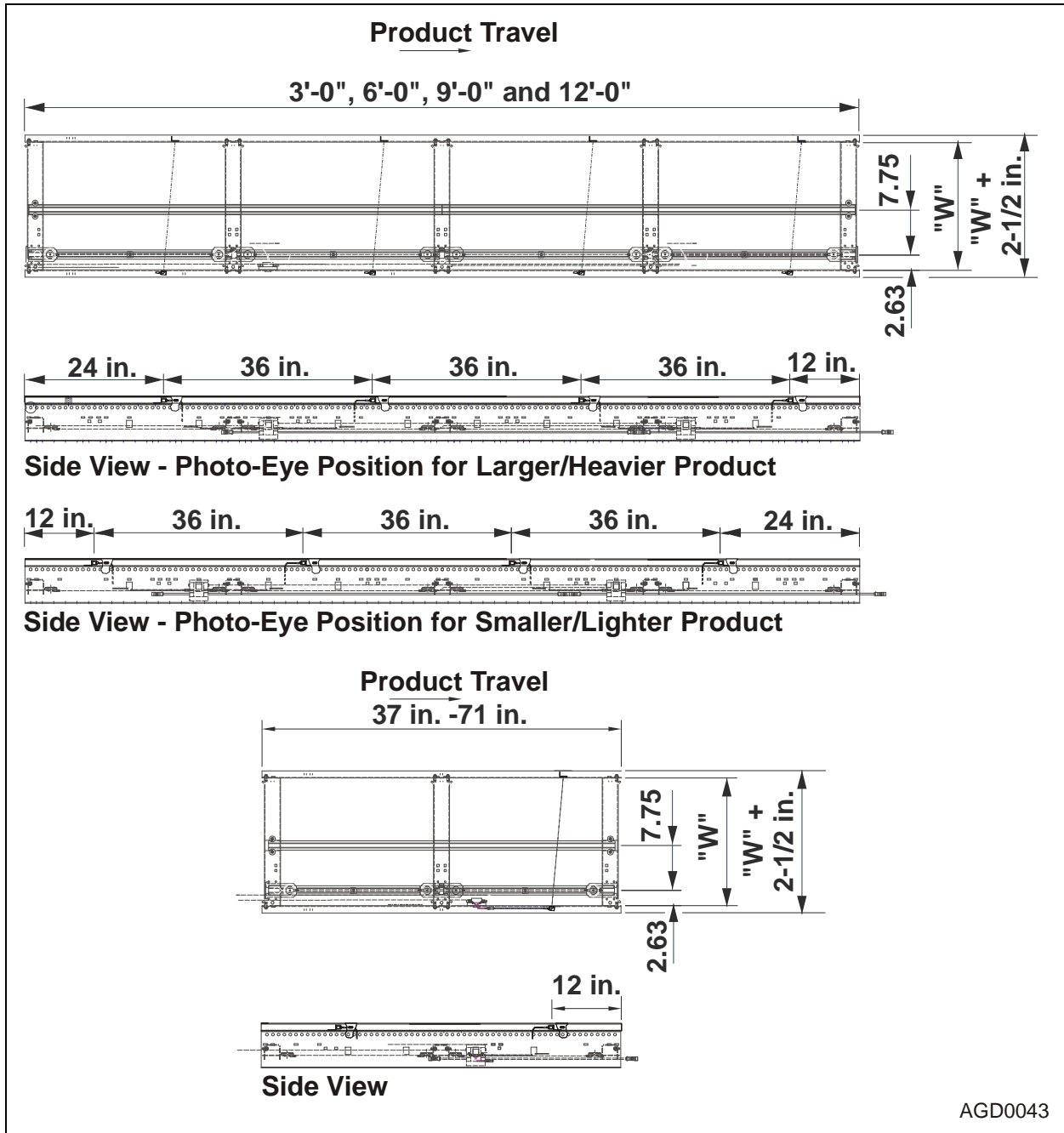
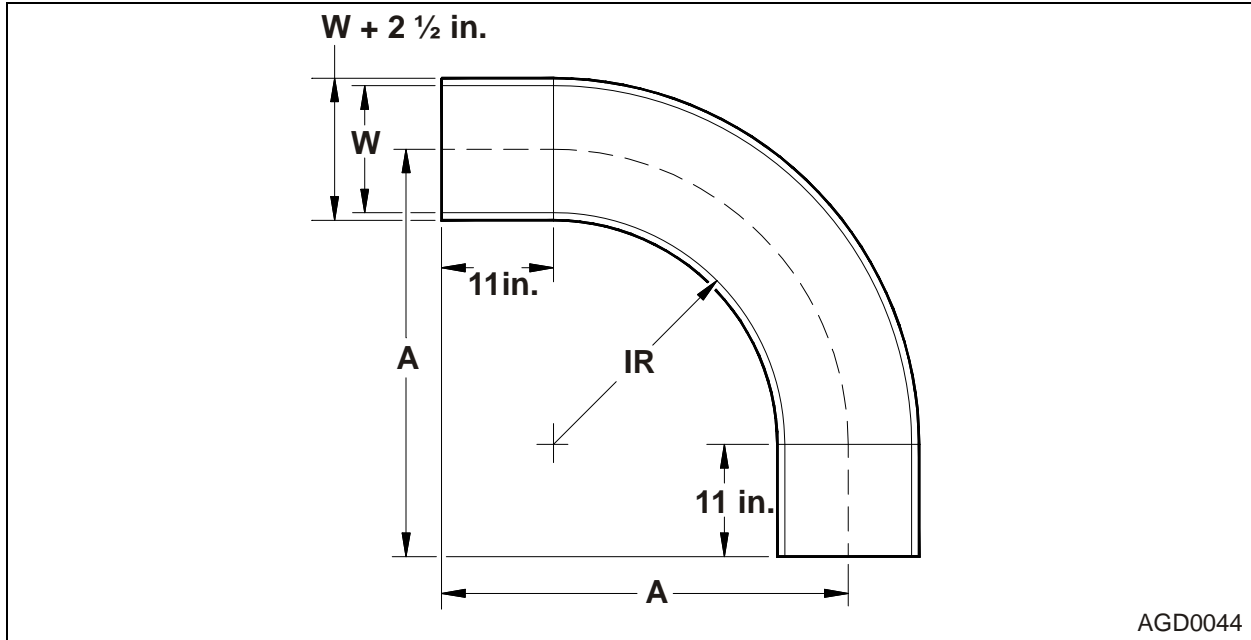


Figure 5 - 5 Intermediate Section Layouts

Curve Sections

90° Curve



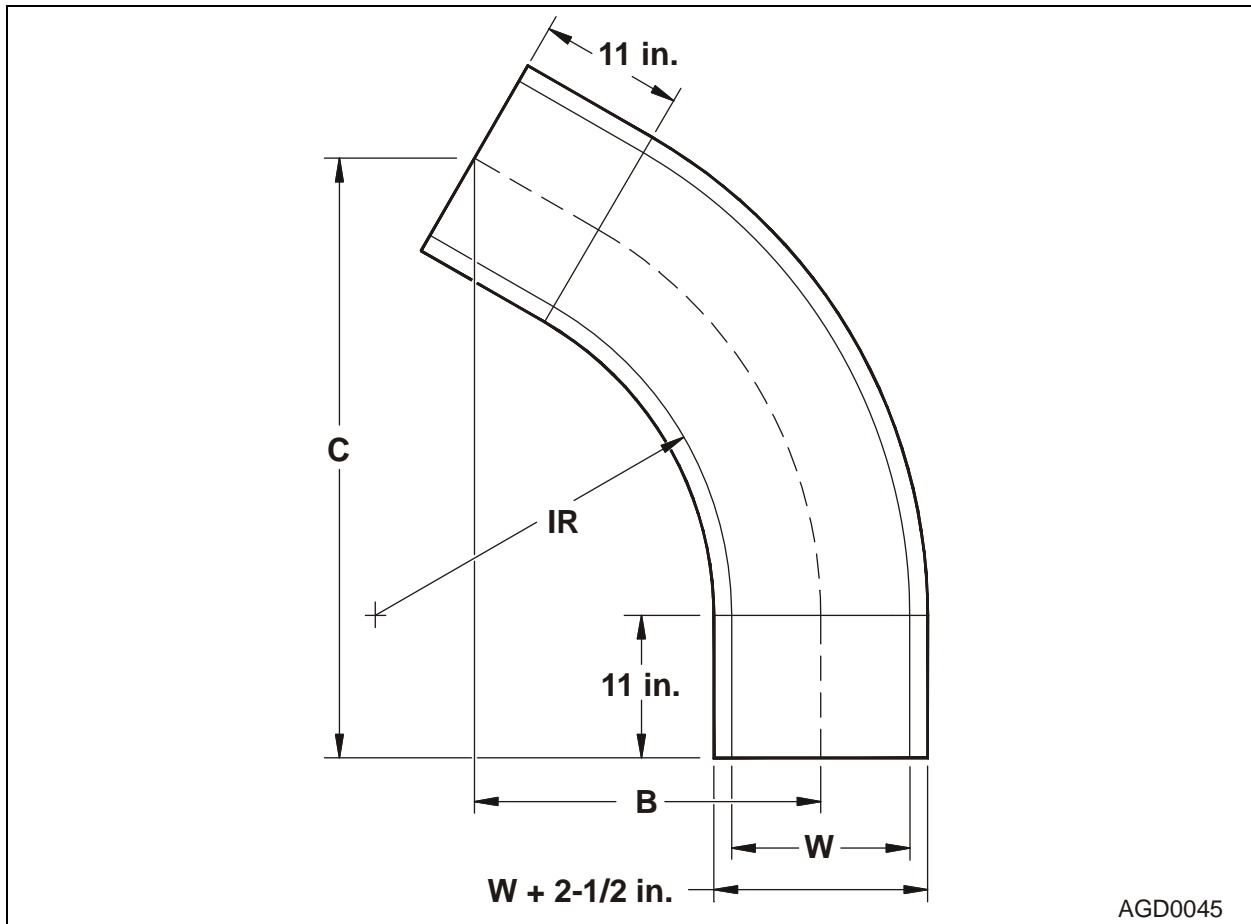
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Figure 5 - 6 90° - Curve Section

Table 5 - 5 90° Curve

"W"	Standard		True Taper	
	IR	A	IR	A
16 inches	30 inches	49 inches	30 inches	49 inches
22 inches	30 inches	52 inches	40 inches	62 inches
28 inches	30 inches	55 inches	50 inches	75 inches
34 inches	30 inches	58 inches	60 inches	88 inches
40 inches	30 inches	61 inches	60 inches	91 inches

60° Curve



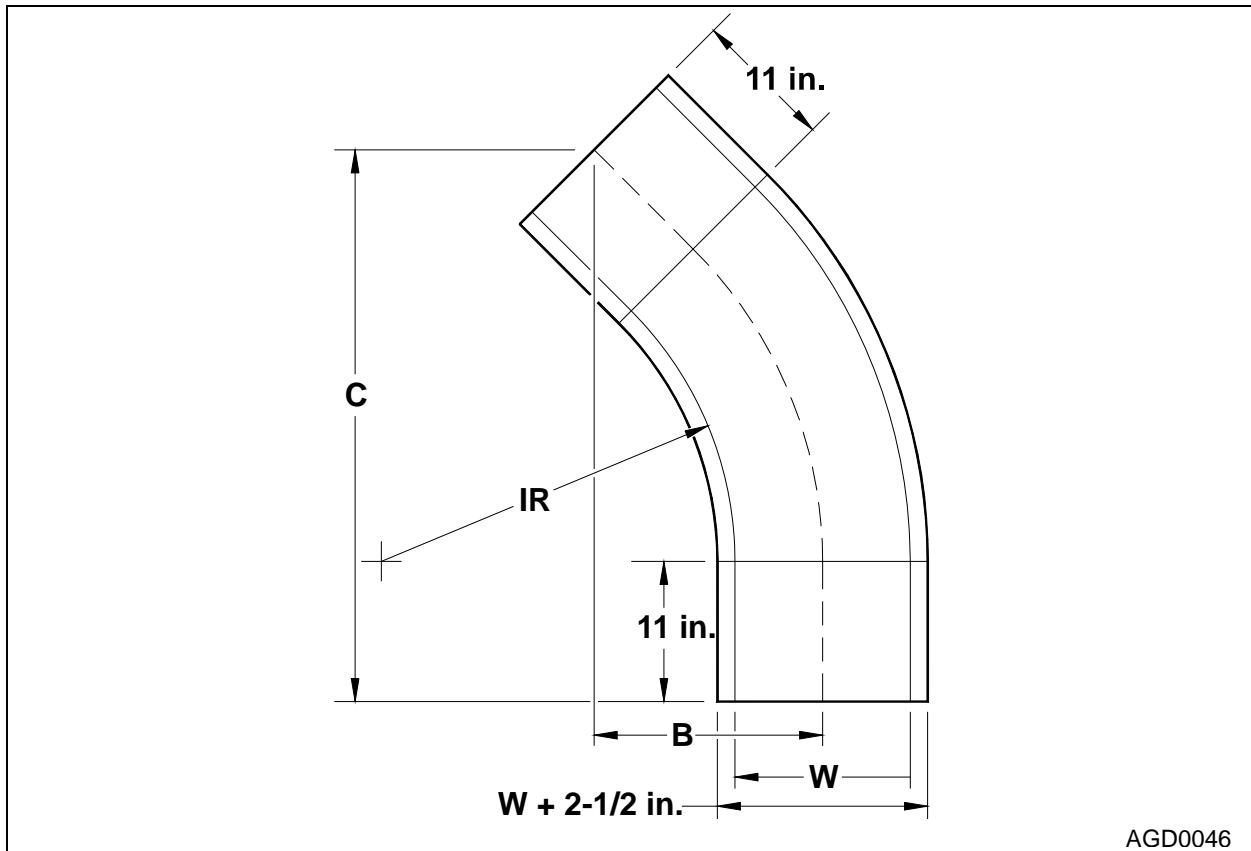
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Figure 5 - 7 60° - Curve Section

Table 5 - 6 60° Curve

"W"	Standard			True Taper		
	IR	B	C	IR	B	C
16 inches	30 inches	28-1/2 inches	49-7/16 inches	30 inches	28-1/2 inches	49-7/8 inches
22 inches	30 inches	30 inches	52 inches	40 inches	36-1/2 inches	63-3/16 inches
28 inches	30 inches	31-1/2 inches	54-5/8 inches	50 inches	41-9/16 inches	71-15/16 inches
34 inches	30 inches	33 inches	57-3/16 inches	60 inches	48-1/2 inches	85 inches
40 inches	30 inches	34-1/2 inches	59-3/4 inches	60 inches	51-1/2 inches	89-3/16 inches

45° Curve



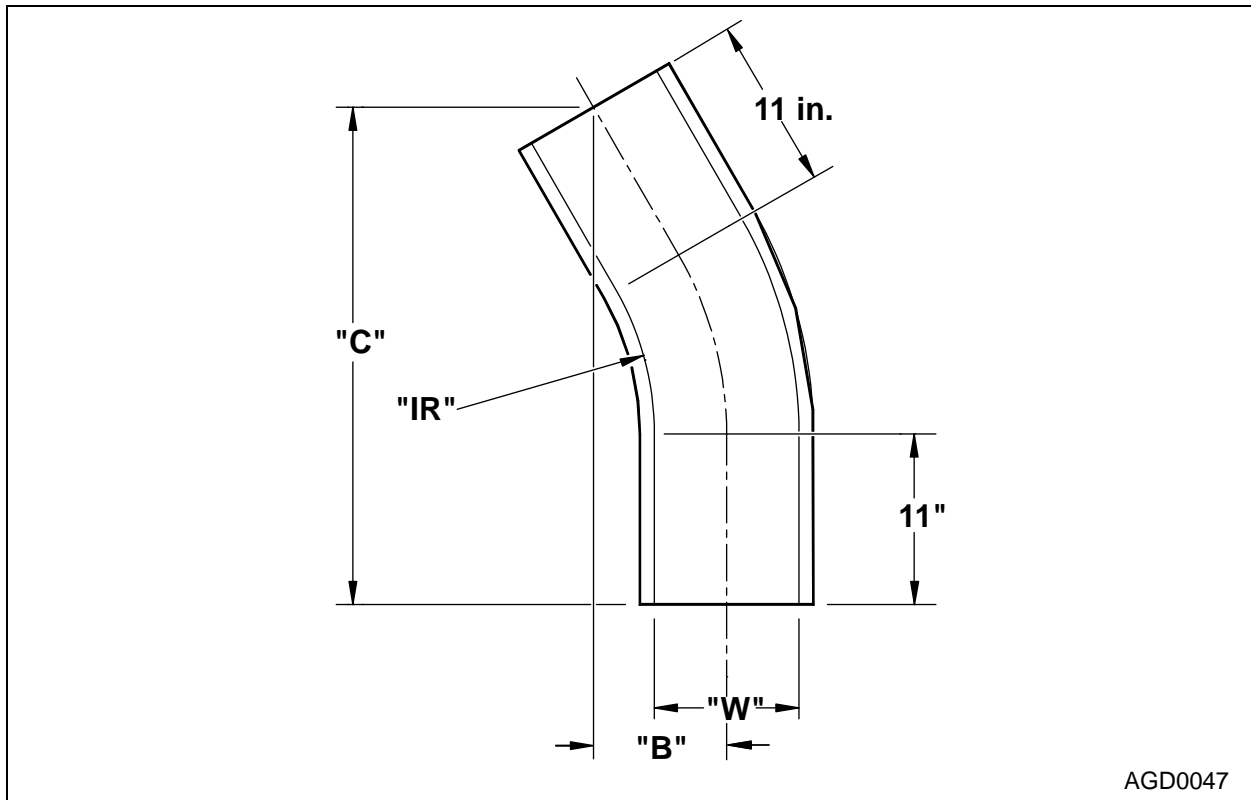
AGD0046

Figure 5 - 8 45° - Curve Section

Table 5 - 7 45° Curve

"W"	Standard			True Taper		
	IR	B	C	IR	B	C
16 inches	30 inches	18-15/16 inches	45-5/8 inches	30 inches	18-15/16 inches	45-5/8 inches
22 inches	30 inches	19-13/16 inches	47-3/4 inches	40 inches	23-9/16 inches	56-7/8 inches
28 inches	30 inches	20-11/16 inches	49-7/8 inches	50 inches	26-9/16 inches	64-1/16 inches
34 inches	30 inches	21-9/16 inches	52 inches	60 inches	30-5/8 inches	73-15/16 inches
40 inches	30 inches	22-7/16 inches	54-1/8 inches	60 inches	32-3/8 inches	78-1/8 inches

30° Curve



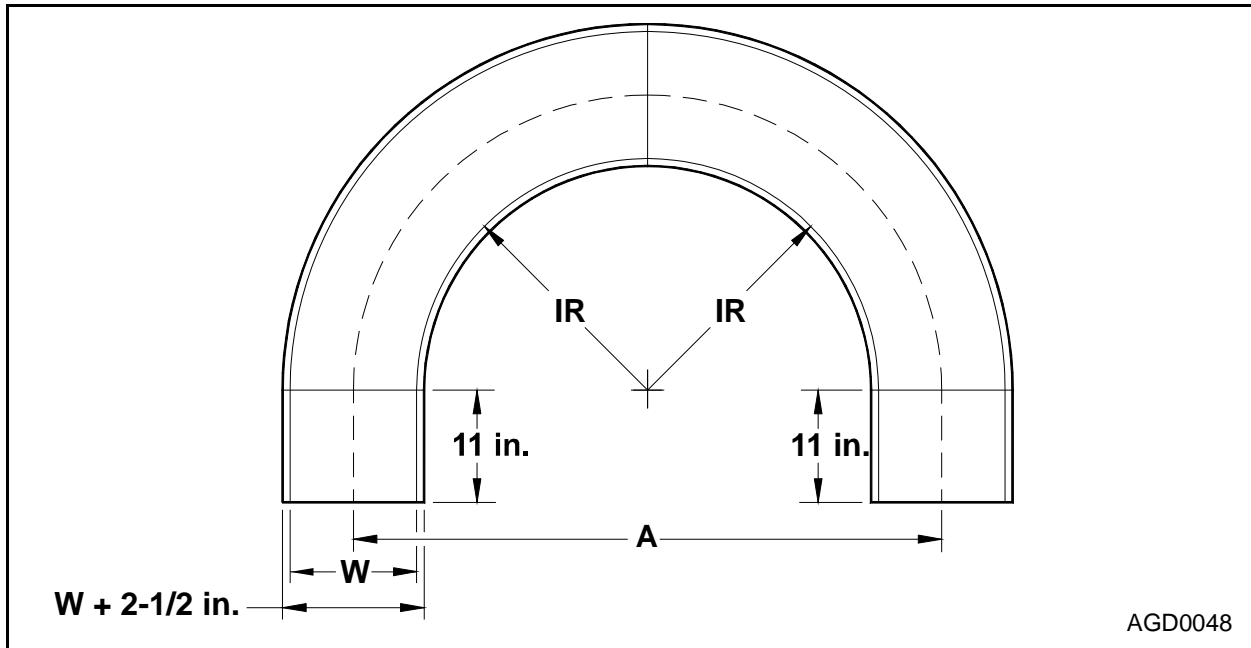
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Figure 5 - 9 30° - Curve Section

Table 5 - 8 30° Curve

"W"	Standard			True Taper		
	IR	B	C	IR	B	C
16 inches	30 inches	10-9/16 inches	39-1/2 inches	30 inches	10-9/6 inches	39-12 inches
22 inches	30 inches	11 inches	41 inches	40 inches	12-3/4 inches	47-1/2 inches
28 inches	30 inches	11-3/8 inches	42-1/2 inches	50 inches	14-1/16 inches	52-9/16 inches
34 inches	30 inches	11-13/16 inches	44 inches	60 inches	15-15/16 inches	59-1/2 inches
40 inches	30 inches	12-3/16 inches	45-1/2 inches	60 inches	16-3/4 inches	62-1/2 inches

180° Curves



AGD0048

Figure 5 - 10 180° - Curve Sections

Table 5 - 9 180° Curve

"W"	Standard	True Taper
	A	A
16 inches	76 inches	76 inches
22 inches	82 inches	102 inches
28 inches	88 inches	128 inches
34 inches	94 inches	154 inches
40 inches	100 inches	160 inches

Intermediate Merge Section

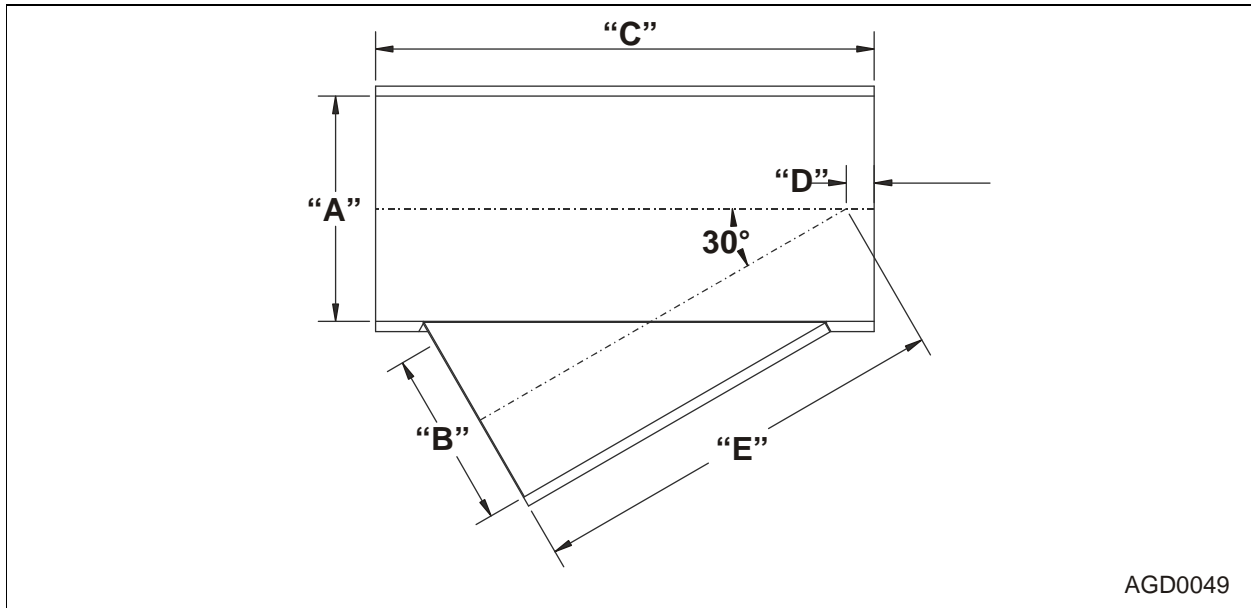


Figure 5 - 11 30° - Intermediate Merge Section

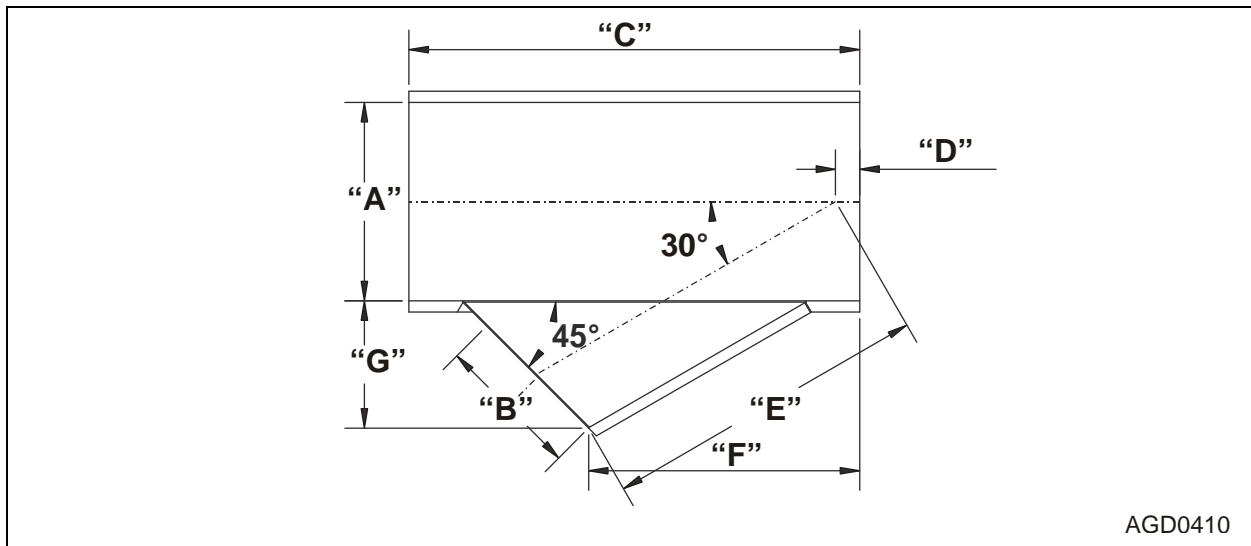


Figure 5 - 12 45° - Intermediate Merge Section

Table 5 - 10 Intermediate Merge Section Dimensions (in inches)

Dim.	30 Degree Merge (Figure E-9)				45 Degree Merge (Figure E-10)			
"A"	22	28	34	40	22	28	34	40
"B"	16	22	28	34	16	22	28	34
"C"	50	62	74	86	50	62	74	86
"D"	2.677	3.481	4.285	5.089	2.677	3.481	4.285	5.089
"E"	41.484	52.680	63.876	75.072	36.288	45.522	55.141	64.729
"F"	N.A.	N.A.	N.A.	N.A.	30.082	37.690	45.297	52.905
"G"	N.A.	N.A.	N.A.	N.A.	14.109	18.501	22.893	27.286

End Idler Section

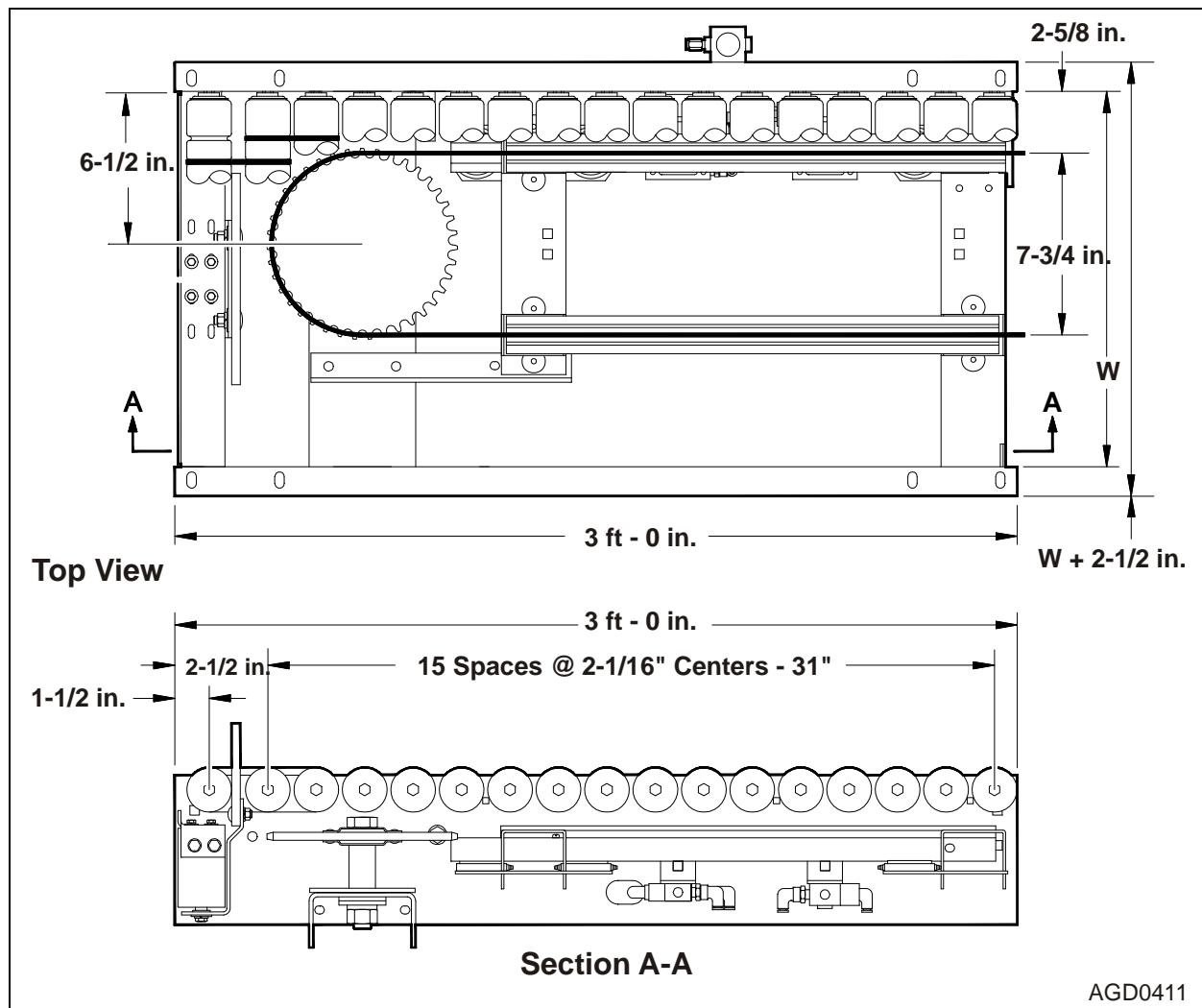


Figure 5 - 13 End Idler Section





6 Controls

This chapter contains descriptions of the control components, how they work, and how to maintain and replace them.

Operational-Zone Control

Accuglide Intermediate Straight Sections consist of a series of air-actuated, operational-zones. Each Local Operational-Zone (LZ) has low-pressure (10-12 psi) air-actuators that raise/lower the drive chain/pad and track to effect its powered (transportation) / non-powered (accumulation) state, see Figure 6 - 1.

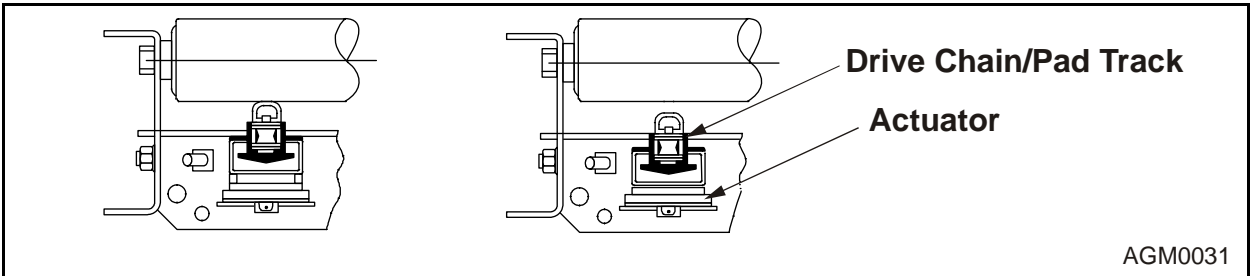


Figure 6 - 1 Drive Chain/Pad and Track - Raised (left), Lowered (right)

Sequential-Zone Control (SZC)

Sequential-Zone Control is the standard for 3-foot Intermediate Straight Section zones. The powered / non-powered state of each operational zone (Local Zone) (Figure 6 - 2) is controlled by the downstream sensor (DS1).

When sensor DS1 detects product, the actuators in the Local Zone lower the drive chain/pad out of roller engagement.

When sensor DS1 no longer senses product, the actuators raise the drive chain/pad into roller engagement in the Local Zone.

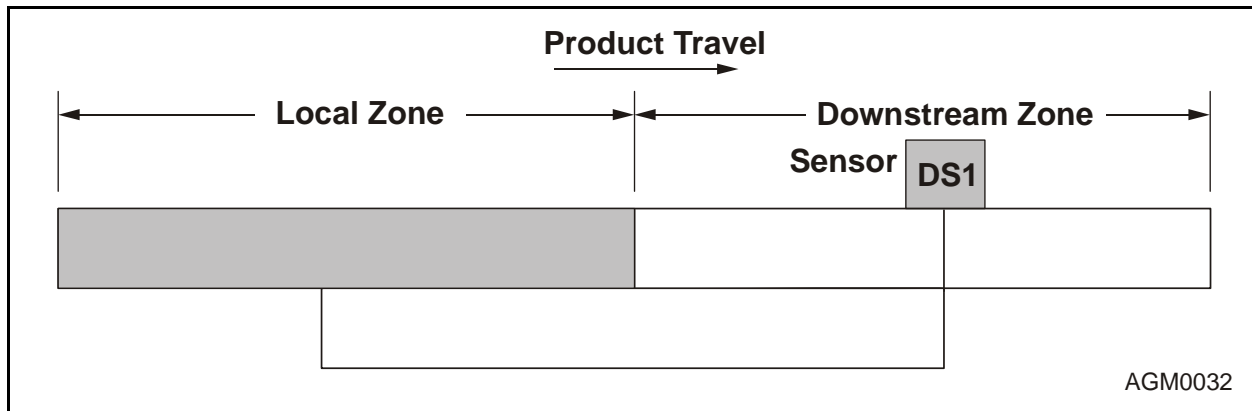


Figure 6 - 2 Sequential-Zone Control

Local-Zone Control (LZC)

Local Zone Control is the standard for 6-foot Intermediate Straight Section zones. The powered / non-powered state of each operational zone (Local Zone) (Figure 6 - 3) is controlled by the sensor (LS1) located in the same zone that it controls.

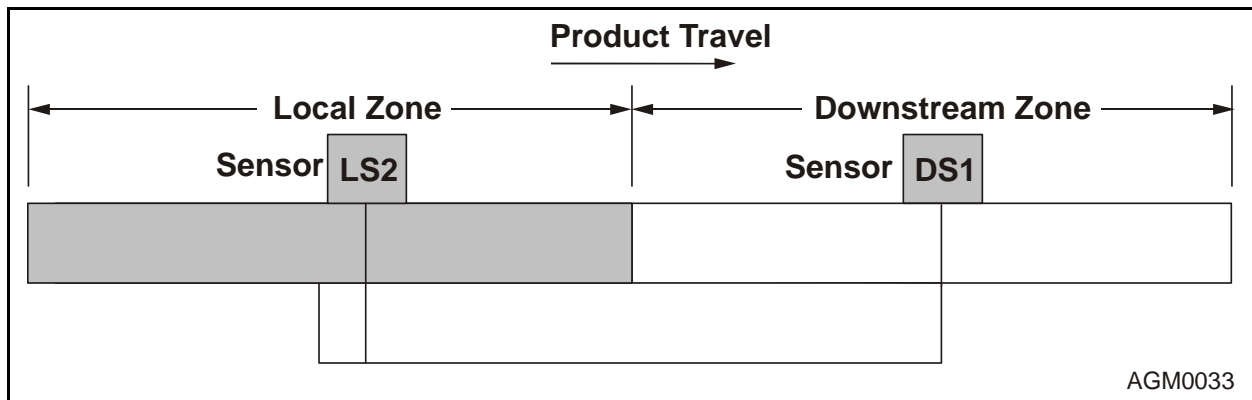


Figure 6 - 3 Local Zone Control

Operational Mode

An operational mode can be primary or secondary. The primary mode is the default operational mode. It can be temporarily overridden for specific operations by the secondary mode. The secondary operational mode is activated by a signal from the control panel. It is commonly used for slug mode in ordebr to achieve higher product release rates.

Operational Mode - Singulation

Singulation is a primary operational-mode in which a Local-Zone's powered / non-powered state is controlled by its associated Downstream Sensor (DS). Accumulated product releases and transports with a nominal zone-length gap between products. See to Figure 6 - 4.

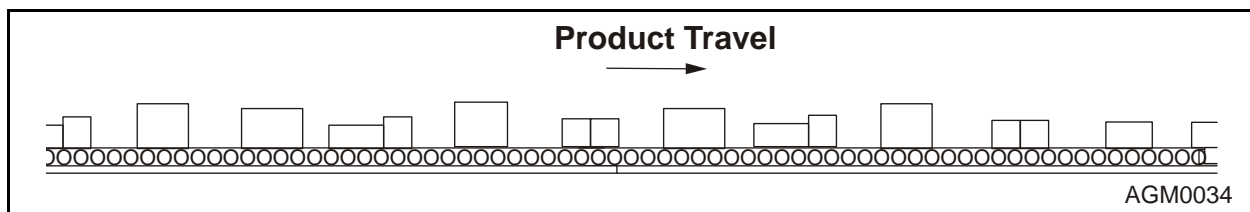


Figure 6 - 4 Singulation Operational Mode

Operational Mode - Auto Slug

Auto-Slug is a primary operational-mode in which a Local-Zone's powered / non-powered state is controlled by: 1) its associated downstream sensor (DS); and 2) the powered / non-powered state-of the next Downstream-Zone (DZ).

An extended-length auto-slug grouping of accumulated product will release and transport with a zone-length (nominal 3-foot) gap between groups.

The extended auto-slug group length can be any desired length, up to the full length of the conveyor. See to Figure 6 - 5.

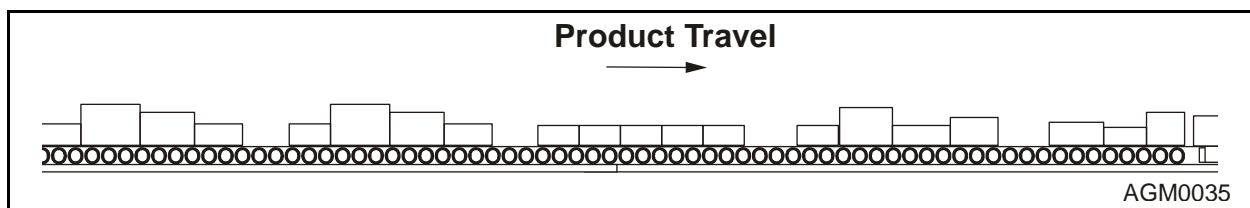


Figure 6 - 5 Auto-Slug Operational Mode

Operational Mode - Dual-Zone

Dual-Zone is a primary operational-mode in which a Local-Zone's powered / non-powered state is controlled by: 1) its associated Downstream-Sensor (DS1) mounted in the first Downstream-Zone; and 2) the second Downstream-Sensor (DS2) mounted in the second Downstream-Zone.

Accumulated product will release and transport with a zone-length (nominal 3 feet long) zero gap between product groupings (nominal 6 feet long). See to Figure 6 - 6.

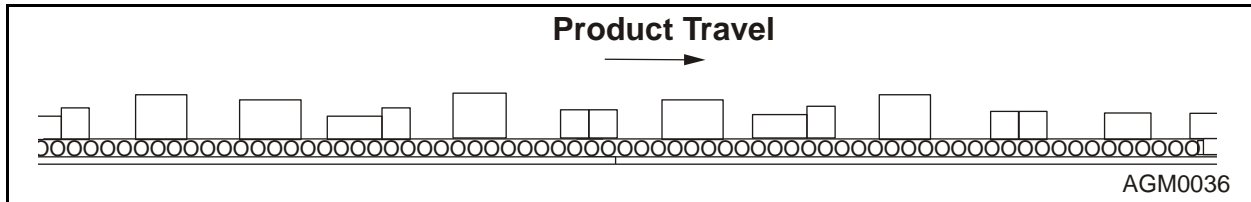


Figure 6 - 6 Dual-Zone Operational Mode

Operational Mode - Slug

Slug is an operational-mode in which the primary operational-mode is over-ridden by an external slug-release signal.

In slug operational-mode, all zones operate in the powered state.

“Slug” is a “secondary” operational mode that can be used with any of the primary operational-modes. Any portion of an Accuglide Conveyor can operate in the slug operational-mode. See to Figure 6 - 7.

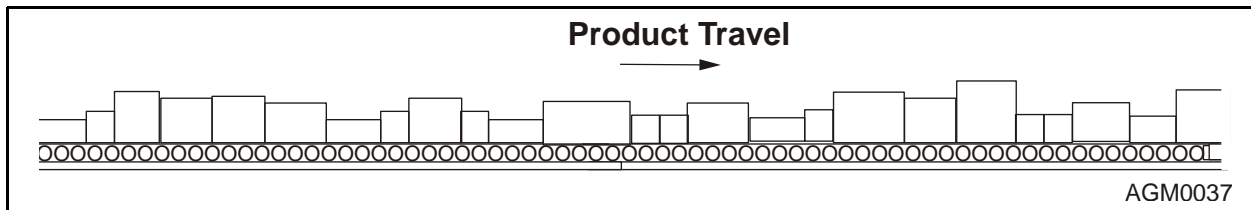


Figure 6 - 7 Slug Operational Mode

Functional Mode

Functional Mode - Accumulation

All primary operational modes allow product to accumulate in the same manner. A first product transports downstream until it reaches the discharge-end of the conveyor. As it coasts to a stop in the 1st non-powered zone, it actuates the zone's sensor and signals the 2nd upstream zone to become non-powered and ready to accept the next product. This process repeats as succeeding products continue to advance and accumulate.

A brake-type device ensures that accumulated product(s) in the 1st zone are not nudged by trailing product onto the take-away conveyor. A Brake-Module, or Blade Stop can be installed in the Discharge Idler Section or a separate Brake Belt Conveyor can be located downstream of the conveyor. See to Figure 6 - 8.

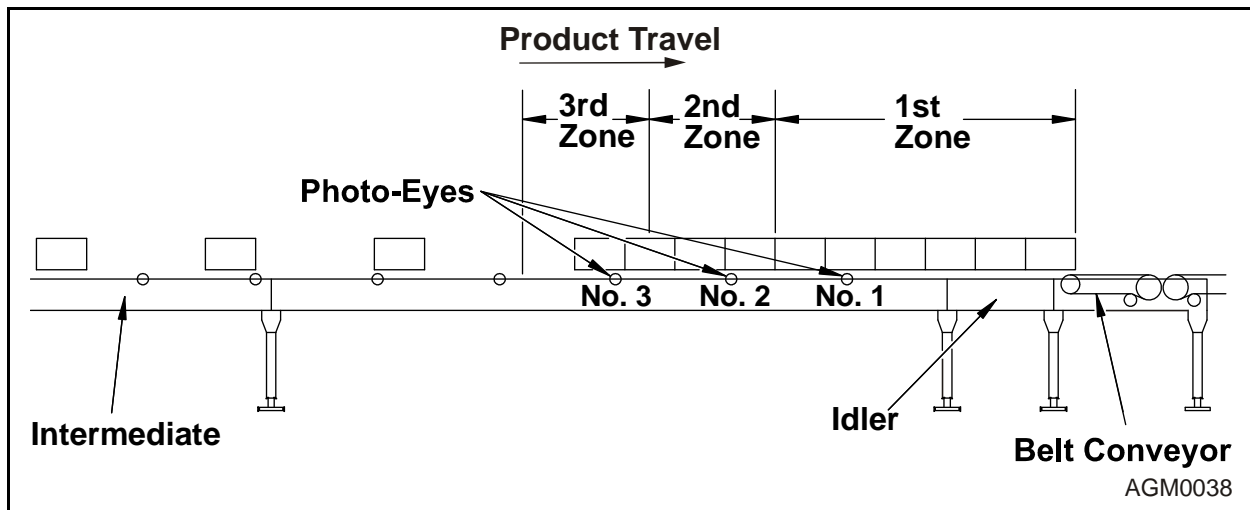


Figure 6 - 8 Accumulation of Product

Accumulation Control - End of Conveyor

Initiating product-accumulation in the conveyor's first Discharge-Zone (Idler) is accomplished by de-activating (closing) the zone's solenoid-type control valve and changing its operational state from powered to non-powered and allowing product to coast to a stop.

Restraining means should be provided to keep accumulated product from being nudged forward onto the downstream take-away conveyor.

A brake-type Belt Conveyor is commonly used as the restraining means. The conveyor and the Discharge-Zone's control means are electrically-linked. When accumulation is required, the Belt Conveyor stops and the Discharge-Zone becomes non-powered; when product release is required, the Belt Conveyor starts and the Discharge-Zone becomes powered. The belt speed will determine the amount of product released. A brake/meter type Belt Conveyor will generate a gap that allows for individual products to be counted and/or released. See to Figure 6 - 9.

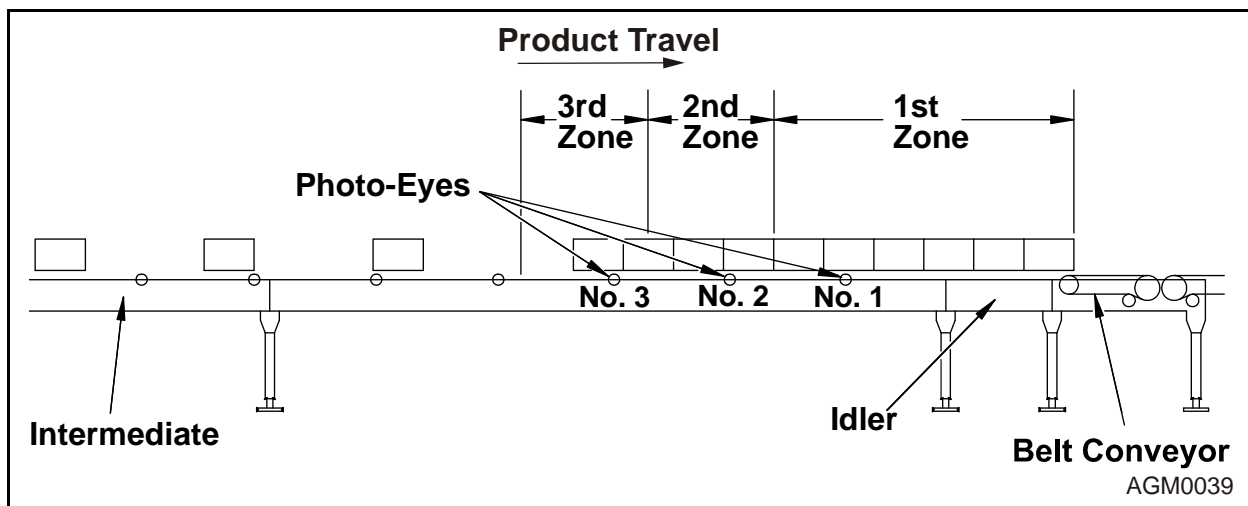


Figure 6 - 9 Accumulation Control - Brake/Meter-Type Belt Conveyor

Brake-Modules are other means for controlling the accumulation of product at the conveyor's discharge-end.

A Brake-Module raises to frictionally-brake and stop the rotation of the Carrier Rollers in the Discharge-Zone. The unit is controlled by the zone's solenoid-type control valve. No other air-supply or control device is required. The Brake-Module is not a positive-type holding device.

Accumulation Control - Intermediate

An application may require the accumulation of product at various points along the conveyor's length. Such applications might include work stations, inspection stations, product batch separation, and traffic-control ahead of Intermediate Curve Sections and/or Intermediate Merge Sections.

NOTE: Brake Modules are used for this type of accumulation control. See Accessories chapter for information about Brake Modules.

Accumulation Control - Curves

Intermediate Curve Sections are Transportation-type and have continuously-powered Carrier Rollers. A Brake Module (Figure 6 - 10) is required to stop upstream product from entering the curve when operational zones downstream of curve are filled with accumulated product. Upstream product is stopped when product accumulates to a full-line sensor (typically 12 feet downstream of curve to allow product to clear the curve and accumulate. (See topic "Accumulation Control - End of Conveyor" in this chapter.

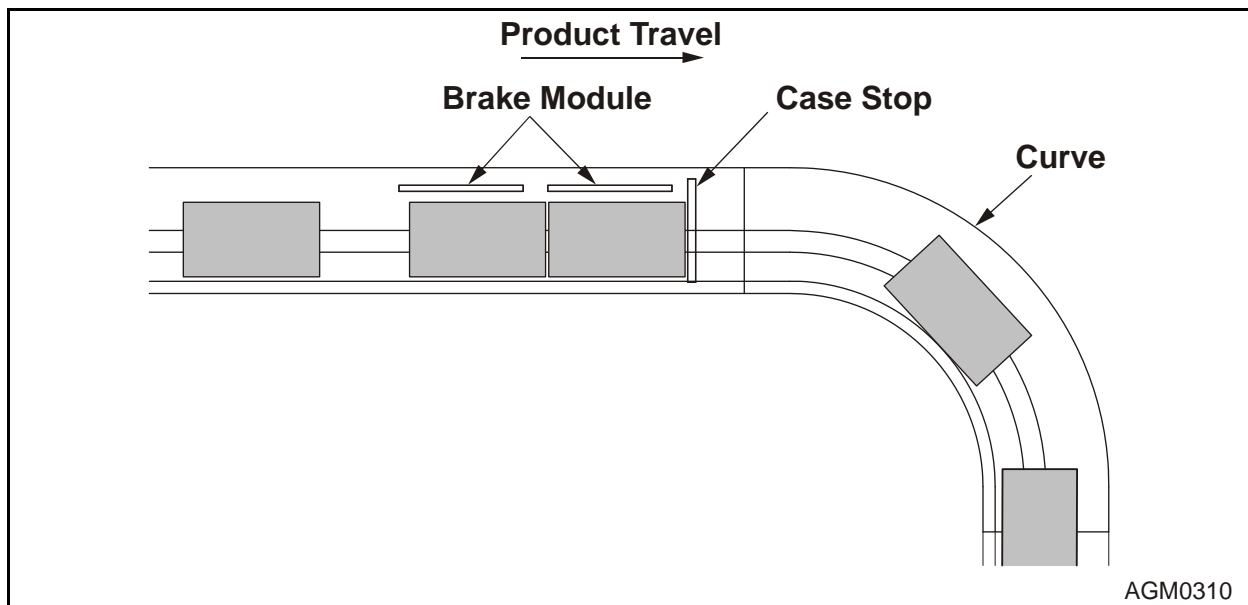


Figure 6 - 10 Accumulation Control - Curves

Functional Mode - Product Release

Initiating product release from the conveyor is accomplished by supplying a release-signal to the Discharge-Zone's solenoid-type control valve and changing its operational state from non-powered to powered, causing product in the zone to resume forward movement.

Product Release Control - Primary Operational Mode

The primary mode is the default operational mode. It can be overridden in places by the secondary mode. Intermediate Sections are shipped from the factory programmed to function in the standard primary operational-mode (Singulation). If required, they may be field-programmed to function in one of the other primary operational-modes (Dual-Zone, or Auto-Slug).

Product Release Control - Secondary Operational Mode

The secondary operational mode is activated by a signal from the control panel. It temporarily overrides the primary operational mode for specific operations. It is commonly used for slug mode in order to achieve higher product release rates. The slug mode causes the rollers to be powered continuously.

Solenoid Valve for Operational Zone Control

The powered / non-powered state of the conveyor's Discharge Zone is controlled by a solenoid-valve (24VDC/115VAC, 3-way, normally-closed). The valve is factory-piped to the air-actuators of the operational-zone in the Idler Section (Figure 6 - 11). One end of a short length of (yellow, 1/4-inch OD) tubing is attached to the second port of the "rear" actuator. To replace/reinstall of the solenoid valve:

1. Connect the "other" end of the yellow tubing to the first air-actuator in the adjoining upstream intermediate section. This creates the first 6-foot discharge zone.
2. Wire the solenoid valve to the system control panel.
3. Connect the air supply line (yellow, 1/4-inch OD) of the zone-controlling solenoid-valve to the upstream intermediate section's main air-supply line (red).

NOTE: The Intermediate Section requires a brass 1/2-inch to 1/4-inch push-to-connect reducer and a 1/2-inch push-to-connect type fitting.

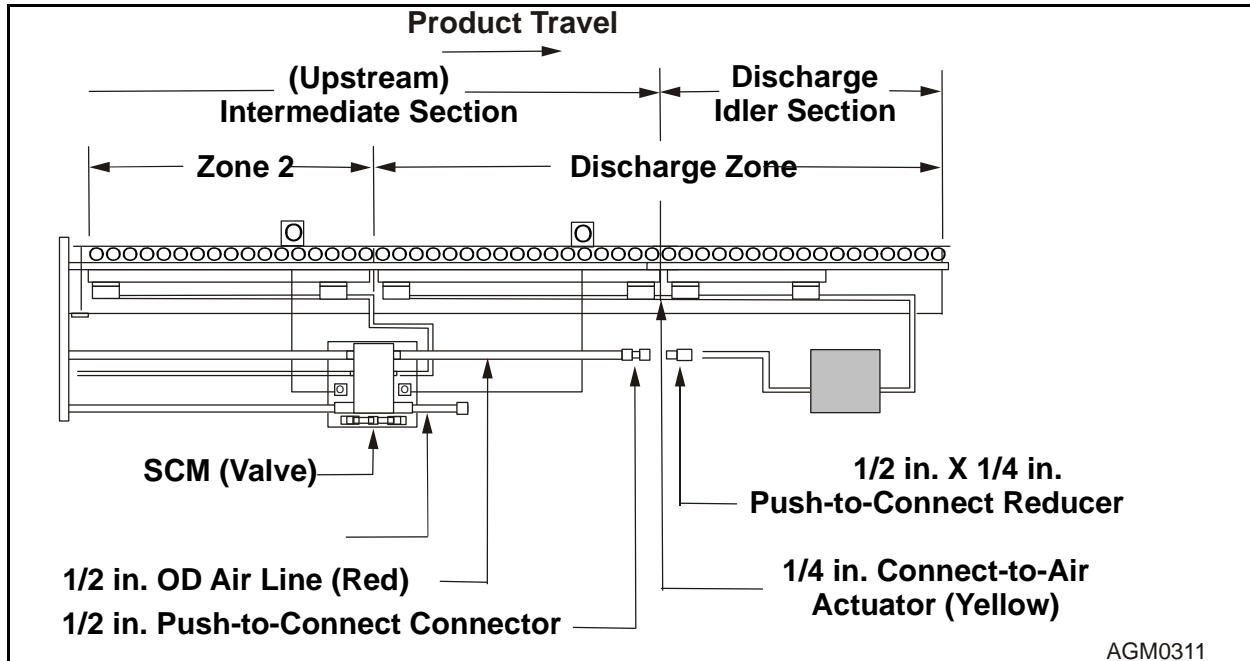


Figure 6 - 11 Operational Zone Control-Solenoid Valve Piping

A Solenoid Control Module (SCM) (Figure 6 - 12) incorporates two (2) 24VDC solenoid valves and the associated logic for controlling two (2) independent operational zones.

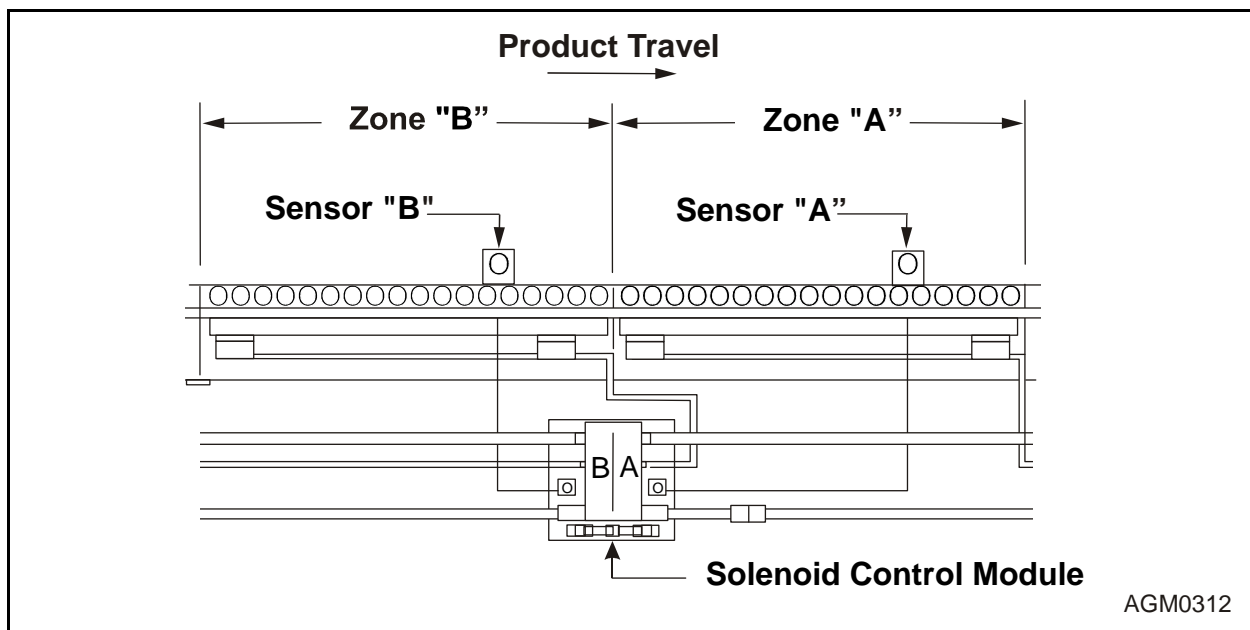


Figure 6 - 12 Solenoid Control Module - Controls Two Operational Zones

The primary operational-mode (Singulation, Dual-Zone, or Auto Slug) of a Local Zone (LZ) is determined by its controlling solenoid valve, whose logic is programmed by the setting of the next downstream valve's Operational Mode Switch (OMS).

For this example (Figure 6 - 13), set the operation mode at OMS "a" to signal valve "b" which controls Local Zone "a". See Figure 6 - 14 and Table 6 - 1 for Operational Mode Switch Position information.

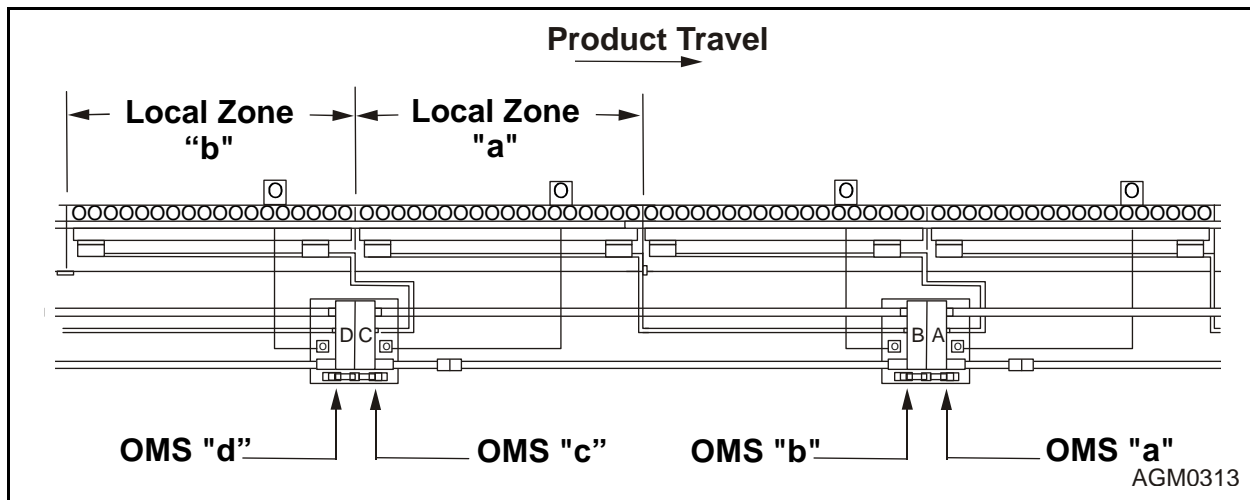


Figure 6 - 13 Local Zone Control-Setting Solenoid Valve Zone Control

Solenoid Control Module Switch Functions

Each SCM (Figure 6 - 14) has three (3) slide switches: one centrally-located, 2-position "direction of travel" slide switch; and two 3-position primary "operational-mode" slide switches. See to Table 6 - 1 for a description of the switch functions.

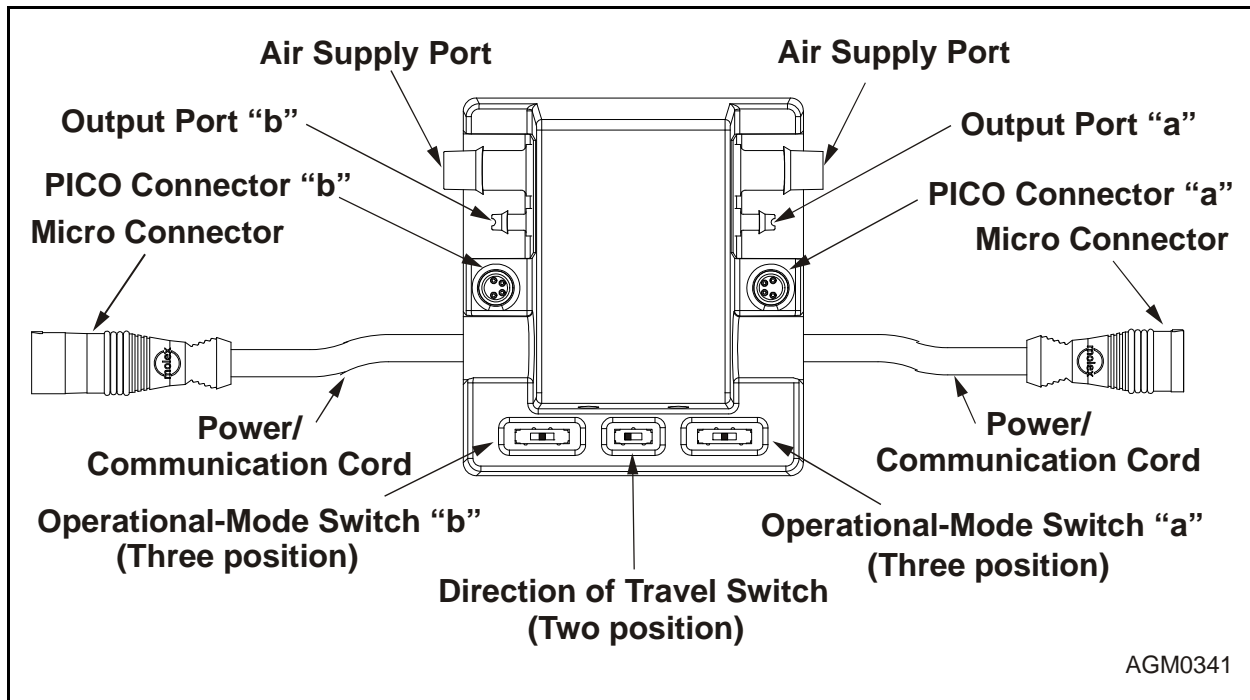


Figure 6 - 14 Solenoid Control Module (SCM) Switch Locations

Table 6 - 1 Solenoid Control Module (SCM) Switch Descriptions

Switch Description	Switch Position		
	Left	Center	Right
Operational-Mode Switch “b”	Dual Zone	Singulation	Auto-Slug
Direction of Travel (DOT) Switch	for “Right-Hand (RH)” sections ^a	N/A	for “Left-Hand (LH)” sections ^b
Operational-Mode Switch “a”	Dual Zone	Singulation	Auto-Slug

- a. For RH sections, mount the SCM on the right-side frame rail, when looking in the direction of travel. Shift the DOT switch to the left-towards the discharge end of the conveyor.
- b. For LH sections, mount the SCM on the left-side frame rail, when looking in the direction of travel. Shift the DOT switch to the right-towards the discharge end of the conveyor.

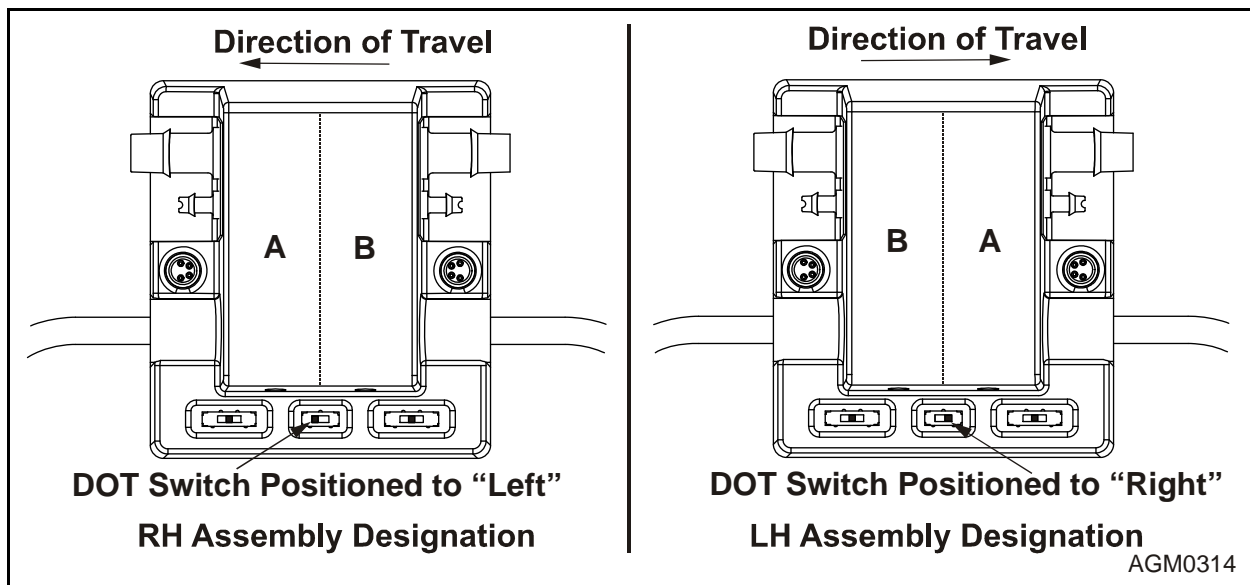


Figure 6 - 15 SCM Switch Settings for Direction of Travel (RH and LH)

NOTE: For conveyors requiring Auto-Slug Operational Mode, identify the Auto-Slug Zone length (number of individual zones). Set the first operational mode switch in each Auto-Slug grouping to Singulation.

Infeed/Release Modes - Connections

Product Release - Primary Mode

To install product-release for a conveyor functioning in one of the primary operational-modes (Singulation, Dual-Zone, or Auto-Slug) connect the remote release signal to the Discharge Zone's Solenoid Control Valve (Figure 6 - 16 and Figure 6 - 17).

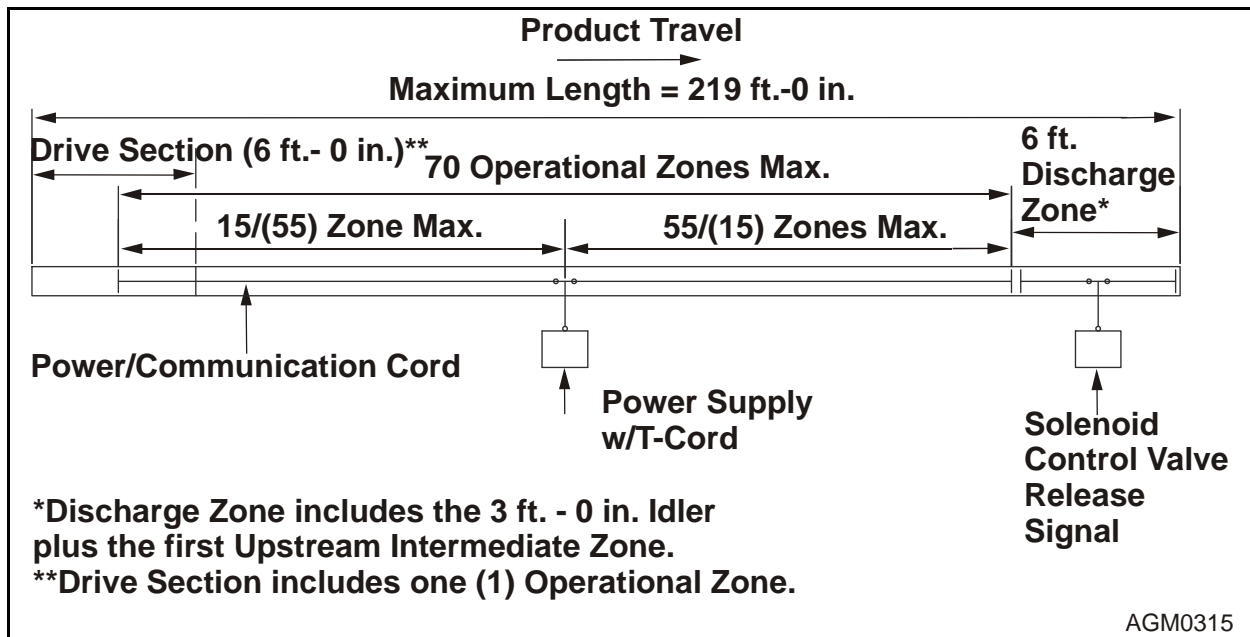


Figure 6 - 16 Primary Operational-Mode Release - Single Power Supply

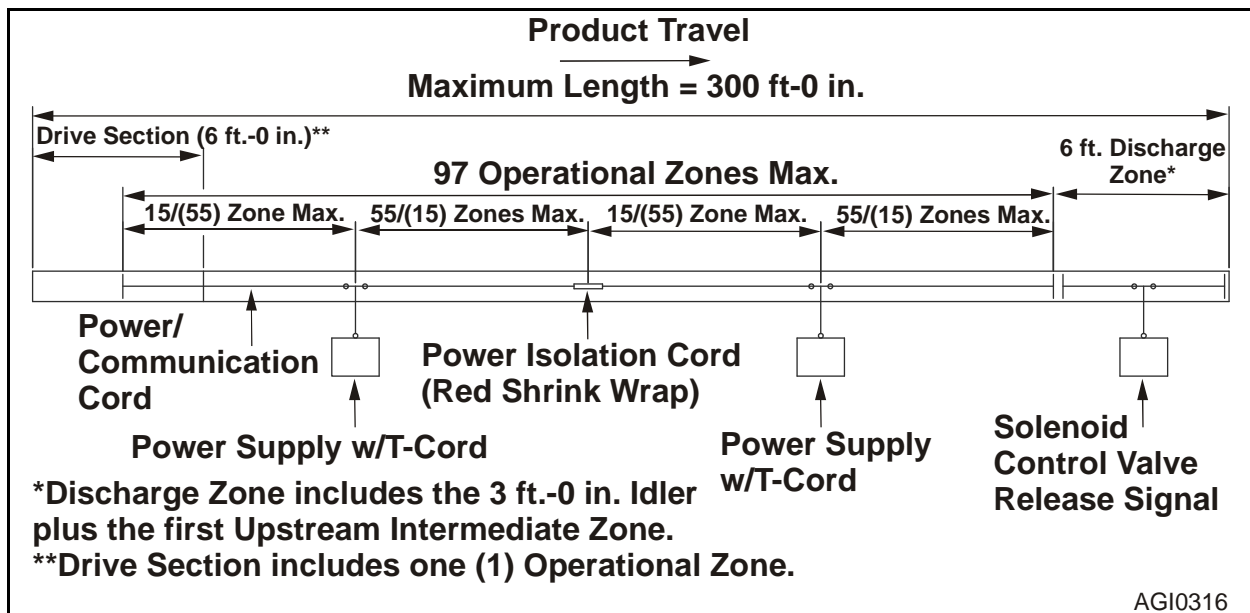


Figure 6 - 17 Primary Operational-Mode Release - Dual Power Supplies

Product Release - Secondary Mode

Full-Length Slug Release

Initiating slug-release of accumulated product requires an external release signal that overrides the primary operational logic of all Solenoid Control Modules within a defined slug-release area.

Full-Length Slug Release - 70 Zones or Less

For full-length slug-release conveyors consisting of seventy (70) Operational-Zones or less, the external release-signal is connected to: 1) the conveyor's Power Supply which sends the signal through the T-Cord to the Power Communication cord; and 2) to the Discharge-Zone's (solenoid-type) control valve. See to Figure 6 - 18.

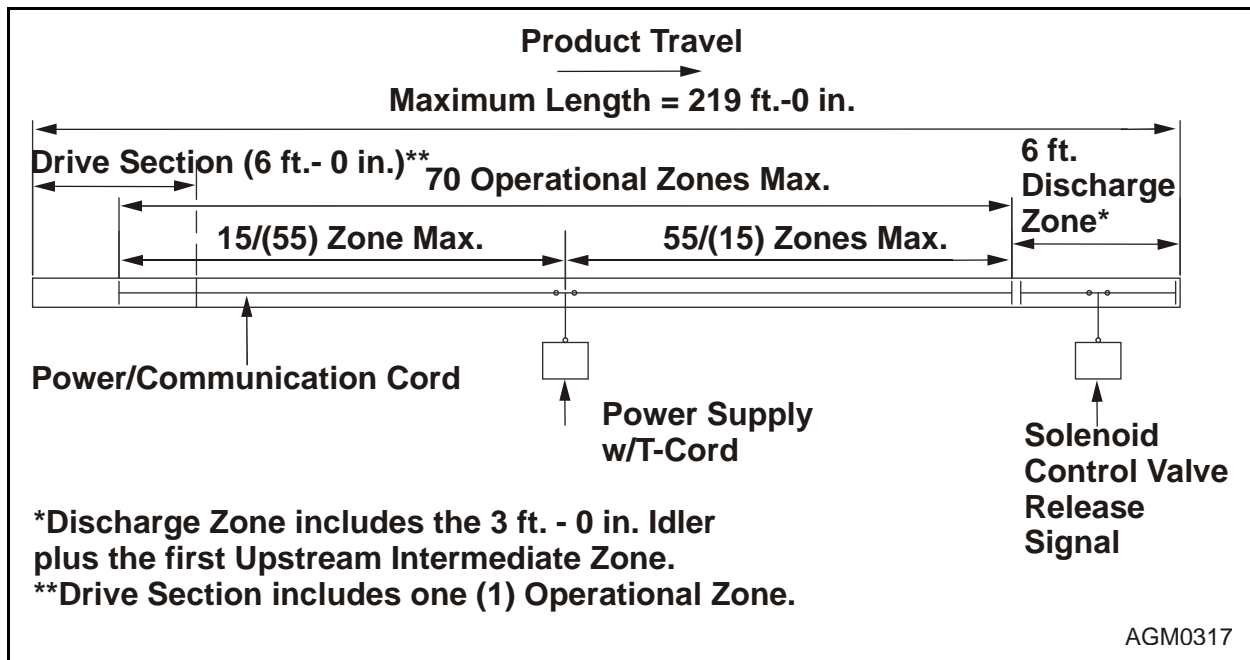


Figure 6 - 18 Full-Length Slug-Release - Single Power Supply

Full-Length Slug Release - 140 Zones or Less

For full-length slug-release conveyors consisting of one-hundred forty (140) Operational-Zones or less, two (2) Power Supplies are required with a Power Isolation Cord separating the two power sources. The external slug-release signal is connected to: 1) either Power Supply; and 2) to the Discharge-Zone's (solenoid-type) control valve. See to Figure 6 - 19.

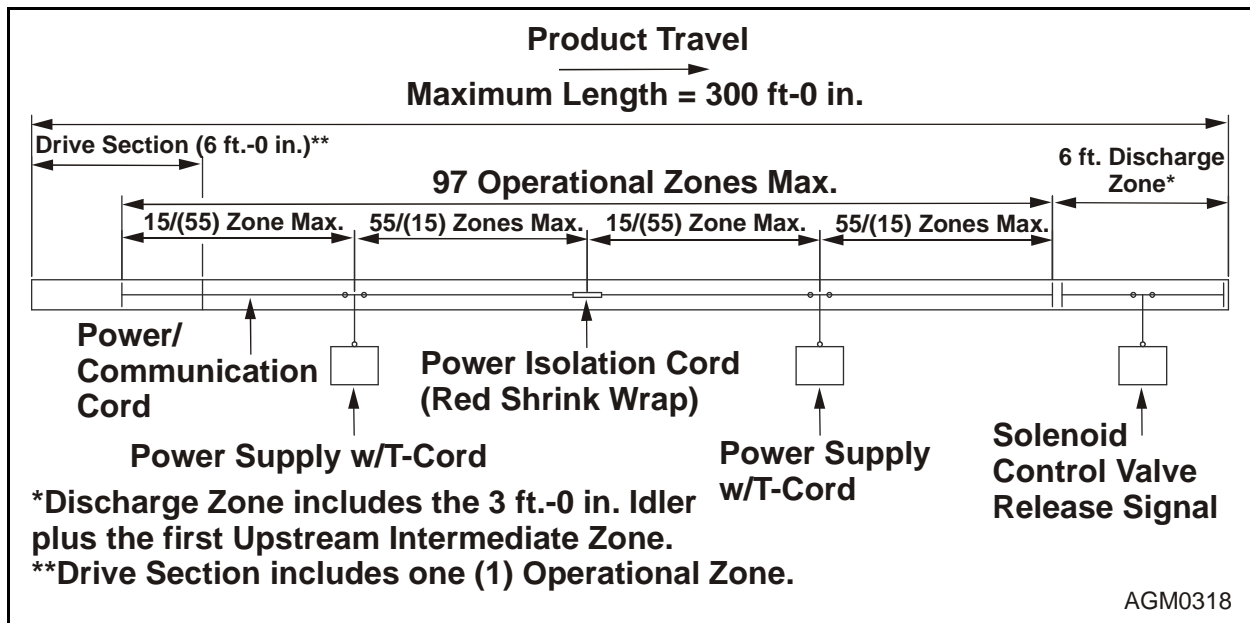


Figure 6 - 19 Full-Length Slug-Release - Dual Power Supplies

Partial-Length Slug Release

A conveyor may require that only a portion of its length operate in the secondary slug-release operational mode (with the partial-length slug-zone beginning at the discharge-end of the conveyor).

The external slug-release signal must be connected to a Power Supply within the slug-release zone. A Slug Termination Cord is required to terminate the slug-release signal at the upstream end of the slug-release zone.

Cord Connected Upstream from Single Power Supply

A single Power Supply conveyor (70 Operational Zones max.) can have a partial-length slug-release that requires the Slug Termination Cord to be connected upstream of the Power Supply. The external release signal is connected to: 1) the Power Supply; and 2) the Discharge-Zone's (solenoid-type) control valve. See to Figure 6 - 20.

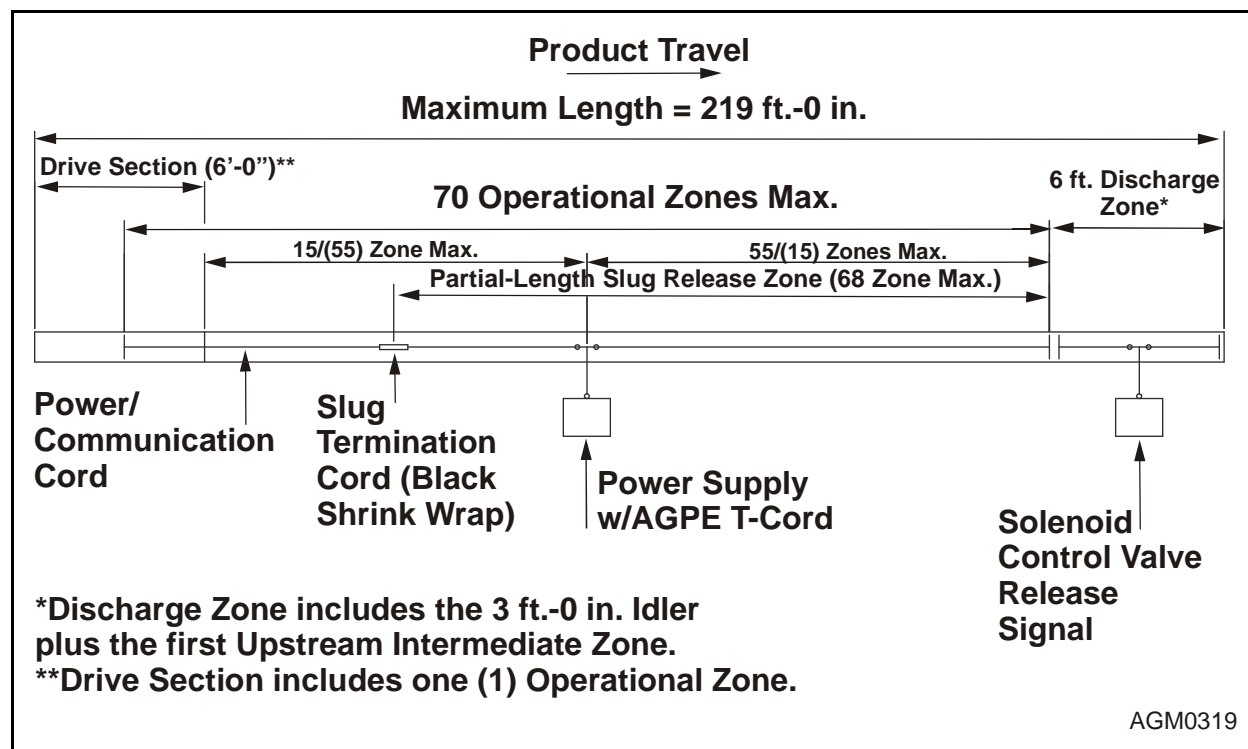


Figure 6 - 20 Partial-Length Slug-Release: Single Pwr Supply (Cord Upstream)

Cord Connected Downstream from Single Power Supply

A single Power Supply conveyor (70 Operational Zones max.) can have a partial-length slug-release that requires the Slug Termination Cord to be connected downstream of the Power Supply. The external release signal is connected to: 1) a Slug Module*; and 2) to the Discharge-Zone's (solenoid-type) control valve. See to Figure 6 - 21.

(*) A Slug-Module is a standard Power Supply that is NOT connected to the 110VAC power source.

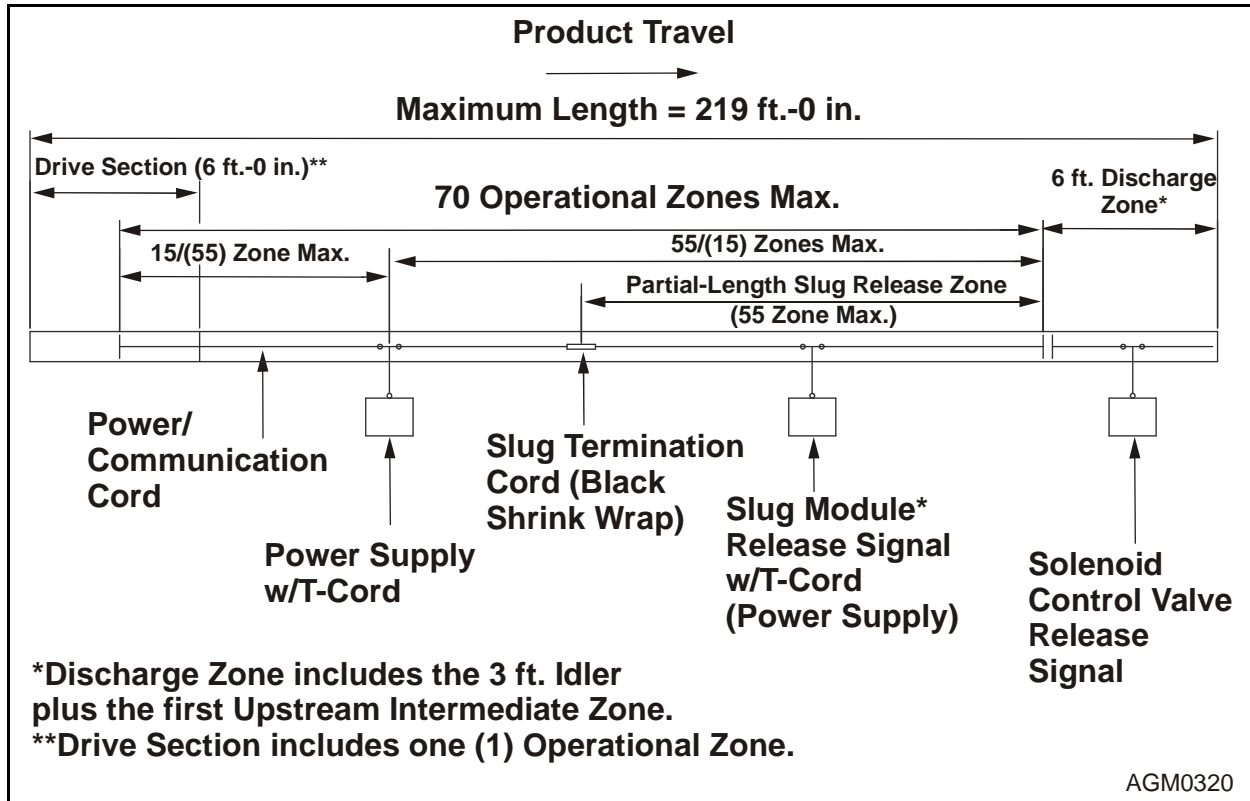


Figure 6 - 21 Partial-Length Slug-Release: Single Pwr Supply (Cord Downstream)

Cord Connected Between Dual Power Supplies

For dual Power Supply conveyors (140 Operational Zones max.) with a partial-length slug-zone that requires the Slug Termination Cord be connected between the Power Supplies, the external release-signal must be connected to: 1) the downstream Power Supply and 2) to the Discharge-Zone's (solenoid-type) control valve. See to Figure 6 - 22.

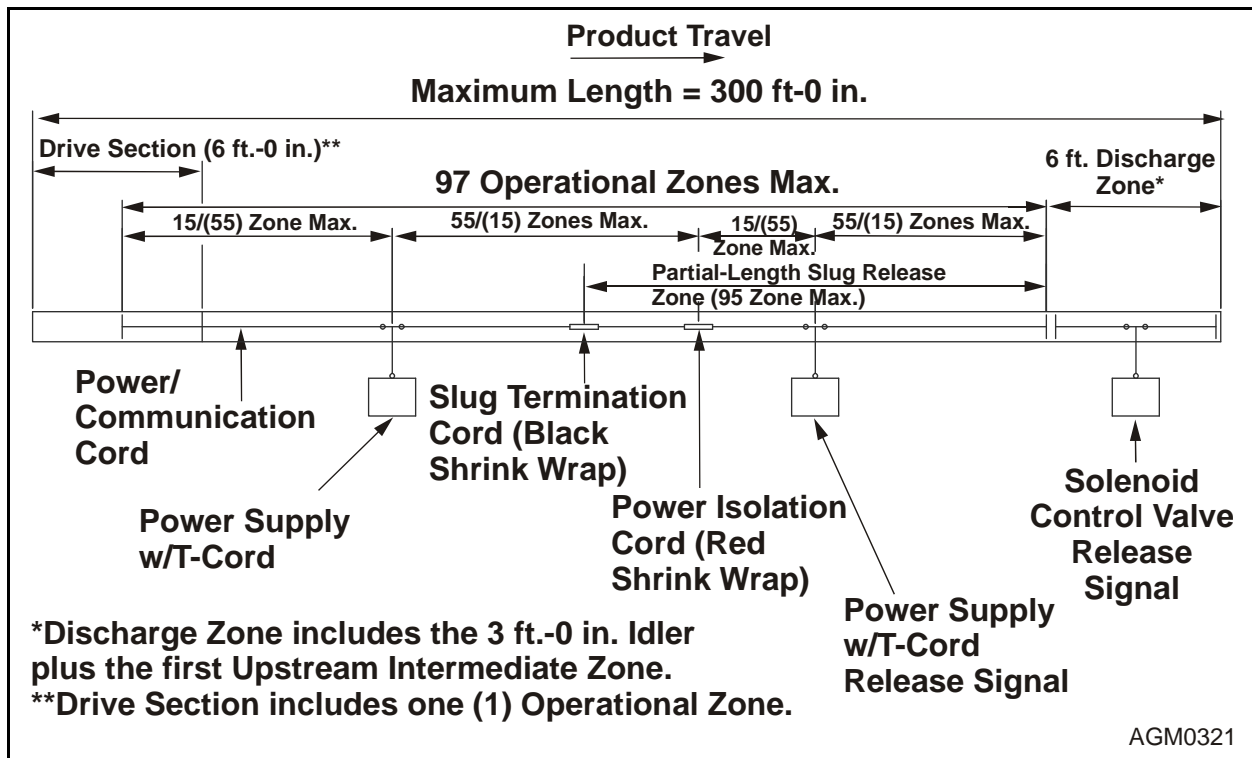


Figure 6 - 22 Partial-Length Slug-Release: Dual Pwr Supplies (Cord Inbetween)

Cord Connected Upstream from Dual Power Supplies

For dual Power Supply conveyors (140 Operational Zones max) with a partial-length slug-zone that requires the Slug Termination Cord be connected upstream of the upstream Power Supply, the external release-signal may be connect to: 1) either Power Supply; and 2) to the Discharge-Zone's (solenoid-type) control valve. See to Figure 6 - 23.

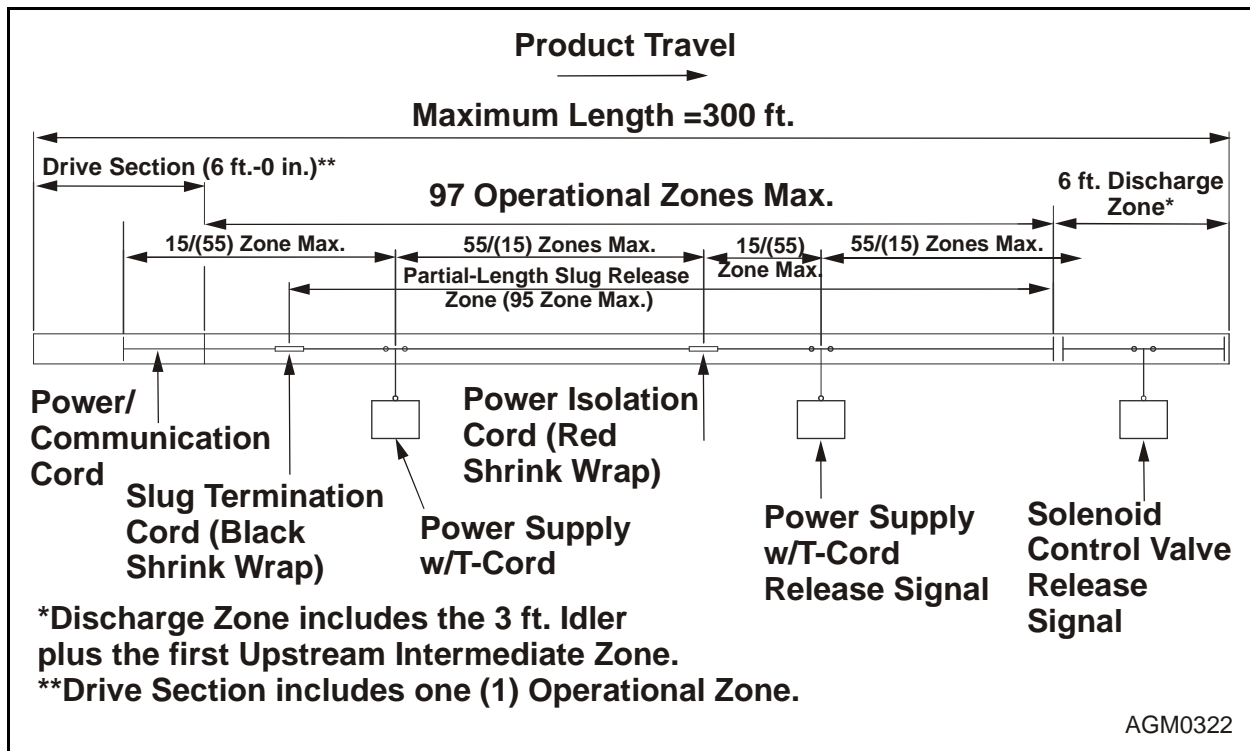


Figure 6 - 23 Partial-Length Slug-Release: Dual Pwr Supplies (Cord Upstream)

Infeed-Secondary (Slug) Mode / Release-Primary Mode

An Accuglide Conveyor operating in one of the three primary operational-modes (Singulation, Auto-Slug, Dual-Zone) may require an upstream portion of its length (beginning at the infeed end of the conveyor) to operate in the secondary slug operational mode.

When the infeed-slug mode is no longer required, the slug-infeed zone returns to its primary operational-mode.

Initiating the infeed-slug requires that an external (slug) signal be supplied to a Power Supply (or Slug-Module) within the defined “slug-infeed zone”. A Slug Termination Cord is required downstream of the Power Supply/Slug-Module.

Initiation of the primary release mode (Singulation, Auto-Slug, or Dual-Zone) requires a remote release signal be connected to the Discharge-Zone's (solenoid-type) control valve. See to Figure 6 - 24 and Figure 6 - 25.

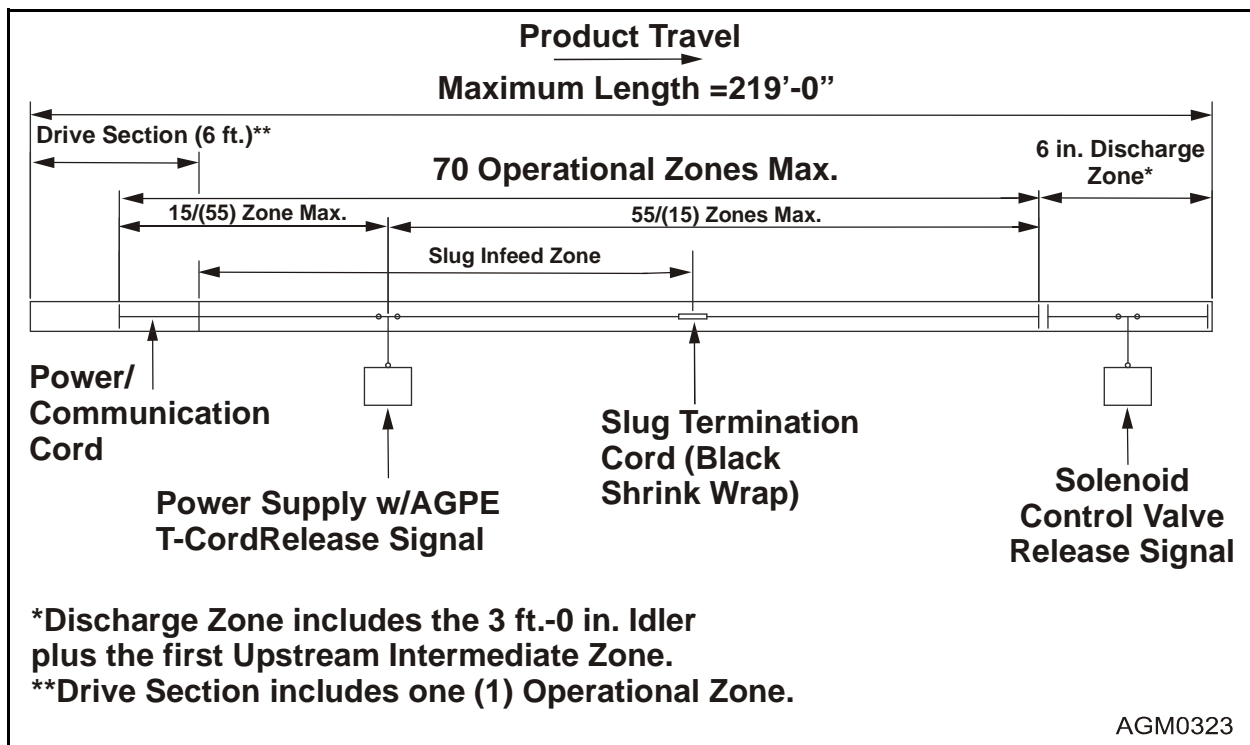


Figure 6 - 24 Slug-Infeed / Primary Mode Release (Single Power Supply)

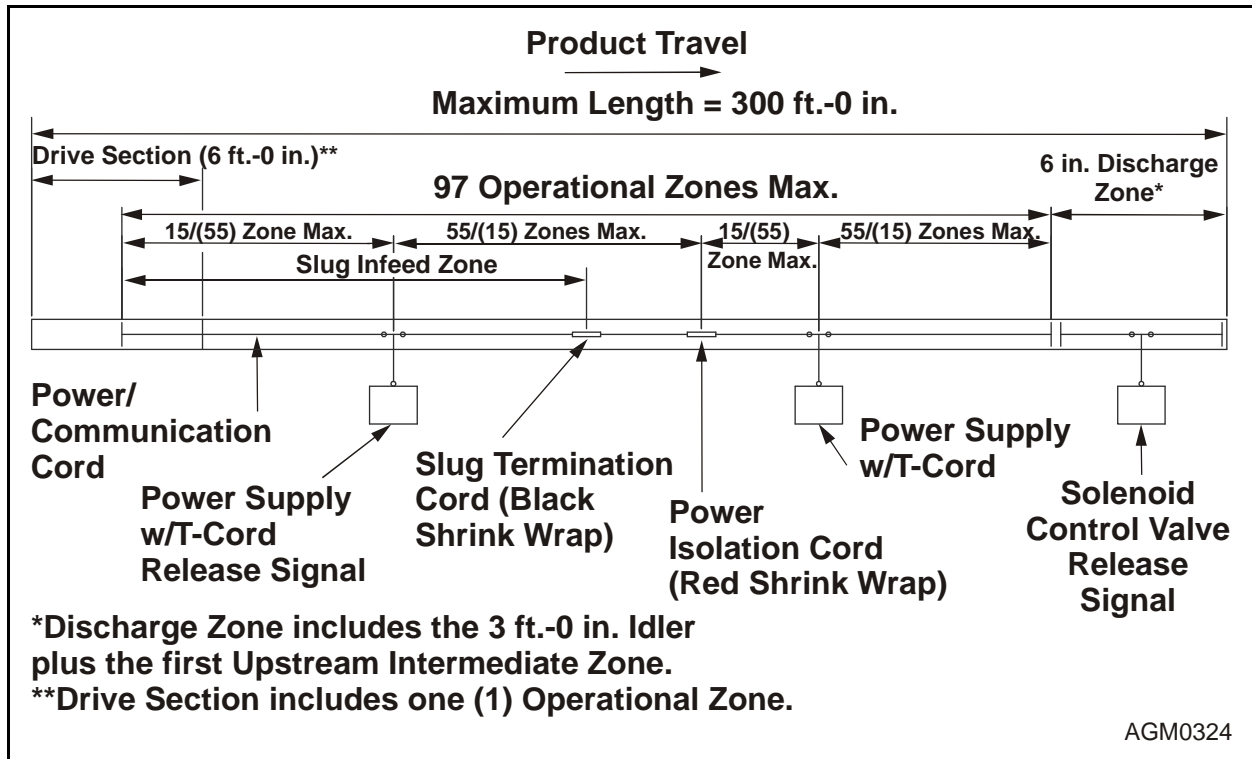


Figure 6 - 25 Slug-Mode / Primary Mode Release (Multiple Power Supplies)

Product Infeed and Release - Secondary (Slug) Mode

An Accuglide Conveyor with an infeed-slug zone may require either full or partial-length slug-release of accumulated product.

Initiating infeed-slug requires an external, infeed-slug signal be supplied to a Power Supply or Slug-Module located within the defined “infeed-slug” zone. A Slug Termination Cord is required to terminate the infeed-slug zone at the zone's downstream end.

Slug Release - Full Length

Initiating slug-release (full-length) (Figure 6 - 26) requires an external slug-release signal to be connected to: 1) all Slug-Modules and/or Power Supplies, and 2) the Discharge-Zone's (solenoid-type) control valve.

(*) A Slug-Module is a standard Power Supply that is NOT connected to the 110VAC power source.

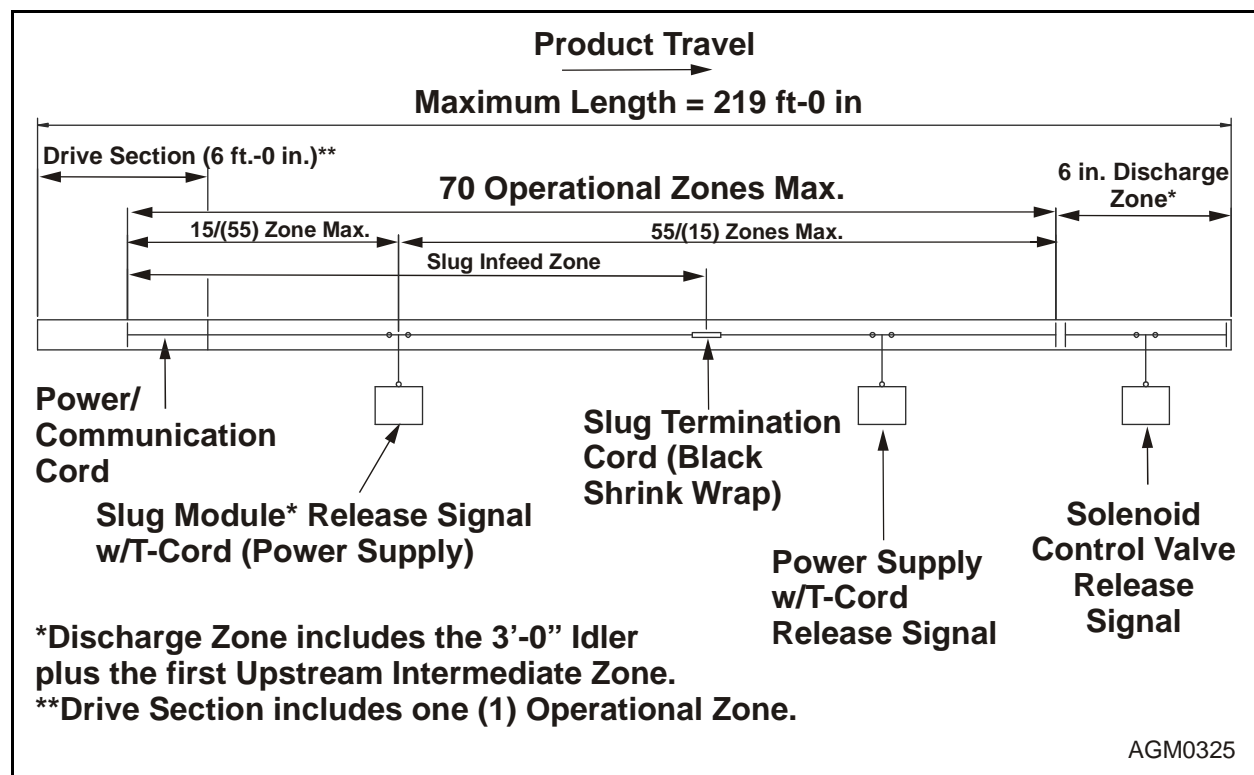


Figure 6 - 26 Slug-Infeed/Full-Length Slug-Release

Slug Release - Partial Length

Initiating slug-release (partial-length) (Figure 6 - 27) requires an external slug-release signal be connected to: 1) all Slug-Module(s) and/or Power Supply(s) within the partial slug-release zone; and 2) the Discharge-Zone's (solenoid-type) control valve.

(*) A Slug-Module is a standard AGPE Power Supply that is NOT connected to the 110VAC power source.

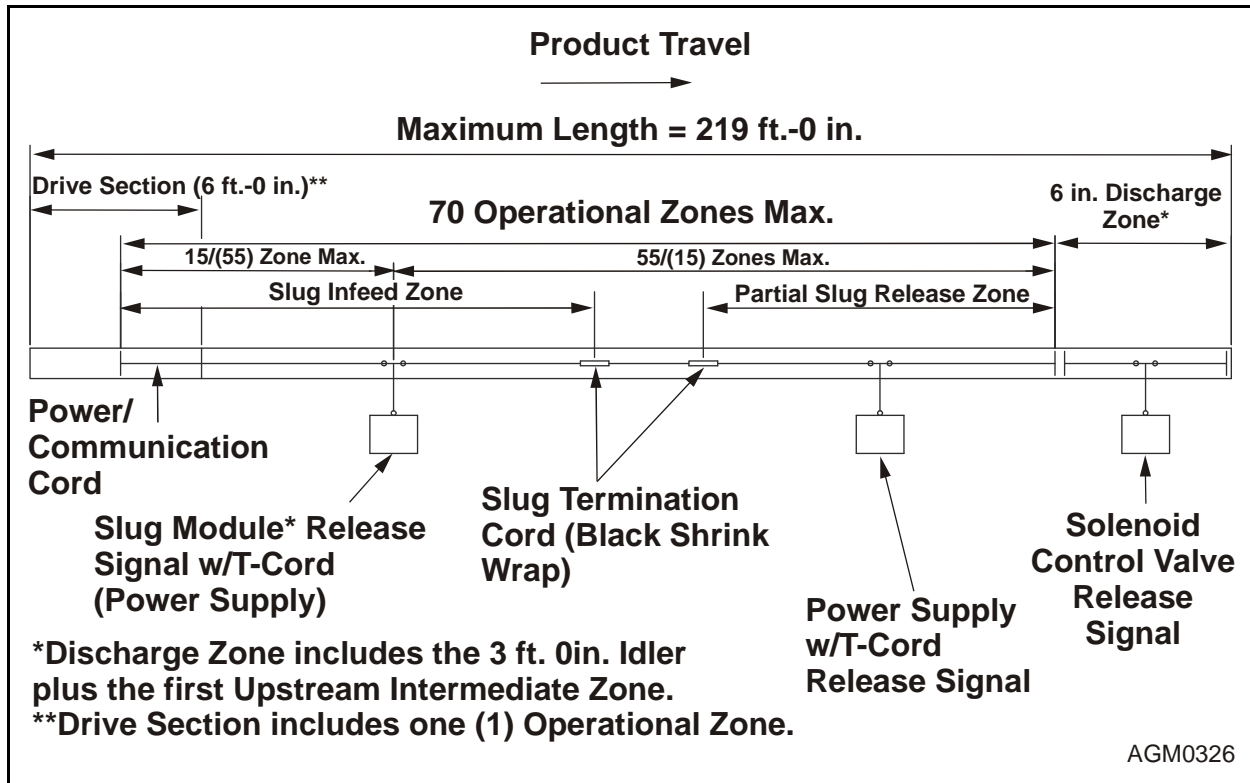


Figure 6 - 27 Slug-Infeed/Partial-Length Slug-Release

Slug Infeed Overlapping Partial Length Slug Release

An Accuglide Conveyor may have an infeed-slug zone that overlaps the conveyor's partial-length slug-release zone.

An additional Power Supply/Slug-Module is required to control the overlapping common area.

Two (2) Slug-Termination Cords are required. One (1) at the discharge-end of the infeed-slug zone, and one (1) at the upstream-end of the slug-release zone.

Initiating infeed-slug requires that a release-signal be connected to the Slug-Module/Power Supplies within: 1) the infeed-slug zone; and 2) the common zone.

Initiating slug-release requires that a release-signal be connected to: 1) the Slug-Module/Power Supplies within: a) the common zone; and b) the slug-release zone; and 2) the Discharge-Zone's (solenoid type) control valve.

(*) A Slug-Module is a standard AGPE Power Supply that is NOT connected to the 110VAC power source.

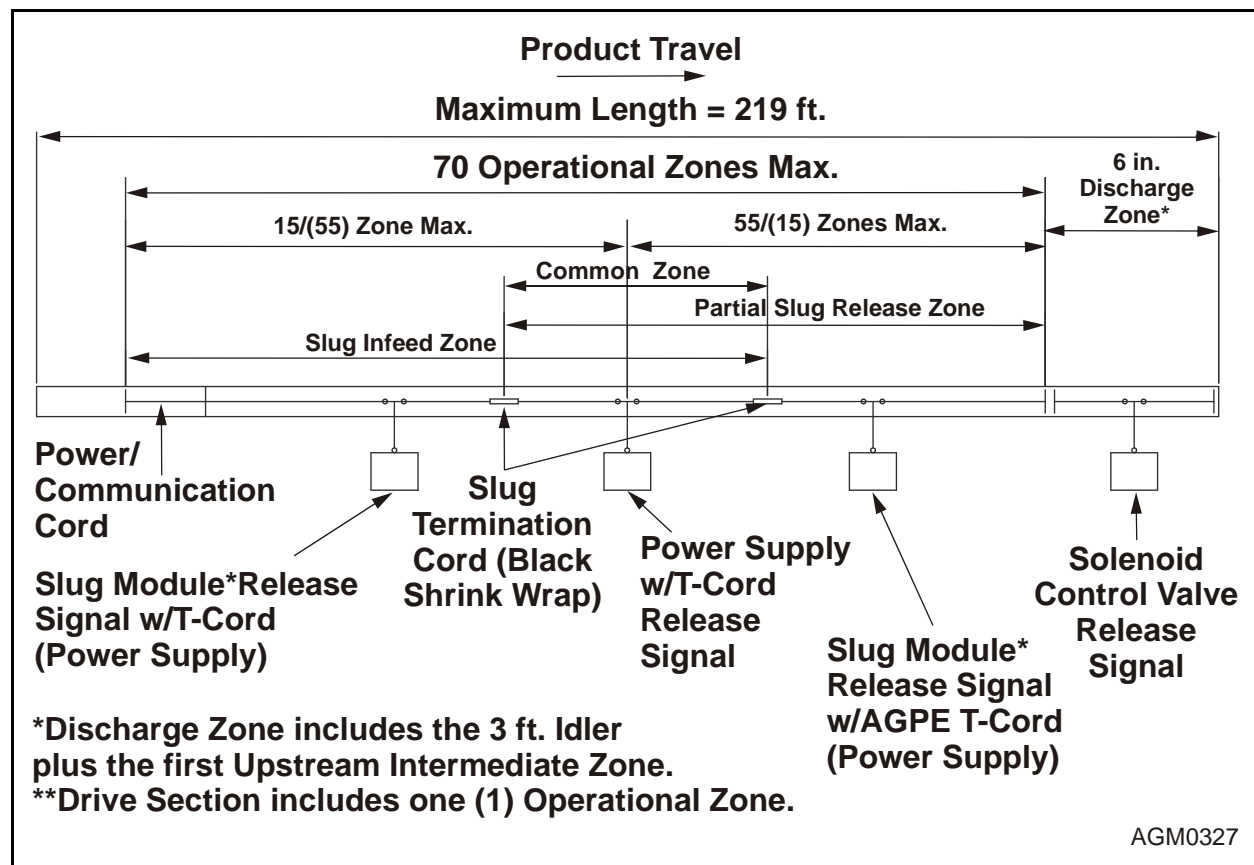


Figure 6 - 28 Slug-Mode Infeed Overlapping Partial-Length Slug-Mode Release

Checking Zone Control Components

Checking the Solenoid Control Module

Each Solenoid control Module has two (2) dual-color LED indicators that show the status of the modules two (2) solenoid valves.

1. Check the color of each indicator.
An amber LED indicates that all Power/Communication cords between the module and the Power Supply are properly connected and the module is receiving power (24VDC) from the power supply; a green LED indicates that its associated solenoid-valve is actuated and its associated operational zone is in the powered state.

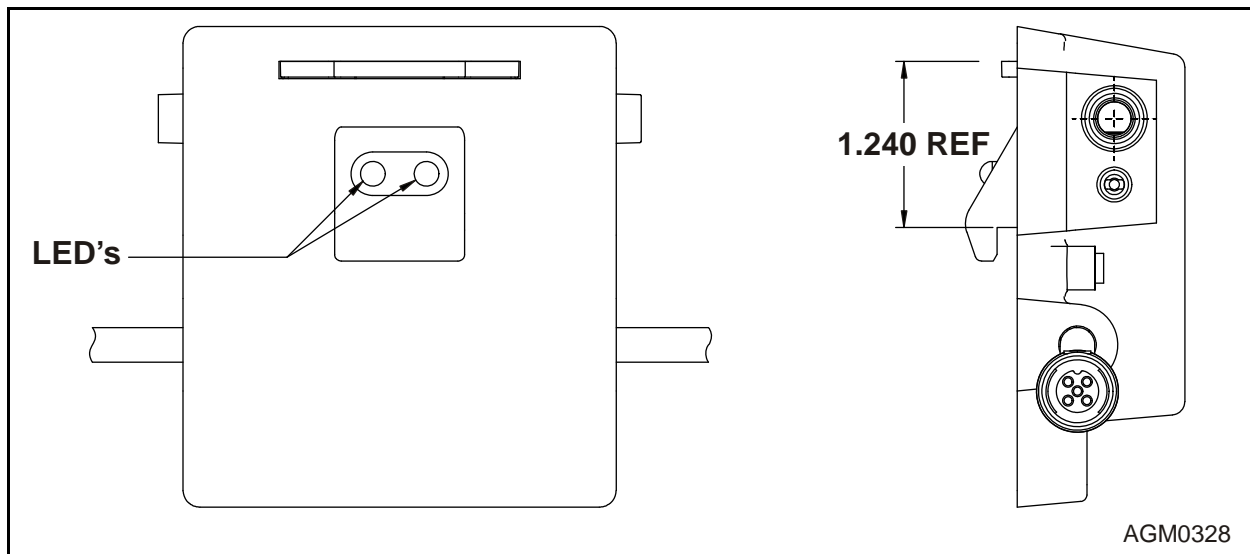


Figure 6 - 29 LED Indicators (As seen from outside of Conveyor)

Checking the Photo-eye Sensor

Each Photo-eye Sensor has one or more LEDs that indicate the sensor's current operational condition and status. Depending on the model/brand of photo-eye supplied, the color(s) of the LEDs may vary from those described in the following step.

1. Check each photo-eye's LED indicators.
A green LED indicates that the photo-eye is properly connected to the Solenoid Control Module and receiving power; a yellow LED indicates that the photo-eye is properly aimed and receiving a reflective beam back from its reflector.

Checking Transportation Function

Make sure product conveys positively and smoothly along the full length of the conveyor.

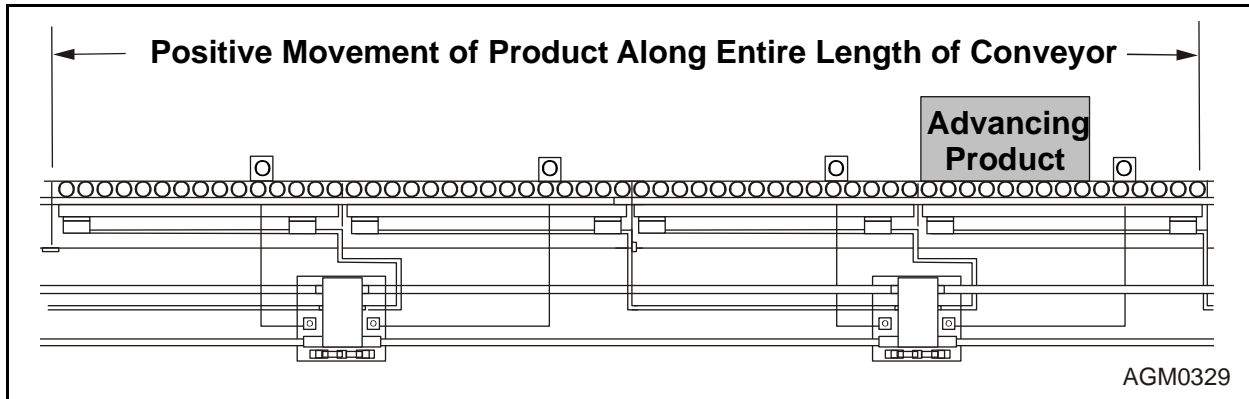


Figure 6 - 30 Checking Transportation Function

Checking Accumulation Function

Checking Accumulation Function - Straight Sections

Make sure the first product coasts to a stop in the first operational-zone at the conveyor's discharge-end and that trailing products accumulate rearward without a buildup of line pressure.

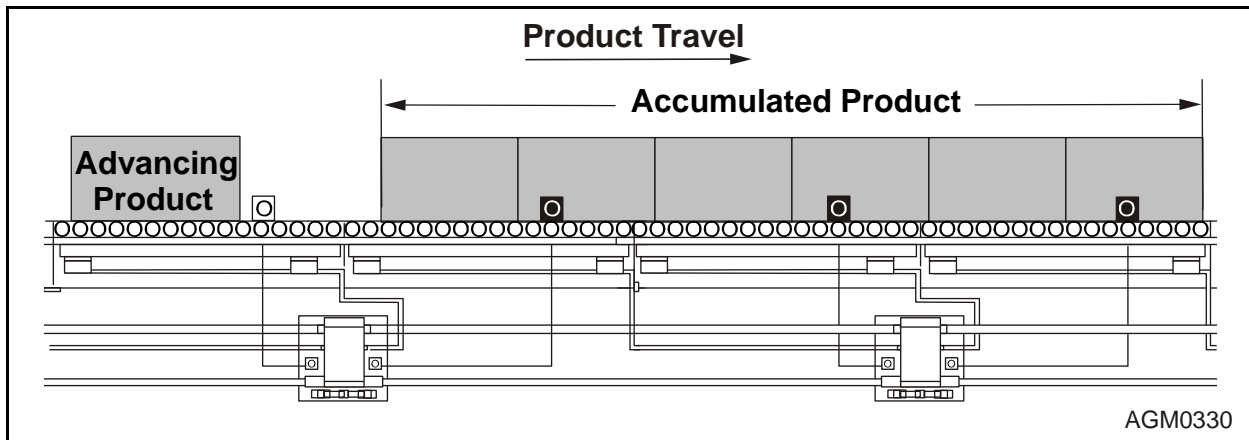


Figure 6 - 31 Checking Product Accumulation Function - Straight Sections

Checking Accumulation Function - Single Operational-Zone

1. Confirm that product stops in operational-zone CZ1 (Figure 6 - 32) when: 1) sensor DS1 is blocked by accumulated product; and 2) sensor CS1 is blocked by advancing product.
2. Confirm that operational-zone UZ1 (not shown in Figure 6 - 32) becomes non-powered when operational-zone CZ1 stops.

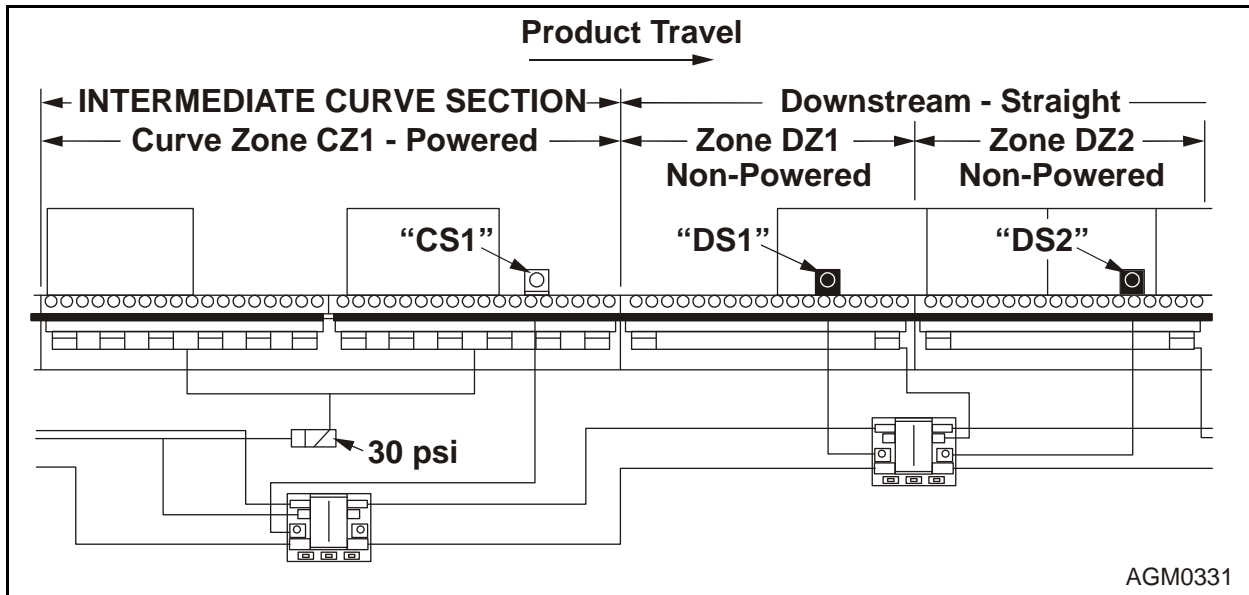


Figure 6 - 32 Intermediate Curve Section - Single Zone Accumulation

Checking Accumulation Function - Dual Operational-Zones

1. Confirm that product stops in operational-zone CZ1 (Figure 6 - 33) when: 1) sensor DS1 is blocked by accumulated product; and 2) sensor CS1 is blocked by advancing product.
2. Confirm that trailing product stop in operational-zone CZ2 when sensor CS2 is blocked.
3. Confirm that operational-zone UZ1 (not shown in Figure 6 - 33) becomes non-powered when the operational-zone CZ2 stops.

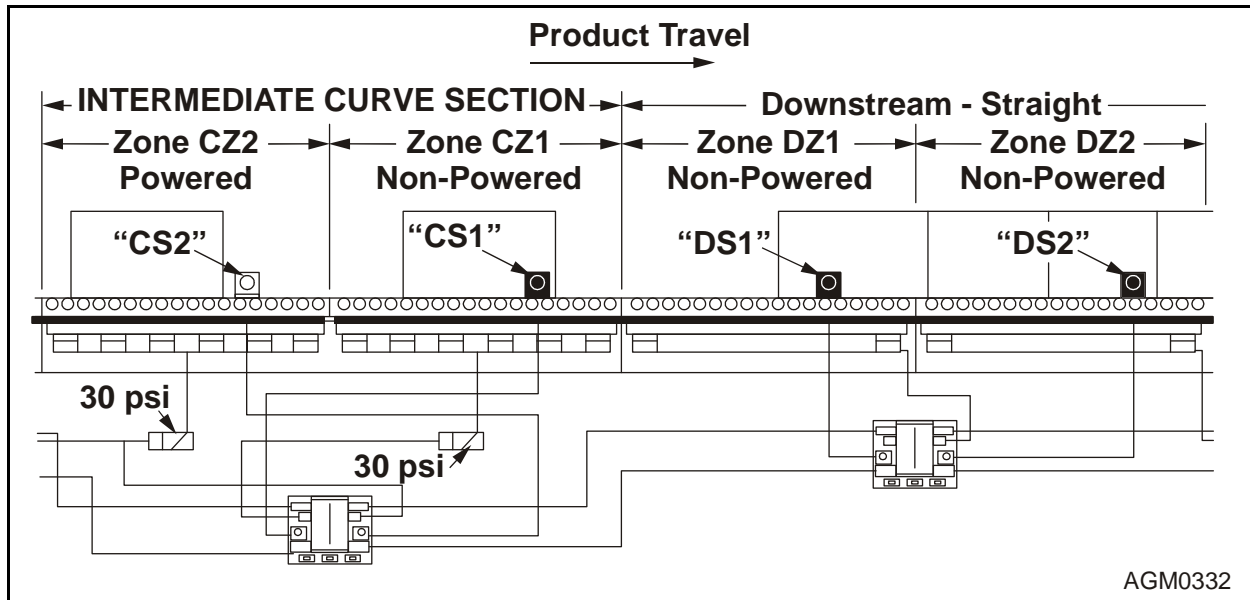


Figure 6 - 33 Intermediate Curve Section - Dual-Zone Accumulation

Checking Operational Mode

Checking Operational Mode - Singulation

Singulation Mode Description

A Solenoid-Control Module (SCM) that is set for the singulation operational-mode responds to its associated photo-eye sensor mounted in the next downstream zone.

Example - Solenoid Valve "A" actuates (raises and powers L2B) when photo-eye sensor "a" (Figure 6 - 34) is unblocked; Solenoid Valve "B" actuates in response to photo-eye sensor "b".

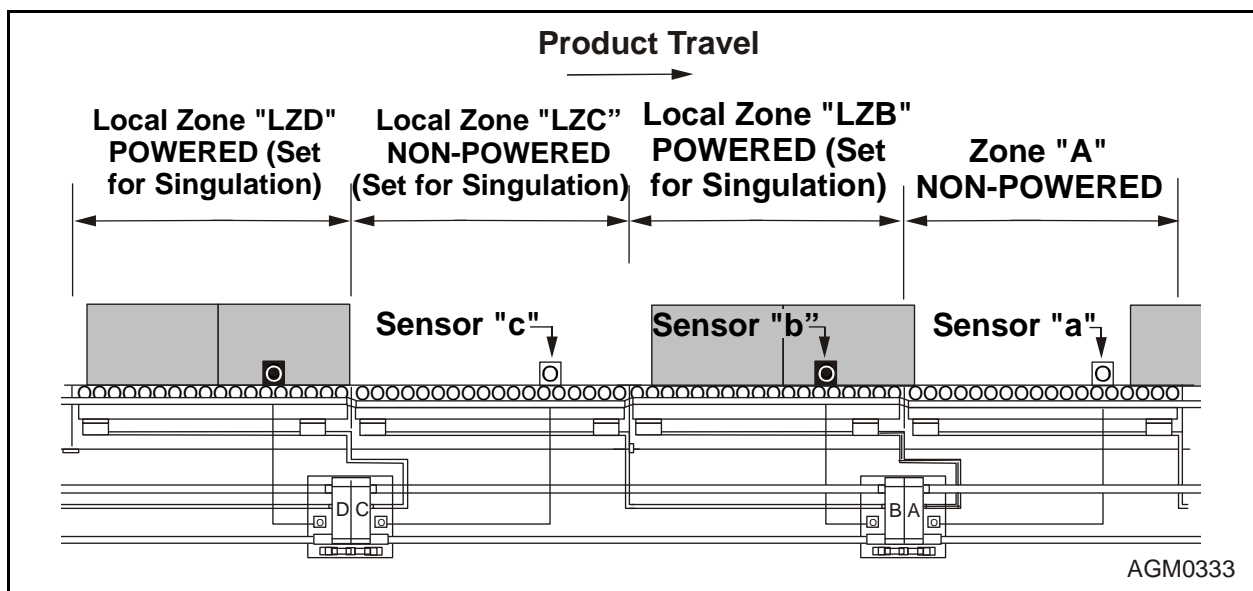


Figure 6 - 34 Singulation Operational Mode

Checking Singulation Mode Operation

To make sure the singulation mode is operating properly:

1. Product Acceptance: Make sure the volume of product being fed onto the conveyor properly advances on the conveyor with gaps (approximately 3 feet long) between each product (or groups of smaller products).
2. Product Release: Provide a release signal to the SCM and confirm that:
 - a. accumulated product "A" (sitting in the first operational zone "A") (Figure 6 - 35) advances; and
 - b. accumulated product "B" (sitting in the second operating zone "B") advances when the first zone's photo-eye sensor "a" is cleared by product "A".

Confirm that this process continues rearward until all product is moving forward with approximately 3-foot-long gaps between products.

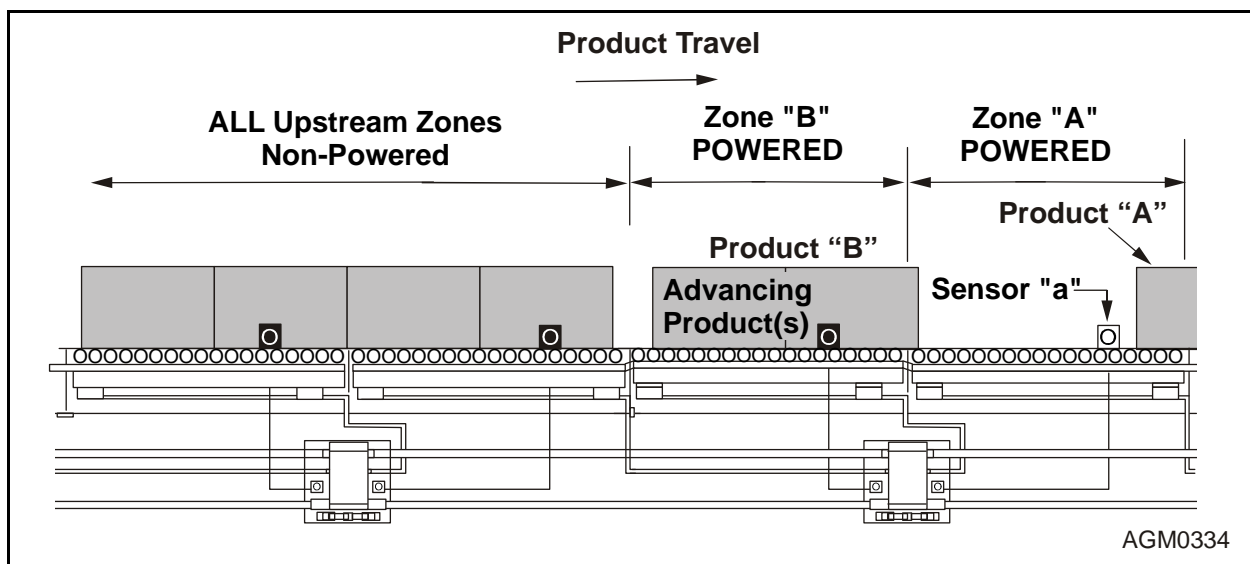


Figure 6 - 35 Singulation Release

Checking Operational Mode - Auto-Slug

Auto-Slug Mode Description

A conveyor may consist of one or more Auto-Slug Zone(s). Each Auto-Slug Zone consisting of a first-zone set for singulation operational-mode followed by any desired number of zones set auto-slug operational-mode. An Auto-Slug Zone may extend the entire length of a conveyor.

A Solenoid Control Module Valve that is set for the auto-slug operational-mode responds to either:

- a. Its associated photo-eye sensor (in next downstream zone); and
- b. The operational state of the next downstream zone.

Example - when Sensor "c" (Figure 6 - 36) is unblocked, Solenoid Valve "A" actuates (raises and powers LZB); Solenoid Valve "B" will actuate (raises and powers LZC) due to the powered state of LZB.

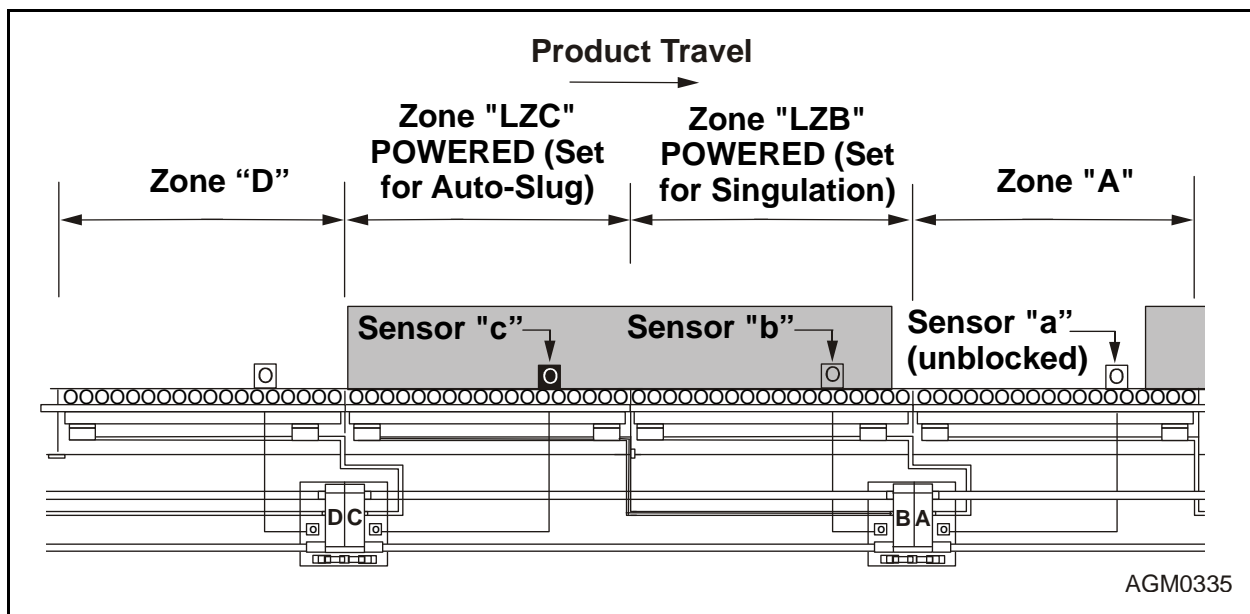


Figure 6 - 36 Auto-Slug Operational Mode

Checking Auto-Slug Mode Operation

1. Check Product Acceptance: Make sure the volume of product being fed onto the conveyor advances with no change in the spacing between product as long as the first-zone's sensor is clean (non blocked).
2. Check Product Release: Provide a release signal to the first operational-zone and confirm that:
 - a. The first accumulated product in the downstream singulation zone advances; and
 - b. All trailing product in zones, set for auto-slug operating mode, advance as a group when the sensor in the first-zone is cleared by the first product.

Example - Solenoid Valve "A" actuates (raises and powers the first Auto-Slug zone) when Sensor "a" (Figure 6 - 37) is unblocked. Solenoid Valve "B" actuates (raises and powers the next upstream Auto-Slug zone) when Sensor "b" is unblocked or Solenoid Valve "A" is actuated.

This process repeats upstream until all product advances as a group with a gap approximately 3-feet long between groupings.

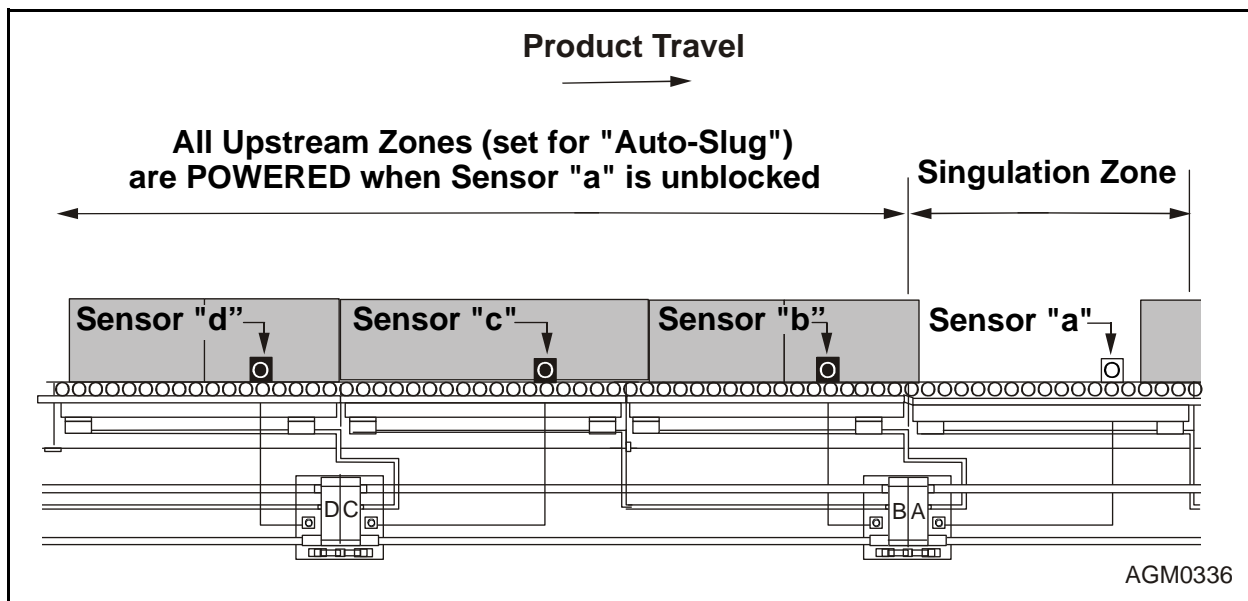


Figure 6 - 37 Checking Auto-Slug Operational Mode

Checking Operational Mode - Dual-Zone

Dual-Zone Mode Description

A Solenoid Control Module that is set for the dual-zone operational-mode responds to either:

- a. Its associated photo-eye sensor in the first downstream zone; or
- b. The photo-eye sensor in second downstream zone.

Example - Solenoid Valve "B" actuates (raises and powers LZC) when either photo-eye Sensors "b" or "a" are unblocked (Figure 6 - 38).

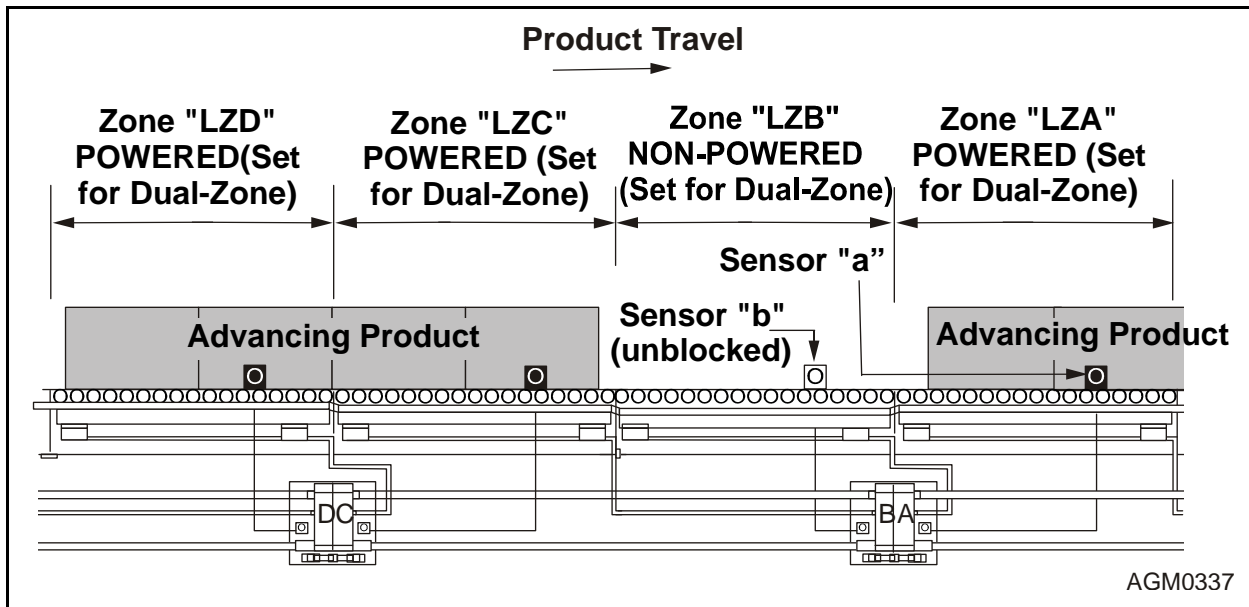


Figure 6 - 38 Dual-Zone Release Diagram

Checking Dual-Zone Mode Operation

1. Product Acceptance: Check that the volume of product being fed onto the conveyor properly advances on the conveyor in groups (approximately 6 feet long) with gaps (approximately 3 feet long) between each group.
2. Product Release: Provide a Zone-Release signal to the first operational-zone and confirm that:
 - a. A group of accumulated product (6 feet long) advances from the first and second downstream operational zones; and
 - b. Trailing product in zones 3 & 4 advance as a 6-foot long group when first zone's sensor is cleared by the first product.

Example - Solenoid Valve "A" actuates (raises and powers Zone "B") (Figure 6 - 39) when Sensor "a" or the next upstream sensor is unblocked. Solenoid valve "B" actuates (raises and powers Zone "c") when Sensor "a" or Sensor "b" is unblocked. This process repeats upstream until all product advances as a group with a gap (approximately 3 feet long) between 6-foot-long groups.

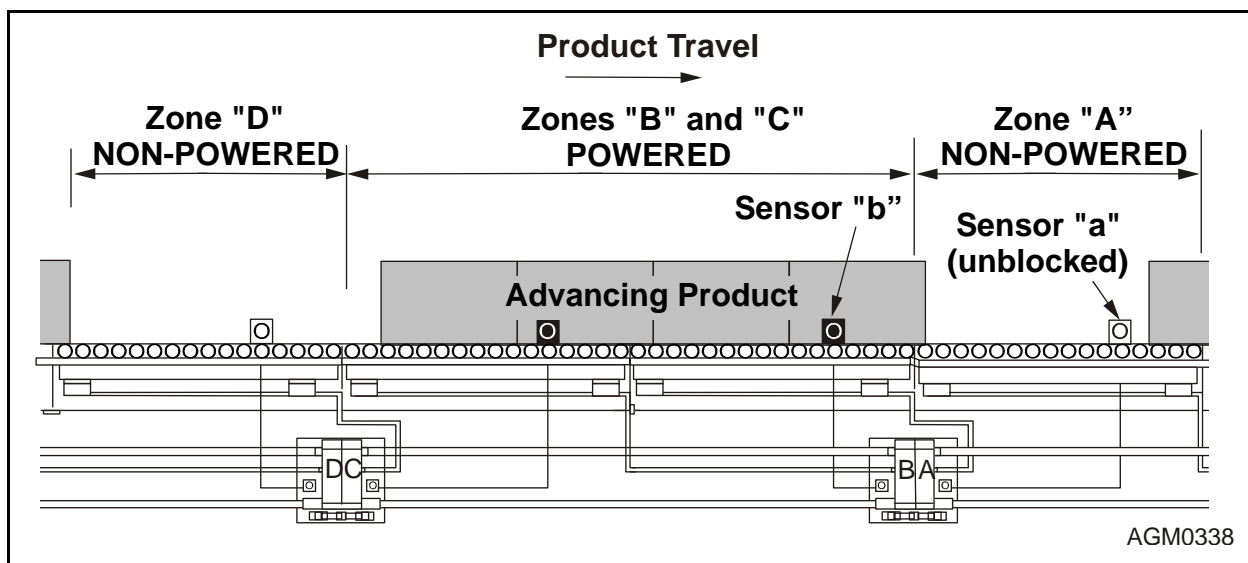


Figure 6 - 39 Checking Dual-Zone Mode Operation

Checking Operational Mode - Slug

Slug Mode Description

All Solenoid Control Modules within a defined slug-zone will respond to an external Slug-Release signal. When a Release signal is received, all solenoid Control Modules within the slug-zone override their primary operational-mode setting (singulation, auto-slug, or dual-zone) and function in the secondary slug operational-mode.

When the Slug Module ceases receiving the Slug-Release signal, the Solenoid control Modules will again function per their primary operational-mode setting.

Checking Slug Mode Operation

Product Release: Provide a Slug-Release signal to the Power Supply or Slug Module and confirm that all accumulated product within the defined (slug-zone) advances in a single grouping. If the required slug-zone length is less than the conveyor's length, the zones upstream of the slug-zone will release per their primary operational mode setting. See to Figure 6 - 40.

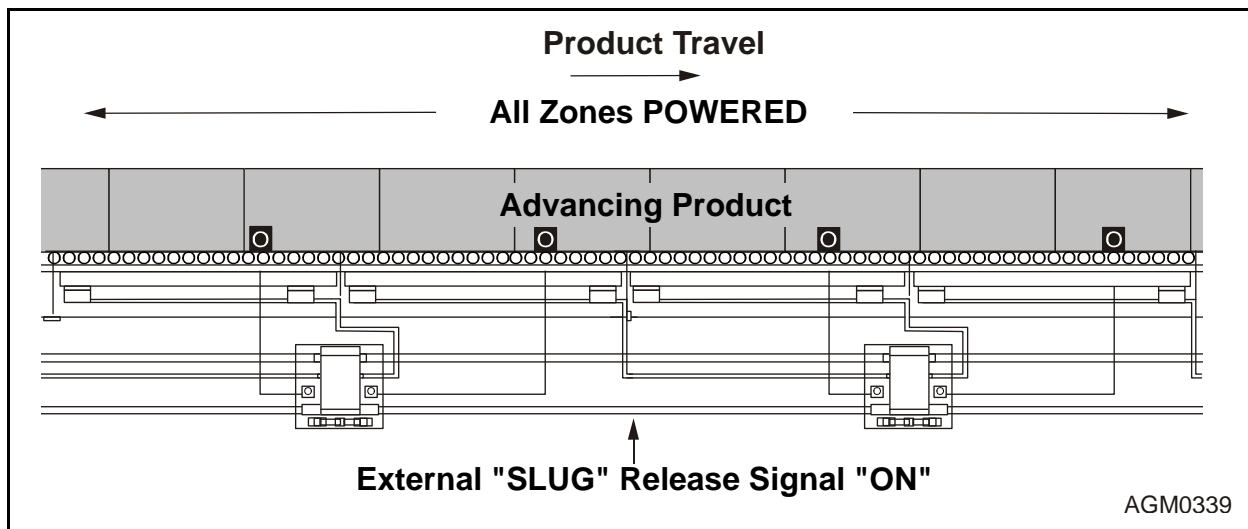


Figure 6 - 40 Checking Slug Mode Operation

Inline Conveyor Connection (Optional)

When the length of an accumulation conveyor line requires that two (2) conveyors function as a single, continuous unit, the mating terminal-end sections (Idler Section and Drive Section) of two (2) adjoining conveyors must be equipped with zone-control components that provide the transportation, accumulation and released operational-modes that match the rest of the conveyor.

A single-zone Retrofit Kit will provide the required control. To make two accumulation conveyors function as a single, continuous unit:

1. Position and install the photo-eye/reflector components (Figure 6 - 41) approx. 12 inches from the discharge end of the downstream conveyor's Drive Section.
2. Position and mount the Solenoid Control Module (w/bracket) approx. 18 inches upstream of the photo-eye.
3. Remove the air-line (yellow, 1/4-inch O.D.) that connects the air-actuators and solenoid-valve in the Idler Section.
4. Connect the air-actuators to the Solenoid Control Module using the new tubing (yellow, 1/4-inch O.D., approximately 6 feet long).
5. Install the main air supply line tubing (red, 1/2-inch O.D.).
6. Connect the Solenoid control Module's Power/Communication Cord to the cord of the downstream module.
7. Connect the Solenoid Control Module to the upstream module using a 3-foot-long P/C Cord Extension.

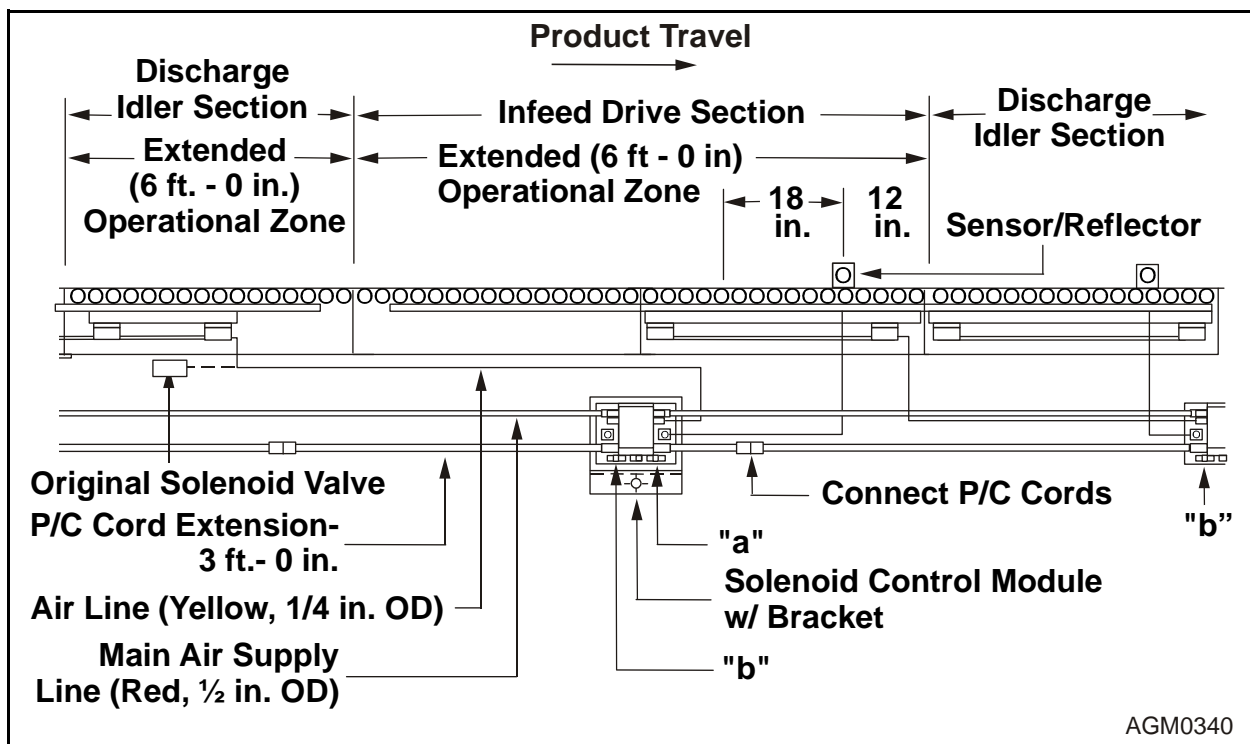


Figure 6 - 41 Connecting Two (2) Inline Conveyors



7 Application Guidelines

Introduction

The Accuglide powered-roller, accumulation conveyors provide:

1. quiet, high-speed transportation of product (cartons, cases, totes, etc.);
2. gentle, zero-pressure accumulation of product; and
3. efficient, high-rate release of accumulated product.

The Carrier Rollers are driven from below by a polyurethane driver pad that is attached to a precision, roller chain with extended pins. Intermediate Straight Sections feature operational groupings (zones) of Carrier Rollers that are either “powered” or “non-powered”. A zone’s operational-state is determined by its associated controlling sensor that is typically located in the next forward (downstream) zone. The sensor is a photo-eye.

Products transport positively along the length of the conveyor. When “accumulation” is required, the “first” product stops when it reaches a “first” remotely-controlled, non-powered discharge-zone where it actuates the sensor in that zone and causes the next, rearward (upstream) zone to become non-powered. This process repeats as each trailing product reaches the first available non-powered zone.

When product movement is again required, the first product in the controlled discharge zone is released and product from upstream zones follow.

Intermediate Curve Sections provide controlled product movement where directional change(s) are required.

Intermediate Merge Sections provide for the positive drive and transition when the merging of product from spur lines onto a main-line Accuglide conveyor is required.

An Accuglide Conveyor consists of the following components, see Figure 7 - 1:

- Drive Section with Power Unit (required)
- Intermediate Straight Section(s) (required)
- Idler Section (required)
- Intermediate Curve Section(s) (optional)
- Intermediate Merge Section(s) (optional)
- Accessories: Power Supply/Supplies; Supports/Hangers; Side Guides

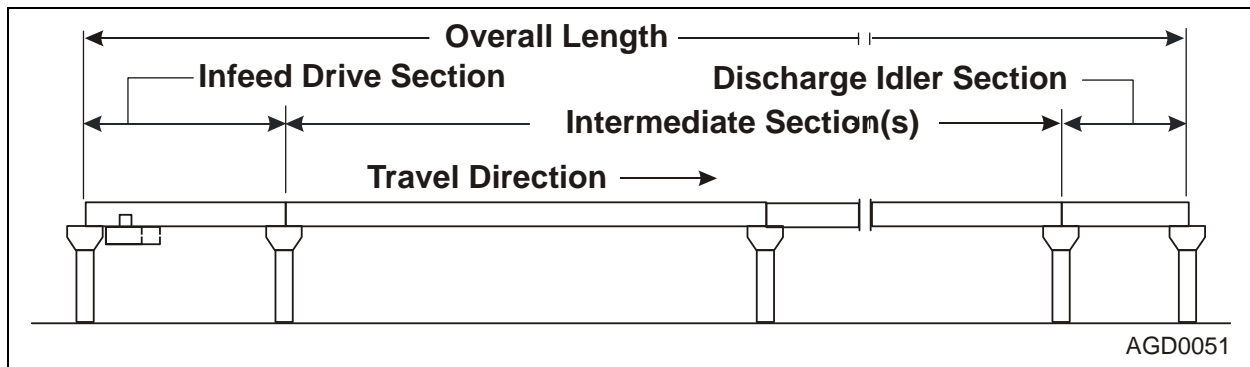


Figure 7 - 1 Conveyor Components

The following is a basic overview of Accuglide Conveyor's components. For more detail, see Specifications chapter.

Product Overview

Drive Section

Drive Section (located at the conveyor's infeed end); 6-foot long, under-hung power unit (3/4 - 5 HP), 60-240 fpm, 650 pounds effective pull; spring-type chain tensioner (air-type tensioner optional); magnetic-type chain/track lubricator (solenoid-actuated type optional), and a 6-foot long operational zone. Carrier Rollers are factory-installed at 2-inch centers with fixed-type mounting ONLY; all rollers are powered; available in Right-Hand (RH) or Left-Hand (LH) assembly* (as determined by the side of the conveyor on which the drive chain/pad are located when looking in the direction of travel).

(*) If a conveyor features an Intermediate Curve Section, the assembly designations of all of the conveyor's components must be the same as the directional change that the curve makes.

Example - An Accuglide Conveyor that includes an Intermediate Curve Section that turns to the right (when looking in the direction of travel) requires that all components be supplied with RH assembly.

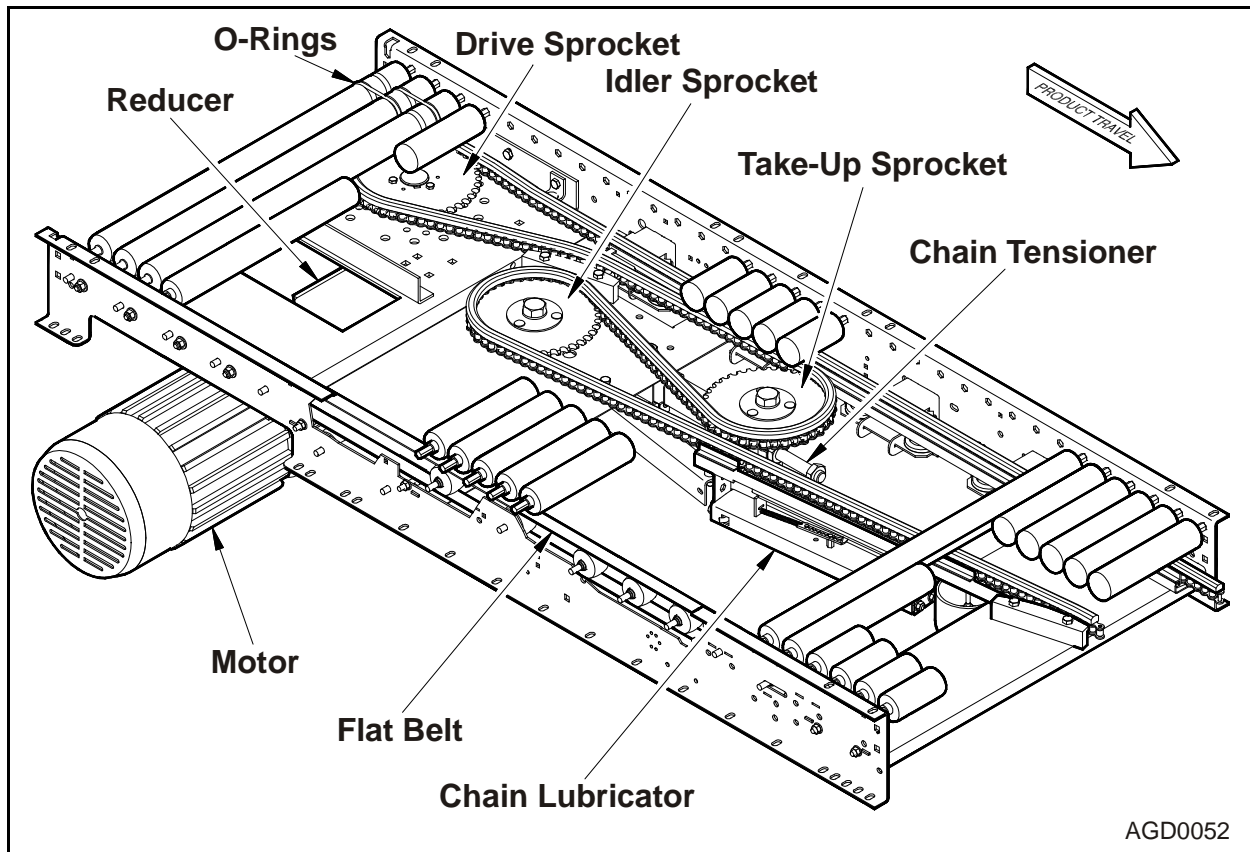


Figure 7 - 2 Infeed Drive Section (LH Assembly Shown)

Intermediate Straight Section

Intermediate Straight Sections consist of: channel-type frame with Carrier Rollers* at 2-inch, 3-inch or 4-inch centers, in pop-out type mounting. Available in RH / LH assembly; Solenoid Control Modules and photo-eye sensors are mounted on the same side of the section as the drive chain/pad.

Accumulation-type sections with 3-foot operational zones.

Transportation-type sections are the same as accumulation-type except there are no operational zones. The section's drive chain/pad is always engaged with the Carrier Rollers.

(*) Carrier Rollers are shipped separate and installed in the field.

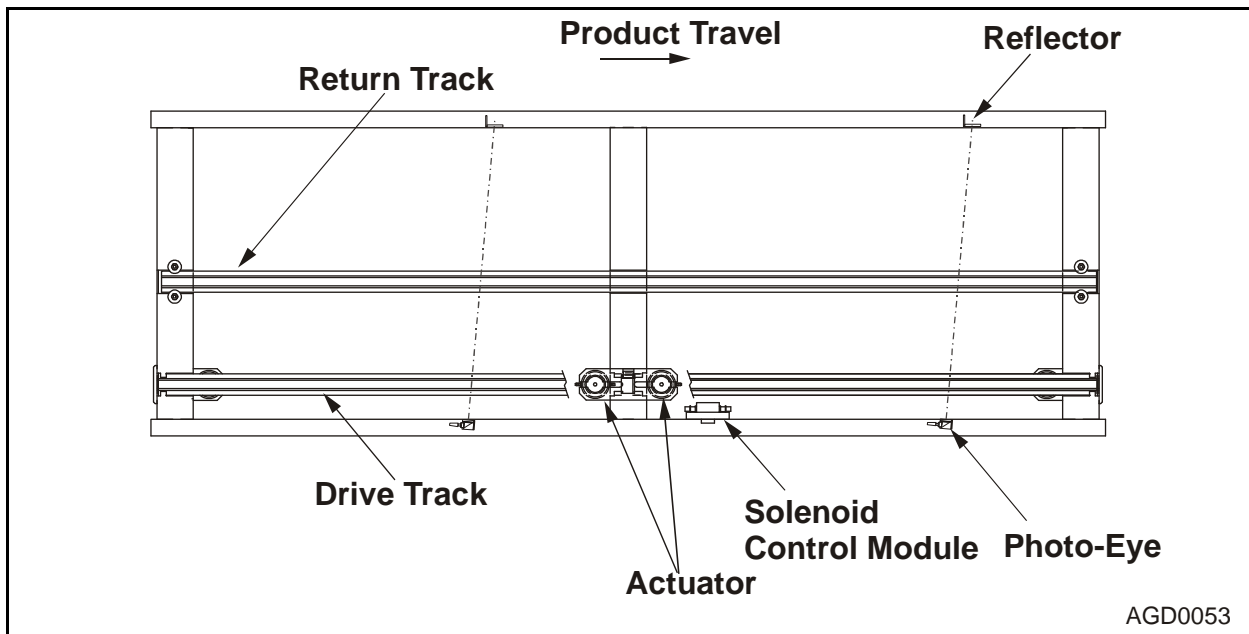


Figure 7 - 3 Intermediate Straight Section (RH Assembly Shown)

Idler Section

The Idler Section, 3 feet long, is located at the conveyor's discharge end. It includes an idler sprocket around which the drive chain and pad's path changes from its "drive" run to its "return" run. It incorporates one (1) 3-foot long operational zone that is controlled by a solenoid valve and an external release signal. Carrier Rollers are factory-assembled into the section at 2-inch centers with fixed-type mounting ONLY; all rollers are powered.

Available in RH / LH assembly (to match Intermediate Drive Section assembly).

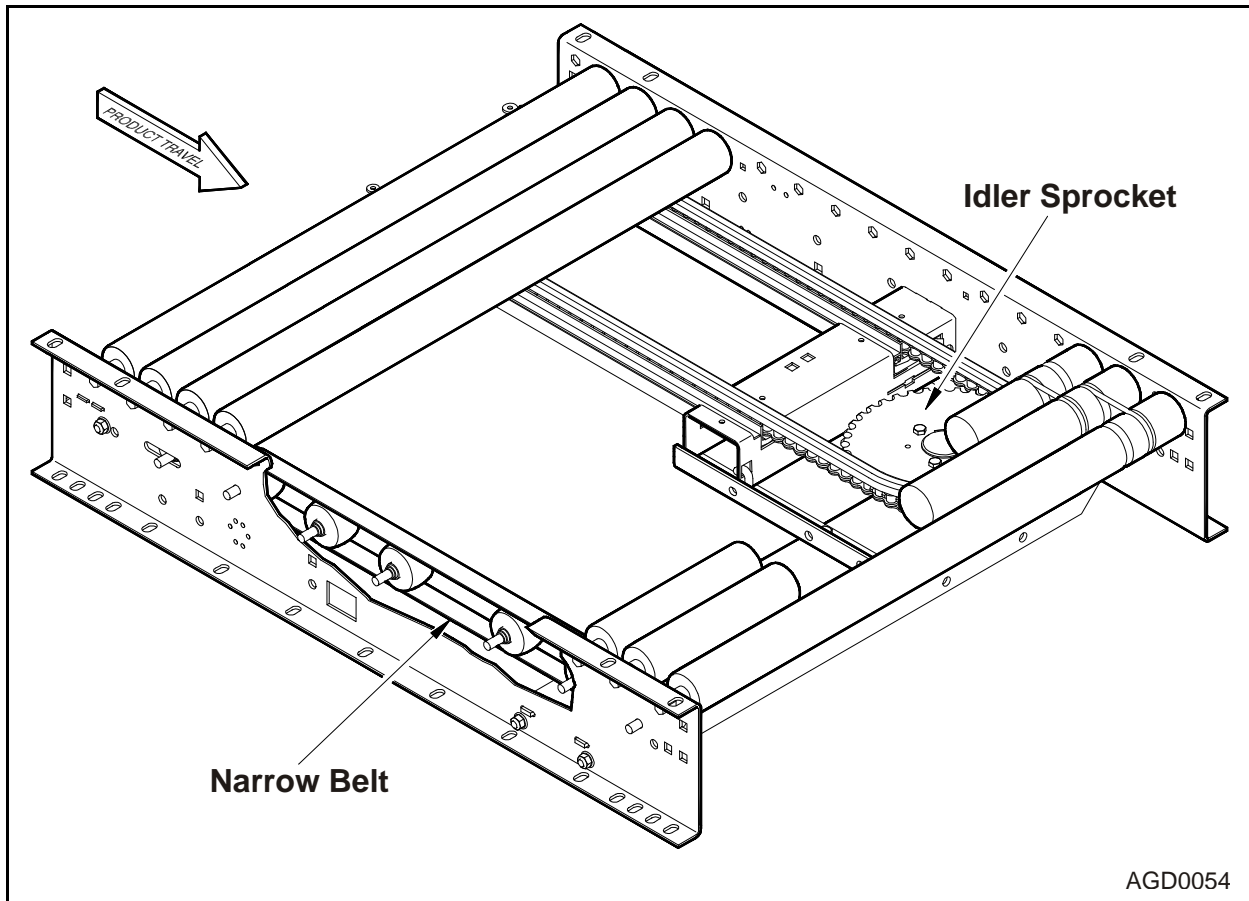


Figure 7 - 4 Idler Section (LH Assembly Shown)

Intermediate Curve Section

Accumulation Type - 60°, 90°, and 180°; Type 26IR or Type TTF frame; 11-inch-long straight tangent at each end; tapered Carrier Rollers set high at 2-inch roller centers (nominal at curve's inside rail).

Carrier Rollers are constantly driven by the fixed-height drive chain/pad. When the downstream operational zones are filled with accumulated product, the curve's operational zone(s) (with Local Zone Control) stop the forward movement of product when detected by photo-eye sensors within each zone.

- Type 26IR frame widths of 16 inches, 22 inches and 28 inches W.
- Type TTF widths of 16 inches, 22 inches, 28 inches, and 34 inches W.

Supplied with photo-eye sensor(s) and necessary air control components.

Transportation Type - 30°, 45°, 60°, 90°, and 180°; Type 26IR or Type TTF frame; 11 inches long straight tangent at each end; tapered Carrier Rollers set high at 2-inch or 3-inch roller centers (nominal at curve's inside rail).

Because the fixed-height drive chain/pad constantly powers the Carrier Rollers, product should not be accumulated within the curve section.

- Type 26IR and Type TTF widths of 16 inches, 22 inches, 28 inches, 34 inches, and 40 inches W.

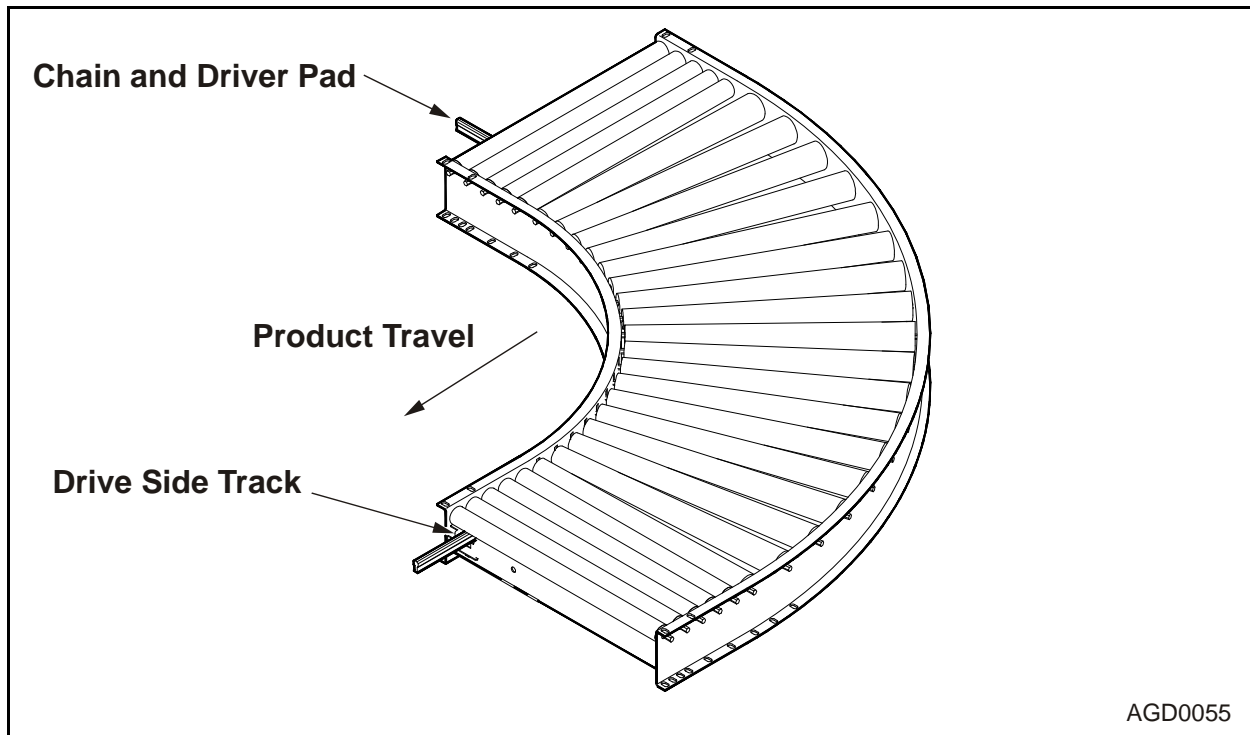


Figure 7 - 5 Intermediate Curve Section (90°, RH Curve Shown)

Intermediate Merge Section

Intermediate (Sawtooth-type) Merge Sections (30° or 45° merge angles) consist of a RSH / CF Type channel-type frame with ABEC Carrier Rollers factory-installed at 2-inch centers (set high) with fixed-type mounting ONLY.

Available in RH/LH assembly (to match drive chain/pad assembly of adjoining sections) and RH/LH “spur-line” location (when looking in the direction of travel).

The sections are “transportation-type” with constant drive to the Carrier Rollers and are not to be used for product accumulation.

Supplied with filter/regulator for separate air-supply (30 psi).

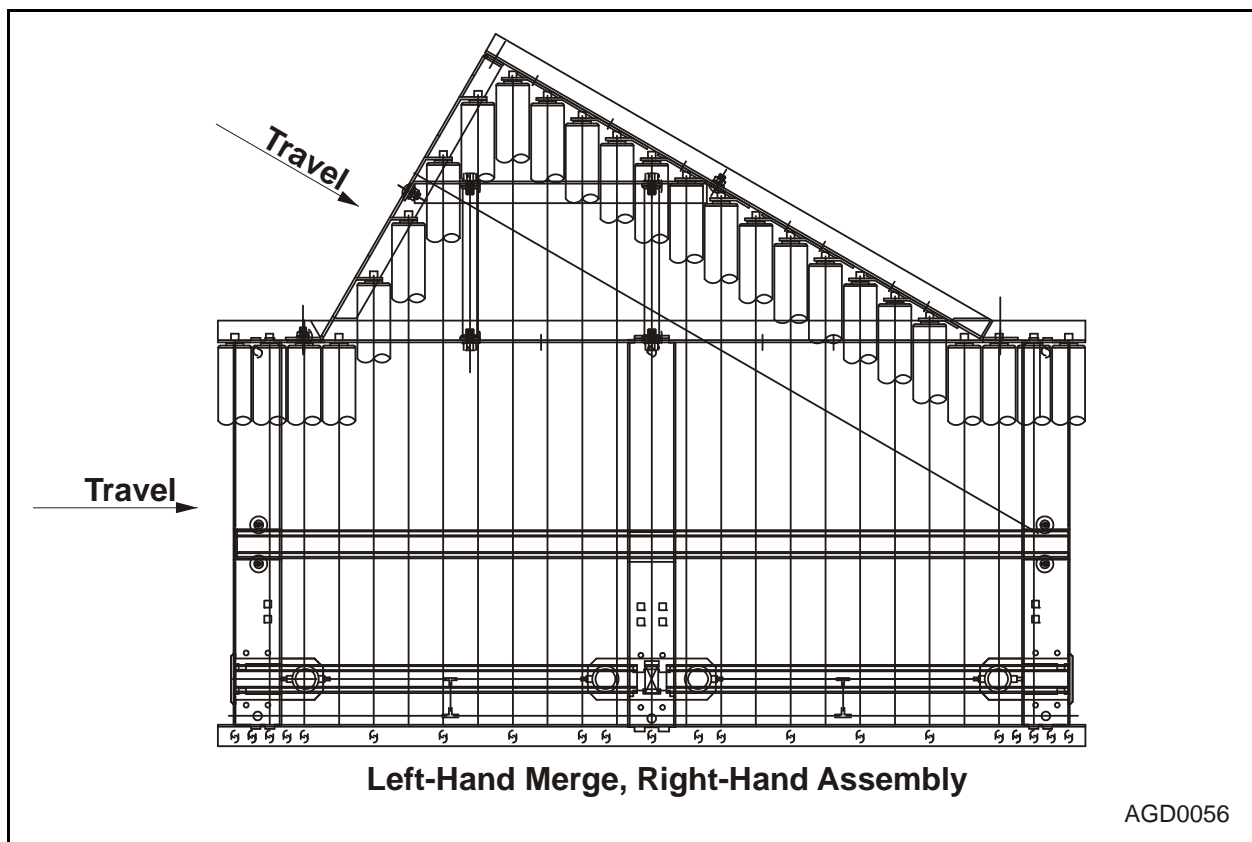


Figure 7 - 6 Intermediate Merge Section

Frame Type

Frame (6-1/2 inch deep rail with 1-1/4-inch top / bottom flanges) - The standard frame depth for all of the company's powered belt and roller product lines with the top of the rollers extending 1/4 inch above the top flange.

Photo-eye rail (2-1/2-inch-deep rail with 1-1/4-inch top / bottom flanges) - Photo-eye rails are required to contain product on the conveyor as well as protect the photo-eye sensors.

Optional Guide rail (7-1/2-inch-deep rail with 1-1/4-inch top / bottom flanges) - Optional guide rails accommodate high speeds or tall product.

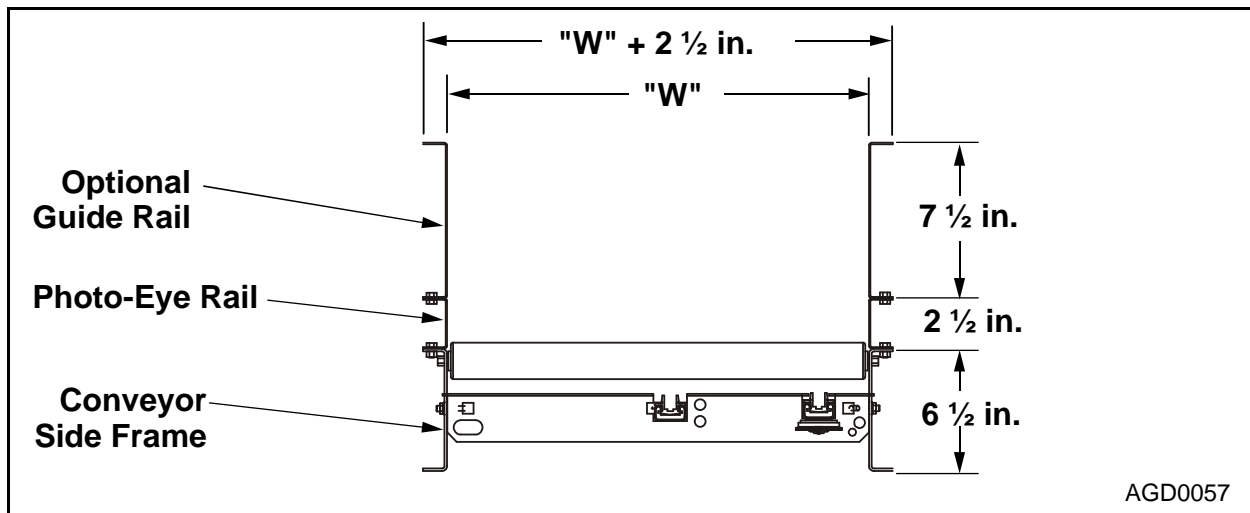


Figure 7 - 7 Frame and Option

Carrier Rollers - Straight / Tapered

Table 7 - 1 Roller Specifications

Type	ABEC	High Speed	Premium High Speed
Designation	AB	HS	PR
Tubing	1.9-inch diameter galvanized		
Bearing	Intelligrated B2006 - ABEC-1 rated		SST RC190 6203 - ABEC-1 rated
Lubrication	Grease packed and sealed (no re-lubrication necessary)		
Axle	7/16-inch hexagonal steel thru shaft	7/16-inch nylon sleeve over 5/16-inch steel core (steel core is thru shaft)	
Roller Capacity	100 lbs		
Environment	-20° F to 150° F		0° F to 150° F
Application Notes	Intelligrated standard Use up to 300 fpm	Low noise. Eliminates frame wear. Standard for speeds 300 fpm and above	Nominal noise and aesthetic improvement over standard High Speed

Table 7 - 2 Tapered Roller Specifications

Type	Tapered ABEC	Tapered High Speed
Designation	AB	HS
Tubing	2.5/1.62-inch galvanized	
Bearing	ABEC-1 rated	
Lubrication	Grease packed and sealed (no re-lubrication necessary)	
Axle	7/16-inch hexagonal steel thru shaft	7/16-inch nylon sleeve over 5/16-inch steel core (steel core is thru shaft)
Roller Capacity	100 lbs	
Environment	-20° F to 150° F	
Application Notes	Intelligrated standard Use up to 300 fpm	Low noise. Eliminates frame wear. Standard for speeds 300 fpm and above

Carrier Roller Mounting - Fixed

A “fixed” Carrier Roller has a “spring-loaded” hex axle that extend through the axle holes in the frame rails.

Carrier Roller Mounting - Pop-Out

A specific “pop-out” Carrier Roller has a “fixed” axle that sets in molded, pop-out mounting inserts that are factory-assembled into the frame rail's hex axle holes at the specified centers.

NOTE: Pop-Out carrier rollers are not available for rollers on 2-inch centers.
 Pop-out rollers should not be used in overhead situations.
 When offset side guide and pop-out rollers are selected, the side guide should not be offset to the inside of the conveyor frame.

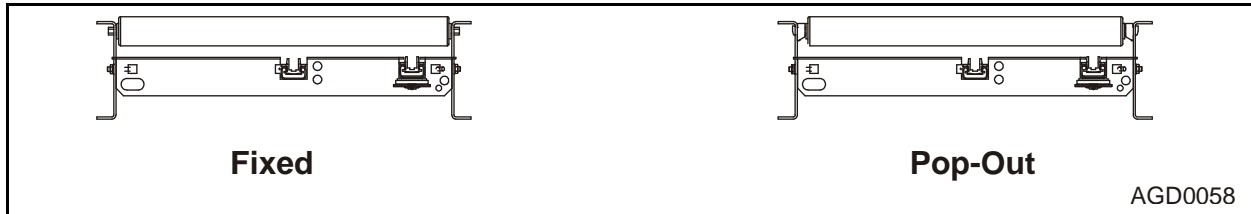


Figure 7 - 8 Pop-Out Carrier Roller Mounting (Intermed. Straight Section ONLY)

Table 7 - 3 Carrier Roller / Mounting-Type Availability

Section Type	Carrier Roller - Mounting-Type	
	Fixed	Pop-Out
Drive	HS, AB, PR	Not Available
Intermediate Straight	HS, AB, PR	AB
Intermediate Curve	AB, HS	Not Available
Intermediate Sawtooth Junction	AB	Not Available
Idler	HS, AB, PR	Not Available

Carrier Roller Centers

Table 7 - 4 Carrier Roller Centers Availability

Section Type	Carrier Roller - Mounting-Type	
	Fixed Mounting	Pop-Out Mounting
Drive	2-inch	Not Available
Intermediate Straight	2-inch, 3-inch, and 4-inch	2-inch, 3-inch and 4-inch
Intermediate Curve	2-inch and 3-inch*	Not Available
Intermediate Sawtooth Junction	2-inch	Not Available
Idler	2-inch	Not Available

(*) Roller Centers measured at curve's Inside Rail

Operational-Zone Control

Accuglide Intermediate Straight Sections consist of a series of air-actuated, operational-zones. Each “local” Operational-Zone (LZ) has low-pressure (10-12 psi) air-actuators that raise/lower the drive chain/pad and track to effect its “powered” (transportation) / “non-powered” (accumulation) state. (Figure 7 - 9).

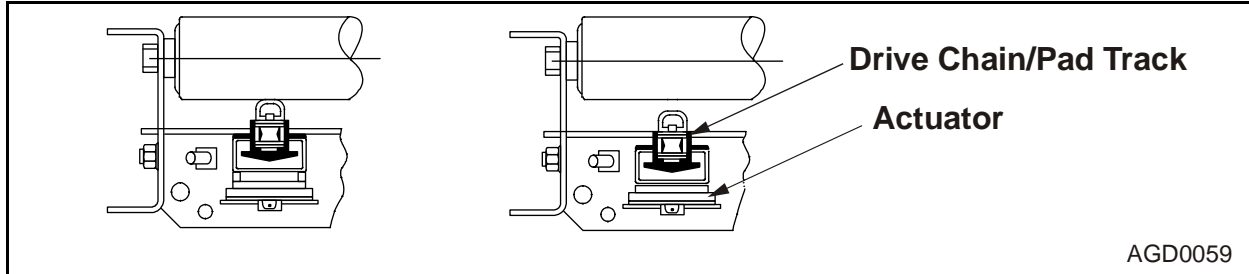


Figure 7 - 9 Drive Chain/Pad and Track - Raised (left); Lowered (right)

Sequential-Zone Control (SZC)

NOTE: Refer to *Accuglide Maintenance Manual, Chapter 3-Controls* for information about Sequential-Zone Control.

Local-Zone Control (LZC)

NOTE: See Control chapter for information about Local- Zone Control.

Sensors

All Intermediate Straight Sections feature a non-contacting, reflective-type photo-eye sensor that is connected to a solenoid-type air valve.

Sensor Positions - 3-Foot Sequentially-Controlled Zones

The product length and the product weight determine the placement of the photo-eye sensor. Refer to *Chapter 3 - Engineering Data* of this manual to determine the correct placement of the photo-eye.

Sensor Positions - 6-Foot Locally-Controlled Zones

The photo-eye sensor is always in the same location. Refer to *Chapter 3 - Engineering Data* of this manual for the correct placement of the photo-eye.

Photo-Eye / Reflector Offset

The reflector is placed a specific distance downstream from the photo-eye. The placement of the reflector is determined by the product shape (box or tapered tote). See Engineering Data chapter of this manual for the correct placement of the reflector.

Description of Operation

Functional Modes

The primary function of a “powered” conveyor is to provide positive, horizontal movement of product along the conveyor.

Accumulation-type powered conveyors have the additional functional requirement of providing product accumulation. Product is queued at the discharge end of the conveyor while upstream product continues to advance towards the accumulation area.

Optional Operational-Modes are available that allow the conveyor to meet the application's flow-rates (acceptance/release).

Operational Modes

Intermediate Straight Sections are available with various operational-modes that affect the product flow-rate (release / acceptance rates).

Intermediate Straight sections feature Solenoid Control Modules (SCM). Each SCM has two (2) solenoid-valves for controlling two (2) adjoining operational-zones. The SCM has the intelligence to allow each Local-Zone's primary operational-mode to be set to meet an application's requirements.

NOTE: When engineering a conveyor system, make sure the operational-mode requirement(s) for each conveyor are shown on the system layout drawing(s).

NOTE: See Controls chapter for more information about operational modes.

Table 7 - 5 shows the installers the field-changes that may be required to the SCM operational-mode settings for the conveyor.

Table 7 - 5 Frame Type Availability

Optional Mode	Zone Length
	3 Feet
Primary	
Singulation (SZC)	Yes(a)
Auto-slug	Yes(b)
Dual-Zone	Yes(b)
Slug	No
Secondary	
Slug	Yes(c)

- (a) Factory setting of SCM.
- (b) SCM(s) must be reset in field.
- (c) Requires Slug-Release Module.

Product Requirements

The following must be considered when engineering a material handling system to ensure satisfactory operation.

Product Weight

Table 7 - 6 Product Weight (Minimum/Maximum)

Primary	
Product - Up to 12 inches long	0*
Product - Over 12 inches long	0*
Secondary	
3-foot long Zone	200 lbs.**

- (*) Minimum Product Weight
- (**) Maximum Product Weight

While there is no minimum product weight limitation, it is important to consider the following two factors.

Product Transportation

Light weight product (less than 2 pounds) may not convey smoothly as they have a tendency to bounce around due to conveyor vibration, air currents, etc. especially at higher speeds.

Product Accumulation

Light weight product stops abruptly upon entering a non-powered operational zone if the rollers have had sufficient time to stop turning. The next, trailing product will bump the non-moving product and push it further into the non-powered zone.

A conveyed product must not exceed the frame's rated capacity of 100 pounds per foot. When conveying heavier product, it is necessary to account for their greater mass and increased momentum.

Heavy products will coast further than light loads into a non-powered zone. This may limit the conveyor's maximum speed especially when handling a mix of load weights.

Product Release

Heavier products restart and accelerate at a slower rate than lighter products. This adversely affects the conveyor's Release Rate. (See the Weight Compensation table in the Engineering Data chapter.)

Product Height - Minimum and Maximum

- Minimum - For Intermediate Straight Sections, the minimum product height should be at least 1 inch to ensure that the photo-eye sensor can detect the conveyed product.
- Maximum - The maximum product height is limited by the ability of an accumulated product to remain upright when its "non-powered" operational zone returns to its "powered" state and/or transferring through an Intermediate Sawtooth Merge Section.

Product Length - Minimum and Maximum

- Minimum - The minimum product length is determined by the roller centers of the conveyor's Intermediate Straight Sections. A product's length must be at least 3X the roller centers to insure that the product is supported by three (3) rollers at all times.
- Maximum - The maximum product length is 48 inches.

Product Width - Minimum and Maximum

- Minimum - The minimum product width should be equal to 3X the roller centers of the Intermediate Section, sufficient to allow the product to properly convey when accidentally turned sideways on the conveyor.
- Maximum - The maximum product width should be equal to the conveyor's width (W) less 2-inches.

The maximum product width should be equal to the conveyor's width (W) less 2 inches.

For a conveyor with an Intermediate Curve Section, the curve's width requirement (see Engineering Data chapter to determine the conveyor's width).

Mixed Product with Varying Widths

The minimum/maximum product width ratio should not exceed 3:1. (See "Product Alignment" on page 16.)

Product Surface(s)

The side surfaces of the product must not reflect the light beam and cause sensor error.

Product must not be transparent or have openings that would allow the photo-eye light beam to pass through and cause sensor error.

Product Structure/Integrity

Products must be able to withstand the momentary impact that may occur when a trailing product coasts into an occupied accumulation zone.

Products transferring onto the main-line via an Intermediate Sawtooth Merge Section must be able to absorb side impact when contacting the merge-section's wheel-face side-guide.

Product Alignment

Positioning product to one side of the conveyor is recommended for maintaining product orientation and reducing the chance of narrow product conveying side by side.

Skewed Carrier Rollers

Carrier Rollers in Intermediate Straight Sections may be "skewed" (one end of a Carrier Roller's axle advanced ahead of the other end) to move a conveyed product to the opposite side of the conveyor.

See Engineering Data chapter for additional information.

Application Considerations

The following must be considered when engineering a material handling system to ensure satisfactory operation.

Conveyor Length

An Accuglide Conveyor is available in 1 inch incremental lengths from a 12-foot minimum* length to a maximum length that is limited by the drive/power unit's capability.

(*) The 12-foot minimum length is based on using: a) an Infeed Drive Section (6 feet long); b) a single-zone Intermediate Straight Section (3 feet long); and c) a Discharge Idler Section (3 feet long).

Multiple Inline Conveyors

When a conveyor-line length requirement exceeds the capability of a single conveyor, two (2) or more Accuglide conveyors will need to be supplied end-to-end that function as a single conveyor. For detailed information for specific instruction on how to properly configure each conveyor, see Installation Procedures chapter.

Flow-Rate

Flow-Rate is the amount of product that a conveyor will transport and is measured in "case-feet-per-minute" (CFPM).

An Accuglide Conveyor must have sufficient Flow Rate to: 1) match or exceed the upstream conveyor's flow-rate; and 2) release sufficient product to meet the downstream conveyor's product flow-rate requirement. Both requirements must be identified.

Selection of the conveyor's operational-mode and speed is based on its flow-rate requirement.

See Engineering Data chapter for further Flow Rate information.

Environmental Conditions

The Accuglide conveyor is suited for operation in temperatures between 40° to 140°F.

NOTE: If product spillage is possible, locate the control module on the outside of the rail.

Do not install the conveyor in:

- Wash down areas.
- Excessive spillage areas. Spillage often occurs downstream of case packers.
- Excessively dirty and corrosive environments.
- Oily product areas. Oily products can cause slippage between the driver pad and the carrier rollers.

Accumulation Density

Accumulation density is a measure of a conveyor's accumulation efficiency (carton-feet of accumulated product per length of a conveyor's accumulation capacity).

The extent that advancing product will accumulate in a non-powered accumulation zone is dependent on: 1) the products' weight, length, bottom surface condition; and 2) the conveyor's width, sensor position, pitch, Carrier Roller(s), and speed.

Refer to Figure 7 - 7 for further information.

Table 7 - 7 Minimum Conveyor Speeds for 100% Accumulation Density

Product Weight	Roller Bearings	Conveyor Speed - fpm			
		Product Length / Sensor Position			
		9-14 inches	14-21 inches	21-24 inches	27-48 inches
		B	B	B	A
5 lbs.	ABEC	200	200	200	*
10 lbs.	ABEC	180	180	200	*
15 lbs.	ABEC	140	140	180	200
25 lbs.	ABEC	120	120	140	200
35 lbs.	ABEC	120	120	120	140
50 lbs.	ABEC	120	120	120	140

*Not recommended.

The conveyor speeds in Figure 7 - 7 are based on the conveyor being fed product at a rate of five (5) cases per minute. This is considered a worst case condition as it allows the Carrier Rollers in the non-powered accumulation to come to rest when the previous product actuates the sensor.

If product is fed at a higher rate, or indexed forward (in singulation mode) then 100% accumulation density is often obtained at the next lower speed (down to a minimum speed of 90 fpm).

Conveyor Speeds

It is recommended that the transportation, accumulation, and release of product be limited to speeds of 240 fpm or less.

If a higher speed is required, the application should be reviewed and the product tested at the desired speed to determine whether it is able to be satisfactorily handled.

To minimize noise and energy usage, select the lowest conveyor speed that will provide the required flow rate and/or accumulation density.

See Engineering Data chapter for further Conveyor Speed information.

Conveyor Pitch

An Accuglide Conveyor should not be inclined (pitched upwards).

While normally used for horizontal operation, the conveyor may be declined (pitched downwards) to suit an application's requirements.

Because product accumulated on a pitched conveyor tends to gravitate, line-pressure at the conveyor's discharge end will result. The amount of line-pressure will depend on the amount of pitch (a 2-inch decline in 12 feet works well; 5 inches in 12 feet is the maximum recommended).

The line-pressure causes the accumulated product to discharge en masse making it difficult to control the release.

Air Supply / Quality

Clean and dry air must be provided for reliable operation of the conveyor's pneumatic controls. The air system must contain suitable driers to produce a pressure dew point temperature that is approximately 10°F below the lowest ambient temperature to which the air lines will be exposed.

Remove compressor "carry-over" oil by filtration with a 5-micron pre-filter and coalescing filter, see Figure 7 - 10.

The accumulation controls Intermediate Straight Sections operate at 12 psi. See Engineering Data chapter for air-consumption information.

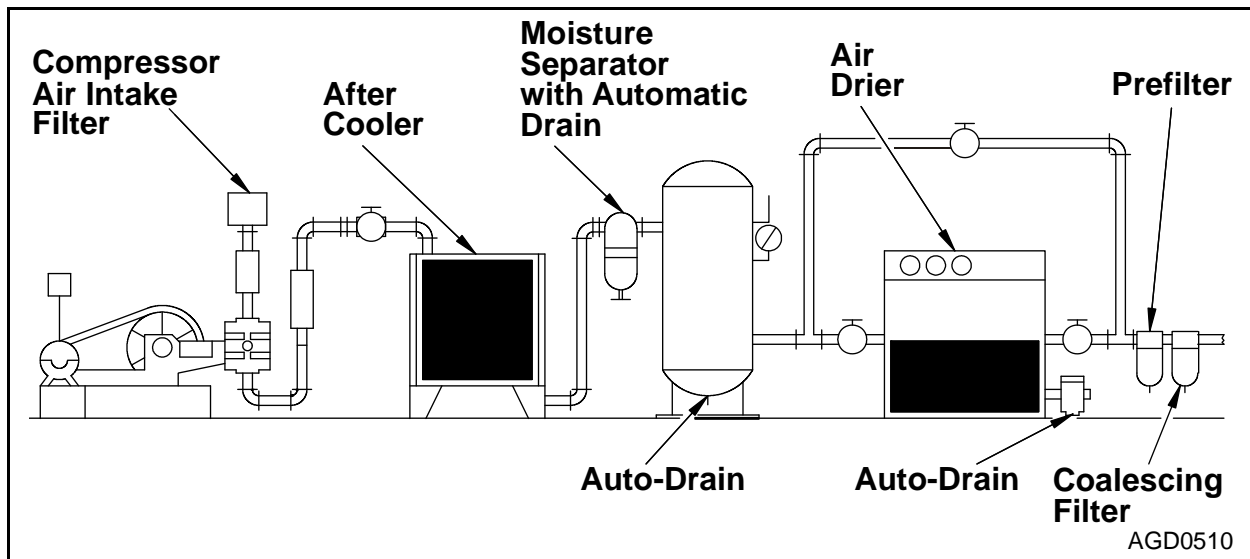


Figure 7 - 10 Typical Air Treatment for Compressed Systems

Pneumatic / Air Supply Components

Accuglide Conveyor Intermediate Straight Sections are shipped with all components pre-piped and all air-lines included. At installation, they are coupled by making a few simple hose connections.

Depending on a conveyor's speed and length, one or more air drops will be required. (See Engineering Data chapter for engineering information and Installation Procedures chapter for installation information.)

8 Component Index

Introduction

The Accuglide Component Index is a listing of all the primary components with a listing of all orderable options.

Accuglide Drives - Direct and Side Mounted

Part Number	Description		
51010400	510 DIRECT DRIVE W/TAKE-UP 6-0		
51010500	510 SIDE MOUNTED DRIVE		
OPTIONS			
Hand	Left Hand	Motor	3/4hp SE Baldor 460-60-3 3PH
	Right Hand		1 hp SE Baldor 460-60-3
Width	16, 22, 28,34, and 40 inches		1.5 hp SE Baldor 460-60-3
Rollers	ABEC		2hp SE Baldor 460-60-3
	HIGH SPEED		3hp SE Baldor 460-60-3
	PREMIUM (Typical)		5hp SE Baldor 460-60-3
Operating Mode	Sick Mounted Inside		3/4hp PE Baldor 460-60-3
	Sick Mounted Outside		1 hp PE Baldor 460-60-3
	Humphrey mounted inside		1.5 hp PE Baldor 460-60-3
	Humphrey mounted outside		2hp PE Baldor 460-60-3
	Transporation Mechanical		3hp PE Baldor 460-60-3
	Transportation Air		5hp PE Baldor 460-60-3
Oiler	Magnetic Oiler		3/4hp SE Baldor 575-60-3
	Solenoid operated Oiler		1 hp SE Baldor 575-60-3
	Solenoid operated Oiler		1.5 hp SE Baldor 575-60-3
Oil Reservoir	1 Litre Capacity		2hp SE Baldor 575-60-3
	1 litre capacity with Low oil switch		3hp SE Baldor 575-60-3
Speed	60, 90, 120, 150, 180, 210, 240, 270		5hp SE Baldor 575-60-3
Tensioner	Spring Tensioner 24V		3/4hp PE Baldor 575-60-3
	Spring Tensioner 115V		1 hp PE Baldor 575-60-3
	Air Tensioner 24V		1.5 hp PE Baldor 575-60-3
	Air Tensioner 115V		2hp PE Baldor 575-60-3
	Air Tensioner 24V W/ pressure switch		3hp PE Baldor 575-60-3
	Air Tensioner 115V w/ pressure switch		5hp PE Baldor 575-60-3

	Motor cont.	3/4 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY
		1 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY
		1-1/2 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY
		2 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY
		3 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY
		5 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY
		3/4 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY
		1 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY
		1-1/2 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY
		2 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY
		3 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY
		5 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY

Accuglide High Speed Drive

Part Number	Description		
51010600	510 UH DRIVE W/TAKE-UP 6-0		
OPTIONS			
Hand	Left Hand	Motor	3hp SE Baldor 460-60-3
	Right Hand		5hp SE Baldor 460-60-3
WIDTH	16"		3hp PE Baldor 460-60-3
	22"		5hp PE Baldor 460-60-3
	28"		3hp SE Baldor 575-60-3
	34"		5hp SE Baldor 575-60-3
	40"		3/4hp PE Baldor 575-60-3
Rollers	ABEC		3hp PE Baldor 575-60-3
	HIGH SPEED		5hp PE Baldor 575-60-3
	PREMIUM (Typical)		3/4 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY
Operating Mode	Transporation Mechanical	1 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY	
	Transportation Air	1-1/2 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY	
Oiler	Magnetic Oiler	2 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY	
	Solenoid operated Oiler	3 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY	
Oil Reservoir	1 Litre Capacity	5 HP 380 VAC, 3PH, 50HZ, STANDARD EFFICIENCY	
	1 litre capacity with Low oil switch	3/4 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY	
Speed	300, 350, 400, 450, 500, 550, 600 and 650	1 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY	

Tensioner	Spring Tensioner 24V	Motor cont.	1-1/2 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY
	Spring Tensioner 115V		2 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY
	Air Tensioner 24V		3 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY
	Air Tensioner 115V		5 HP 380 VAC, 3PH, 50HZ, PREMIUM EFFICIENCY
	Air Tensioner 24V w/ pressure switch		
	Air Tensioner 115V w/ pressure switch		

Accuglide Intermediate Section

Part Number	Description		
51010000	510 INTERMEDIATE SECTION 3'-0"		
51010100	510 INTERMEDIATE SECTION 6'-0"		
51010200	510 INTERMEDIATE SECTION 9'-0"		
51010300	510 INTERMEDIATE SECTION 12'-0"		
OPTIONS			
Hand	Left Hand	Operating Mode	Humphrey mounted inside 3' zone
	Right Hand		Humphrey mounted outside 3' zone
Width	16"	Photo-Eye	Humphrey mounted inside 6' zone
	22"		Humphrey mounted outside 6' zone
	28"		Transporation Mechanical
	34"		Transportation Air
	40"		None
Rollers	Fixed ABEC	Photo-Eye	Prox eye Pos "A" RH drive
	Fixed High Speed		Prox eye Pos "A" LH drive
	PREMIUM (Typical)		
	Pop-out 2.0C ABEC		
	Pop-out 3.0C ABEC		
	Pop-out 3.0C High Speed		
	Pop-out 4.0C ABEC		

NOTE: Pop-out carrier rollers are not available for rollers on 2-inch centers. Pop-out rollers should not be used in overhead situations. When offset side guide and pop-out rollers are selected, the side guide should not be offset to the inside of the conveyor frame.

Accuglide Discharge Idler

Part Number	Description		
51010700	510 DISCHARGE IDLER 3'-0"		
OPTIONS			
Hand	Left Hand	Operating Mode	115v Accumulation
	Right Hand		115V Transportation Air
Width	16"		24V Accumulation
	22"		24V Transportation Air
	28"		Mechanical Transportation
	34"		Photo-Eye
	40"	Prox eye Pos "A" RH drive	
Rollers	Fixed ABEC	Encoder	Prox eye Pos "A" LH drive
	Fixed High Speed		Not Required
	PREMIUMUM (Typical)	Required	
Brake Module	Required		
	non-required		
Air Operated Blade Stop	Not Required		
	Blade Stop AC115V		
	Blade Stop DC24V		

Accuglide Transportation Curves

2'-6" Inside Radius	
Part Number	
51010801	510 CRV 30D ASSY 2-6IR 3C 22BF
51010802	510 CRV 30D ASSY 2-6IR 3C 28BF
51010803	510 CRV 30D ASSY 2-6IR 3C 34BF
51010804	510 CRV 30D ASSY 2-6IR 3C 40BF
51010901	510 CRV 45D ASSY 2-6IR 3C 22BF
51010902	510 CRV 45D ASSY 2-6IR 3C 28BF
51010903	510 CRV 45D ASSY 2-6IR 3C 34BF
51010904	510 CRV 45D ASSY 2-6IR 3C 40BF
51011001	510 CRV 60D ASSY 2-6IR 3C 22BF
51011002	510 CRV 60D ASSY 2-6IR 3C 28BF
51011003	510 CRV 60D ASSY 2-6IR 3C 34BF
51011004	510 CRV 60D ASSY 2-6IR 3C 40BF
51011101	510 CRV 90D ASSY 2-6IR 3C 22BF
51011102	510 CRV 90D ASSY 2-6IR 3C 28BF
51011103	510 CRV 90D ASSY 2-6IR 3C 34BF
51011104	510 CRV 90D ASSY 2-6IR 3C 40BF
51011201	510 CRV 180D ASSY 2-6IR 3C 22BF (90D 1 OF 2)
51011202	510 CRV 180D ASSY 2-6IR 3C 28BF (90D 1 OF 2)
51011203	510 CRV 180D ASSY 2-6IR 3C 34BF (90D 1 OF 2)
51011204	510 CRV 180D ASSY 2-6IR 3C 40BF (90D 1 OF 2)
51011301	510 CRV 180D ASSY 2-6IR 3C 22BF (90D 2 OF 2)
51011302	510 CRV 180D ASSY 2-6IR 3C 28BF (90D 2 OF 2)
51011303	510 CRV 180D ASSY 2-6IR 3C 34BF (90D 2 OF 2)
51011304	510 CRV 180D ASSY 2-6IR 3C 40BF (90D 2 OF 2)
True Taper	
51011401	510 CRV 30D ASSY TT 2C 16BF
51011402	510 CRV 30D ASSY TT 2C 22BF
51011403	510 CRV 30D ASSY TT 2C 28BF
51011404	510 CRV 30D ASSY TT 2C 34BF
51011405	510 CRV 30D ASSY TT 2C 40BF
51011501	510 CRV 45D ASSY TT 2C 16BF

51011502	510 CRV 45D ASSY TT 2C 22BF
51011503	510 CRV 45D ASSY TT 2C 28BF
51011504	510 CRV 45D ASSY TT 2C 34BF
51011505	510 CRV 45D ASSY TT 2C 40BF
51011601	510 CRV 60D ASSY TT 2C 16BF
51011602	510 CRV 60D ASSY TT 2C 22BF
51011603	510 CRV 60D ASSY TT 2C 28BF
51011604	510 CRV 60D ASSY TT 2C 34BF
51011605	510 CRV 60D ASSY TT 2C 40BF
51011701	510 CRV 90D ASSY TT 2C 16BF
51011702	510 CRV 90D ASSY TT 2C 22BF
51011703	510 CRV 90D ASSY TT 2C 28BF
51011801	510 CRV 90D ASSY TT 2C 34BF
51011802	510 CRV 90D ASSY TT 2C 40BF
51011901	510 CRV 180D ASSY TT 2C16BF (90D 1 OF 2)
51011902	510 CRV 180D ASSY TT 2C 22BF (90D 1 OF 2)
51011903	510 CRV 180D ASSY TT 2C 28BF (90D 1 OF 2)
51012001	510 CRV 180D ASSY TT 2C16BF (90D 2 OF 2)
51012002	510 CRV 180D ASSY TT 2C 22BF (90D 2 OF 2)
51012003	510 CRV 180D ASSY TT 2C 28BF (90D 2 OF 2)
51012101	510 CRV 180D ASSY TT 2C34BF (90D 1 OF 2)
51012102	510 CRV 180D ASSY TT 2C 40BF (90D 1 OF 2)
51012201	510 CRV 180D ASSY TT 2C34BF (90D 2 OF 2)
51012202	510 CRV 180D ASSY TT 2C 40BF (90D 2 OF 2)
OPTIONS	
Rollers	Fixed ABEC
	Fixed High Speed
Drip Pan	Required
	Not Required
Operating Mode	Transportation Only Mechanical
	Transportation Humphrey controls Mechanical
	Transportation Only air
	Transportation Humphrey controls Air

Accuglide Saw-Tooth Merge

Part Number	Description	
51016800	510 30 DEG SAWTOOTH MRG 2C W22	
51016900	510 30 DEG SAWTOOTH MRG 2C W28	
51017000	510 30 DEG SAWTOOTH MRG 2C W34	
51017100	510 30 DEG SAWTOOTH MRG 2C W40	
51017200	510 45 DEG SAWTOOTH MRG 2C W22	
51017300	510 45 DEG SAWTOOTH MRG 2C W28	
51017400	510 45 DEG SAWTOOTH MRG 2C W34	
51017500	510 45 DEG SAWTOOTH MRG 2C W40	
OPTIONS		
Hand	Left Hand	
	Right Hand	
Rollers	Fixed ABEC	
	Fixed High Speed	
	PREMIUM (Typical)	

Accessories

The following components are common and optional for all Accuglide Conveyors. For detailed specifications, see Accessories chapter.

Accuglide Accessories

Part No.	Description
FK420012	9.75/6.5 Trans Brkt Field Kit
29001300	Drip Pan
70074201	Air Control Assy Kit (Filter/Reg)
23380501	Slug Terminator Cord 0-6 Black
23380502	Power Isolation Cord
23381000	510 Power Supply Installation 24V
51043100	BM Curve Air Control 3-0
51043200	BM Curve Air Control 3-0
51043301	BM Curve System Control 3-0
51043302	BM Curve System Control 3-0
51043501	BM IS System Control 3-0
51043502	BM IS System Control 3-0
51043700	Interface Head-Tail Field Kit
51043800	Field Cut Kit Template
6-09723	Package Stop Angle Type
FK410241	Additional Splice Plate Kit
51046500	Terminal End Cover
10005900	Knee Brace
12012001	Guide Transition End 2.50 in.
12012002	Guide Transition End 6.50 in.
12012003	Guide Transition End 10.00 in.
12012007	Guide Transition End 7.50 in.
12012101	Guide Transition End 2.50 in.
12012102	Guide Transition End 6.50 in.
12012103	Guide Transition End 10.00 in.
12012107	Guide Transition End 7.50 in.
12013201	Guide Transition End 10.00 in.
12013202	Guide Transition End 6.50 in.
12013203	Guide Transition End 10.00 in.
12013204	Guide Transition End 10.00 in.
12013205	Guide Transition End 6.50 in.
12013206	Guide Transition End 10.00 in.
12019601	Guide Rail PE 6ft. LG 3ft. ZN 2.5in. H Assy
12019602	Guide Rail PE 6ft. LG 6ft. ZN 2.5in. H Assy
12019701	Guide Rail PE 12ft. LG 3ft. ZN 2.5in. H Assy
12019702	Guide Rail PE 12ft. LG 6ft. ZN 2.5in. H Assy

12019801	Guide Rail PE 12ft. LG 3ft. ZN 10.0in. H Assy
12019802	Guide Rail PE 12ft. LG 6ft. ZN 10.0in. H Assy
12019901	Guide Rail PE 12ft. LG 3ft. ZN 10.0in. H Assy
12019902	Guide Rail PE 12ft. LG 6ft. ZN 10.0in. H Assy
12017901	Guide Rail SKWL PE 6ft. LG 3ft. ZN 2.5in. H Assy
12017902	Guide Rail SKWL PE 6ft. LG 6ft. ZN 2.5in. H Assy
12018001	Guide Rail SKWL PE 12ft. LG 3ft. ZN 2.5in. H Assy
12018002	Guide Rail SKWL PE 12ft. LG 6ft. ZN 2.5in. H Assy
12018101	Guide Rail SKWL PE 6ft. LG 3ft. ZN 6.5in. H Assy
12018202	Guide Rail SKWL PE 6ft. LG 6ft. ZN 6.5in. H Assy
12018301	Guide Rail SKWL PE 12ft. LG 3ft. ZN 6.5in. H Assy
12018302	Guide Rail SKWL PE 12ft. LG 6ft. ZN 6.5in. H Assy
12018401	Guide Rail SKWL PE 6ft. LG 3ft. ZN 10.0in. H Assy
12018402	Guide Rail SKWL PE 6ft. LG 6ft. ZN 10.0in. H Assy
12019501	Guide Rail SKWL PE 12ft. LG 3ft. ZN 10.0in. H Assy
12019502	Guide Rail SKWL PE 12ft. LG 6ft. ZN 10.0in. H Assy
12018401	Guide Rail SKWL REFL 6ft. LG 3ft. ZN 2.5in. H Assy
12018402	Guide Rail SKWL REFL 6ft. LG 6ft. ZN 2.5in. H Assy
12018501	Guide Rail SKWL REFL 12ft. LG 3ft. ZN 2.5in. H Assy
12018502	Guide Rail SKWL REFL 12ft. LG 6ft. ZN 2.5in. H Assy
12018601	Guide Rail SKWL REFL 6ft. LG 3ft. ZN 6.5in. H Assy
12018602	Guide Rail SKWL REFL 6ft. LG 6ft. ZN 6.5in. H Assy
12018701	Guide Rail SKWL REFL 12ft. LG 3ft. ZN 6.5in. H Assy
12018702	Guide Rail SKWL REFL 12ft. LG 6ft. ZN 6.5in. H Assy
12018801	Guide Rail SKWL REFL 6ft. LG 3ft. ZN 10.0in. H Assy
12018802	Guide Rail SKWL REFL 6ft. LG 6ft. ZN 10.0in. H Assy
12018901	Guide Rail SKWL REFL 12ft. LG 3ft. ZN 10.0in. H Assy
12018902	Guide Rail SKWL REFL 12ft. LG 6ft. ZN 10.0in. H Assy
12000600	Skate Wheel Side Guard Assy 1.33"
12000601	Skate Wheel Side Guard Assy 5.33"
12000602	Skate Wheel Side Guard Assy 8.83"
12002401	SG 30 DEG IR CRV 30" Rad. 2.50" H
12002402	SG 30 DEG IR CRV 30" Rad. 6.50" H
12002403	SG 30 DEG IR CRV 30" Rad. 10.00" H
12002404	SG 30 DEG IR CRV 40" Rad. 2.50" H
12002405	SG 30 DEG IR CRV 40" Rad. 6.50" H
12002406	SG 30 DEG IR CRV 40" Rad. 10.00" H
12002407	SG 30 DEG IR CRV 50" Rad. 2.50" H
12002408	SG 30 DEG IR CRV 50" Rad. 6.50" H

12002409	SG 30 DEG IR CRV 50" Rad. 10.00" H
12002410	SG 30 DEG IR CRV 60" Rad. 2.50" H
12002411	SG 30 DEG IR CRV 60" Rad. 6.50" H
12002412	SG 30 DEG IR CRV 60" Rad. 10.00" H
12002601	SG 45 DEG IR CRV 30" Rad. 2.50" H
12002602	SG 45 DEG IR CRV 30" Rad. 6.50" H
12002603	SG 45 DEG IR CRV 30" Rad. 10.00" H
12002604	SG 45 DEG IR CRV 40" Rad. 2.50" H
12002605	SG 45 DEG IR CRV 40" Rad. 6.50" H
12002606	SG 45 DEG IR CRV 40" Rad. 10.00" H
12002607	SG 45 DEG IR CRV 50" Rad. 2.50" H
12002608	SG 45 DEG IR CRV 50" Rad. 6.50" H
12002609	SG 45 DEG IR CRV 50" Rad. 10.00" H
12002610	SG 45 DEG IR CRV 60" Rad. 2.50" H
12002611	SG 45 DEG IR CRV 60" Rad. 6.50" H
12002612	SG 45 DEG IR CRV 60" Rad. 10.00" H
12003201	SG 90 DEG IR CRV 30" Rad. 2.50" H
12003202	SG 90 DEG IR CRV 30" Rad. 6.50" H
12003203	SG 90 DEG IR CRV 30" Rad. 10.00" H
12003204	SG 90 DEG IR CRV 40" Rad. 2.50" H
12003205	SG 90 DEG IR CRV 40" Rad. 6.50" H
12003206	SG 90 DEG IR CRV 40" Rad. 10.00" H
12003207	SG 90 DEG IR CRV 50" Rad. 2.50" H
12003208	SG 90 DEG IR CRV 50" Rad. 6.50" H
12003209	SG 90 DEG IR CRV 50" Rad. 10.00" H
12003210	SG 90 DEG IR CRV 60" Rad. 2.50" H
12003211	SG 90 DEG IR CRV 60" Rad. 6.50" H
12003212	SG 90 DEG IR CRV 60" Rad. 10.00" H
51023501-510	510 Track SOL-OIL 115V AC
51023502-510	510 Track SOL-OIL 24V AC
51020300-510	Magnetic Sensor Chain Lubricator Assembly
23381700	510 Cable Tee Power Humphrey
51007701	Case Stop Assembly, Idler W16 115V
51007702	Case Stop Assembly, Idler W22 115V
51007703	Case Stop Assembly, Idler W28 115V
51007704	Case Stop Assembly, Idler W34 115V
51007705	Case Stop Assembly, Idler W40 115V
51007706	Case Stop Assembly, Idler W16 24V
51007707	Case Stop Assembly, Idler W22 24V
51007708	Case Stop Assembly, Idler W28 24V
51007709	Case Stop Assembly, Idler W34 24V
51007710	Case Stop Assembly, Idler W40 24V
51007800	610 Idler Drop In Brake Module
51044100	510 Drop In 3ft Brake Module
51044000	Field Kit 510 3ft Brake Module

41048200	Interface Head-Tail Field Kit (Gen 2)
12012601	Side Guide MRG/DIV Plain 20DEG 2.50"H
12012602	Side Guide MRG/DIV Plain 30DEG 2.50"H
12012603	Side Guide MRG/DIV Plain 45DEG 2.50"H
12012604	Side Guide MRG/DIV Plain 20DEG 6.50"H
12012605	Side Guide MRG/DIV Plain 30DEG 6.50"H
12012606	Side Guide MRG/DIV Plain 45DEG 6.50"H
12012607	Side Guide MRG/DIV Plain 20DEG 10.00"H
12012608	Side Guide MRG/DIV Plain 30DEG 10.00"H
12012609	Side Guide MRG/DIV Plain 45DEG 10.00"H
12012610	Side Guide MRG/DIV Plain 45DEG 7.50"H
12012501	Side Guide Bullnose Rail 30 DEG 2.50"H
12012502	Side Guide Bullnose Rail 30 DEG 6.50"H
12012503	Side Guide Bullnose Rail 30 DEG 10.00"H
12012504	Side Guide Bullnose Rail 30 DEG 7.50"H
51023300-510	Oil Reservoir Assembly 1 Liter
51023400-510	Oil Reservoir Assembly 1 Liter with Float Switch
51022000	510 HD Spring Tensioner (52210B)
5102300-510	Cylinder Tensioner
51025700	Switch Assembly
24024200	High Pressue Regulator
51021201	510 Chain RC50 W/EXT PIN
51024000	510 Connection Link RC50 W/EXT PIN
51021301	510 Pad Driver W/Wear Indicator
70074200	P610 Filter/Regulator MTG Kit (VCC-823)
23381000	510 Power Supply Installation 24V
FK410241	Splice Flat
FK510384	Splice Angle for Curves and Drive
51045100	510 Skewed Driver Field Kit
51024901	Cable Humphrey Connector 1-0
51024902	Cable Humphrey Connector 2-0
51024903	Cable Humphrey Connector 3-0
51024904	Cable Humphrey Connector 4-0
51024905	Cable Humphrey Connector 6-0
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