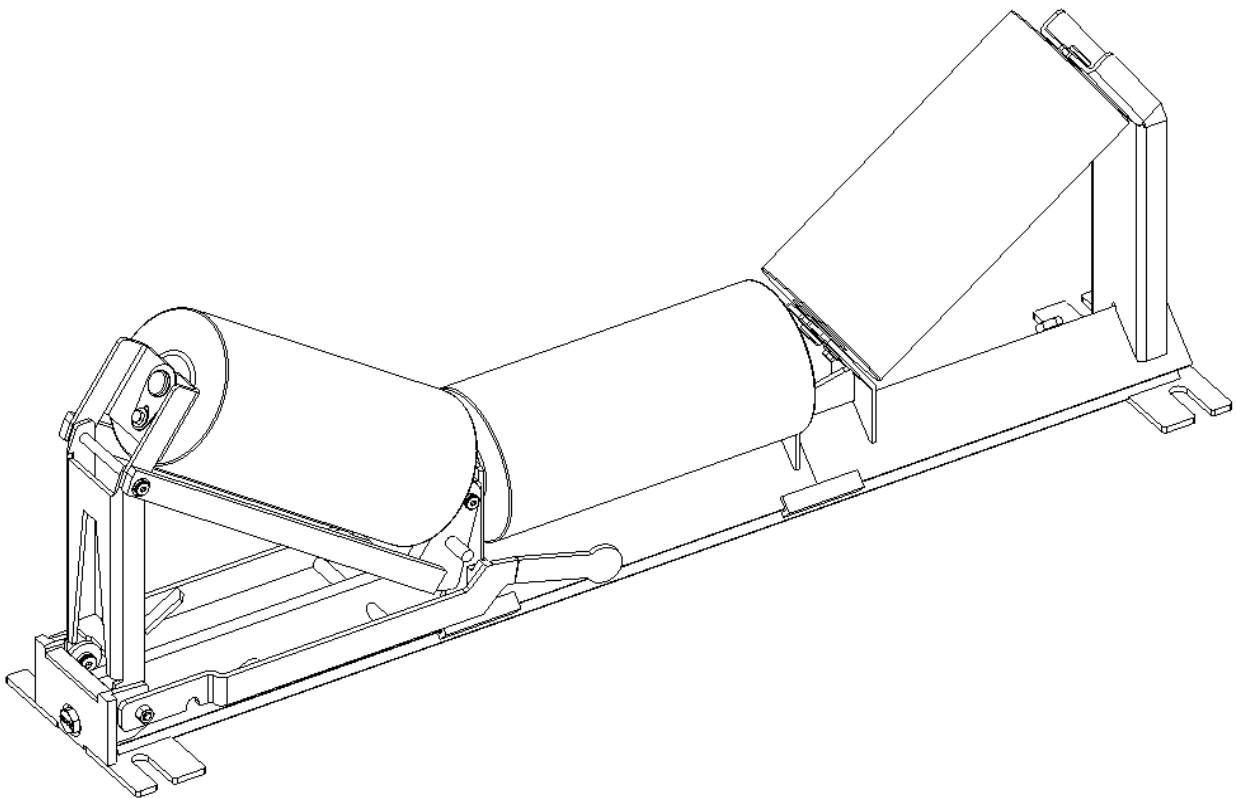


BENETECH. **MaxZone™**

**Drop and Slide Out Idler Assembly,
Installation, Operation & Maintenance
Manual**



BENETECH® 

! IMPORTANT !

BENETECH, INC. HEREBY DISCLAIMS ANY LIABILITY FOR, BUT NOT LIMITED TO:

- IMPROPER INSTALLATION OF EQUIPMENT
- IMPROPER SIZING OF EQUIPMENT
- DAMAGE DUE TO CONTAMINATION OF MATERIAL
- USER'S FAILURE TO INSPECT EQUIPMENT
- USER'S FAILURE TO MAINTAIN EQUIPMENT
- USER'S FAILURE TO TAKE REASONABLE CARE OF THE EQUIPMENT
- INJURIES OR DAMAGE RESULTING FROM USE OR APPLICATION OF THIS PRODUCT CONTRARY TO INSTRUCTIONS AND SPECIFICATIONS CONTAINED HEREIN.

BENETECH, INC.'S LIABILITY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF EQUIPMENT SHOWN TO BE DEFECTIVE.

! SAFETY !

Review and understand all safety rules given herein along with local and Governmental standards and regulations. Know and understand the American National Standards Institute (ANSI) z244.1-1982 lockout/tagout procedures, the American National Standard for Personal Protection - Lockout/Tagout of Energy Sources - Minimum Safety Requirements and the Occupational Safety and Health Administration (OSHA) Federal Register, Part IV, 29 CFR Part 1910, Control of Hazardous Energy Source (Lockout/Tagout); Final Rule.

Also observe all local and Governmental regulations concerning entry into confined spaces, welding, cutting, grinding, wash-down procedures and all Personal Protective Equipment (PPE) regulations.

The following notations are used throughout in this manual.

! DANGER !

Danger: Denotes immediate hazards that will result in severe personal injury or

! WARNING !

Warning: Denotes hazards or unsafe practices that could result in personal

! CAUTION !

Caution: Denotes hazards or unsafe practices that could result in product or property damages.

! IMPORTANT !

Important: Denotes instructions that must be followed for proper installation and/or operation of equipment.

! NOTE !

Note: Denotes general items to assist the reader/installer/operator.

Please pay close attention to all of these items and warnings. They have been included here for your safety and for ease of installation.

Table of Contents

Introduction.....	4
Safety	5-6
Before Installation.....	6-7
Installation	8-13
Operation and Maintenance	14-15
Part Numbers	16
References	17
Appendix.....	18-19

Introduction

The Benetech Drop and Slide Out Idler is a carrying side conveyor belt idler and is used on the cargo carrying side of the conveyor belt. The unique design of this idler allows it to be installed where one side of the conveyor system may have very limited or no access thus preventing normal idler maintenance.

The Benetech Drop and Slide Out Idler incorporates a retractable, side support roller unit which is accessed from the serviceable side of the conveyor. When in the retracted position, the roller unit simply slides out from underneath the existing conveyor belt allowing for easy roller inspection or replacement.

Placement of the idler is most common in transfer point or load zone areas but can be used anywhere on the carrying side of the conveyor belt.

In addition to allowing one sided access for idler roll inspection or replacement, the side support roller unit can be installed on any matching Benetech Simple Slide Idler frame. This unique feature means the Drop and Slide Out Idler can be added at a future date should the need arise due to changes to existing conveyance systems.

There are a lot of different sizes and types of idlers, made by multiple manufacturers, so it's critical that the correct size and type are ordered to minimize problems in the conveying system. Incorrect idler sizing or specification can lead to belt damage, cargo spillage, premature equipment failure, or other even more catastrophic events. Care must be taken to order and use the correct size frames and idlers in a conveying system.

Upon installation of the Drop and Slide Out Idler (s), the alignment and height should match the other idlers in the conveying system. Verification of this is critical to prevent problems in cargo transport or in the other equipment being used. If this is a concern there are companies available who specialize in conveyor and conveying system alignment that can be utilized to qualify or correct potential issues.

In some cases the materials used in the construction of the idler frames or idler rolls may not be compatible with the material being handled, and contamination of the conveyed product can occur. If the material being processed can be contaminated in any way through the use of this product it is the user's responsibility to take the necessary steps to prevent contamination.

Consult BENETECH, INC. if you suspect there may be material incompatibility issues or you have questions about product application and use, we can provide recommendations for your specific application.

Safety

All safety rules defined in this document and all owner/employer as well as State and Federal safety rules must be strictly adhered to when working on/with this, or any equipment.

! DANGER !

Do not touch or go near the conveyor belt or conveyor accessories when the belt is running. Your body or clothing can get caught and you can be pulled into the conveyor, resulting in severe injury or death.



! DANGER !

Before installing, servicing, or adjusting the equipment, turn off AND lock out/tag out all energy sources to the conveyor and conveyor accessories according to ANSI standards. Failure to do so could result in serious injury or death.

! DANGER !

If this equipment is to be installed in an enclosed area, observe all confined space entry regulations and test the atmosphere for gas levels and dust content levels before using a cutting torch, welding equipment or electric hand tools. Using a torch, welding, grinding or drilling in an area with gas or dust may cause an explosion and/or fire resulting in serious injury or death.

! WARNING !

Before using a cutting torch, welders, or grinding equipment, cover the conveyor belt with a fire retardant/resistant cover. Make sure a water source/fire hose is readily available AND OPERATIONAL. Failure to do so can allow the belt to catch fire.

! WARNING !

Conveyor components are heavy and require two people to lift. Attempting to lift the equipment without assistance could result in injuries or damage to the equipment.



!WARNING!

Remove all tools, parts, trash, and foreign objects from the installation area and conveyor belt before turning on the conveyor. Failure to do so can result in serious personal injury or damage to the belt and conveyor.

Before Installation

1. Inspect ALL shipping containers for damage and correct number of items (skids, pallets, cartons, boxes, etc.) being delivered. Report damage and/or shortages to delivery service immediately and fill out delivery service's claim form. Keep ALL damaged goods for examination. Benetech Inc is NOT responsible for damage occurring during transit.
2. All Benetech Inc. Conveyor Components are shipped from our facilities fully assembled. Care should be taken while disassembling the units to ensure no parts are lost or damaged as the equipment is moved to its desired location. Dispose of shipping containers in approved manner.
3. If any items are missing, IMMEDIATELY contact BENETECH, INC. or an authorized representative.

!IMPORTANT!

Note: Mounting hardware and shims are NOT provided with Benetech Inc. Drop and Slide Out Idlers if they are purchased as a single conveyor component purchase order (without Additional products as part of an engineered job). Typical hardware needed in four locations is shown in Figure B.I.3 below for troughing idlers. Actual bolt length is dependent on conveyor specific geometry and if any shims are required. Consult the Appendix for CEMA CLASS bolt

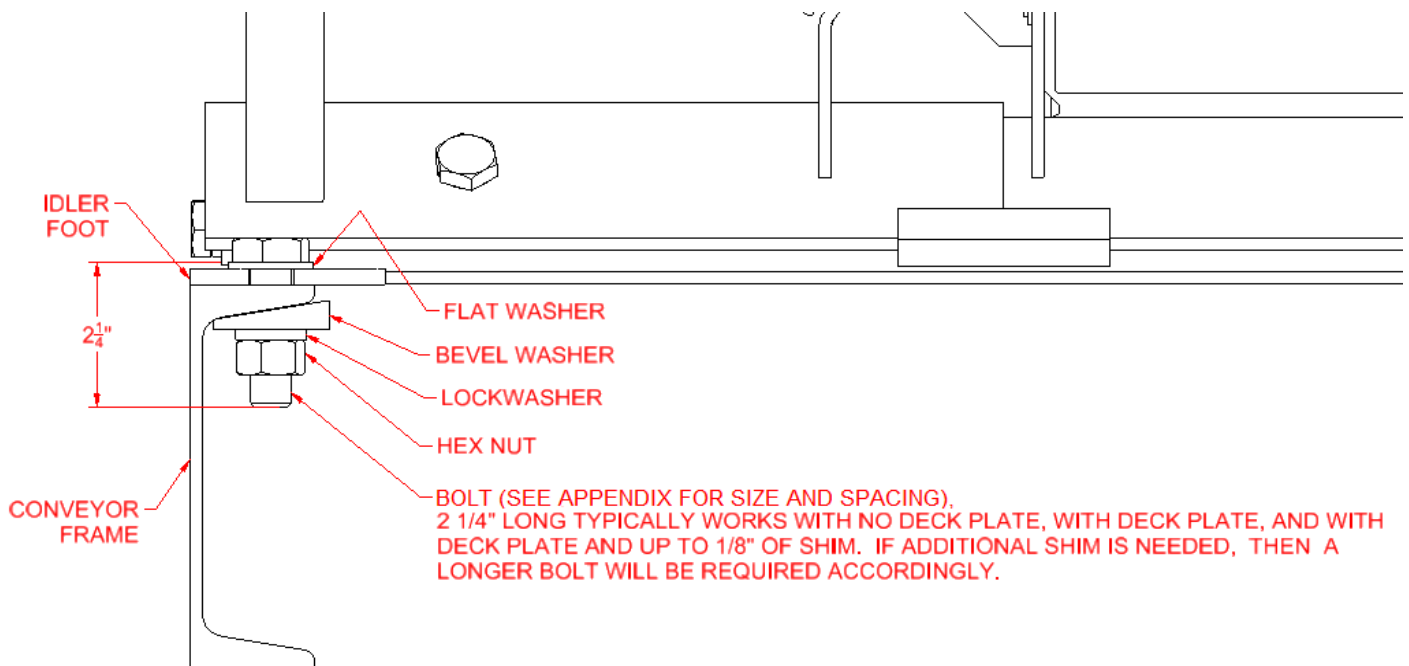


Figure B.I.3

4. Gather tools. Minimum tools required for installation are:

- Tape Measure/String
- Drill (appropriate for the size holes being drilled)
- Torch
- Level/Straight Edge
- Open/Box End Wrenches
- Socket Set

5. Turn off and lock out/tag out energy source according to plant specific procedures (see “References”) and local plant regulations.



! WARNING !

Customer Facility Safety Protocols must be adhered to regarding the use of Any spark or flame producing equipment.

Installation

! IMPORTANT !

Read entire section before beginning work.

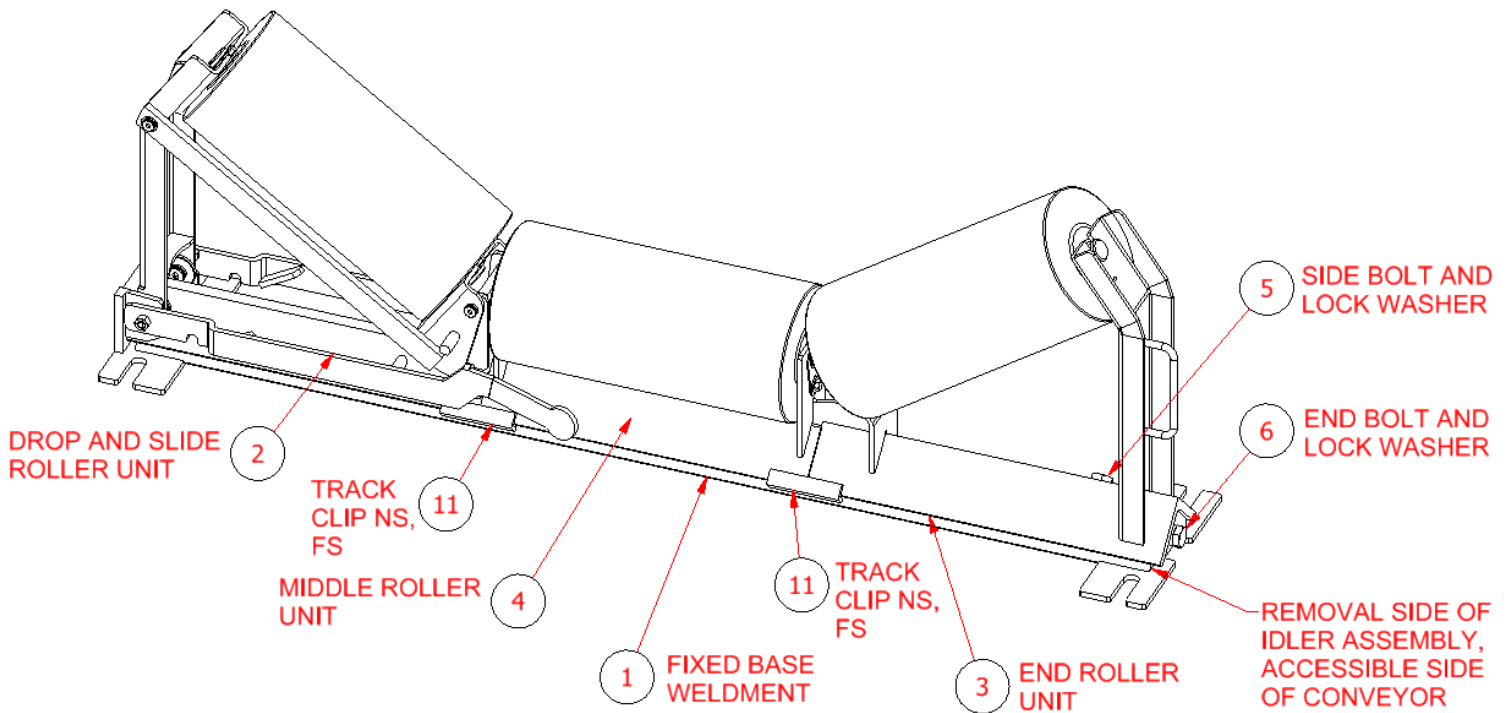


Figure 1

1. Remove or relocate any existing idlers or belt support cradles as necessary.
2. Remove the three roller units of the Drop and Slide Out Idler as shown in Figure 1.
3. Mount the Fixed Base Weldment (1) to the conveyor structure or decking such that the End Lock Plate (7) is mounted toward the inaccessible side of the conveyor, see Figure 2 below. For troughing and picking idlers, consult the APPENDIX as needed for proper spacing and hardware size. Mounting hardware is not provided however, a typical example is shown in Figure B.I.3 on page 6.

! IMPORTANT !

Note: Any new or existing bolt mounting holes should not exceed the CEMA CLASS specification dimension "B" span as documented in the APPENDIX and Reference 3. Contact a Benetech Inc. representative if unsure of the proper bolting span.

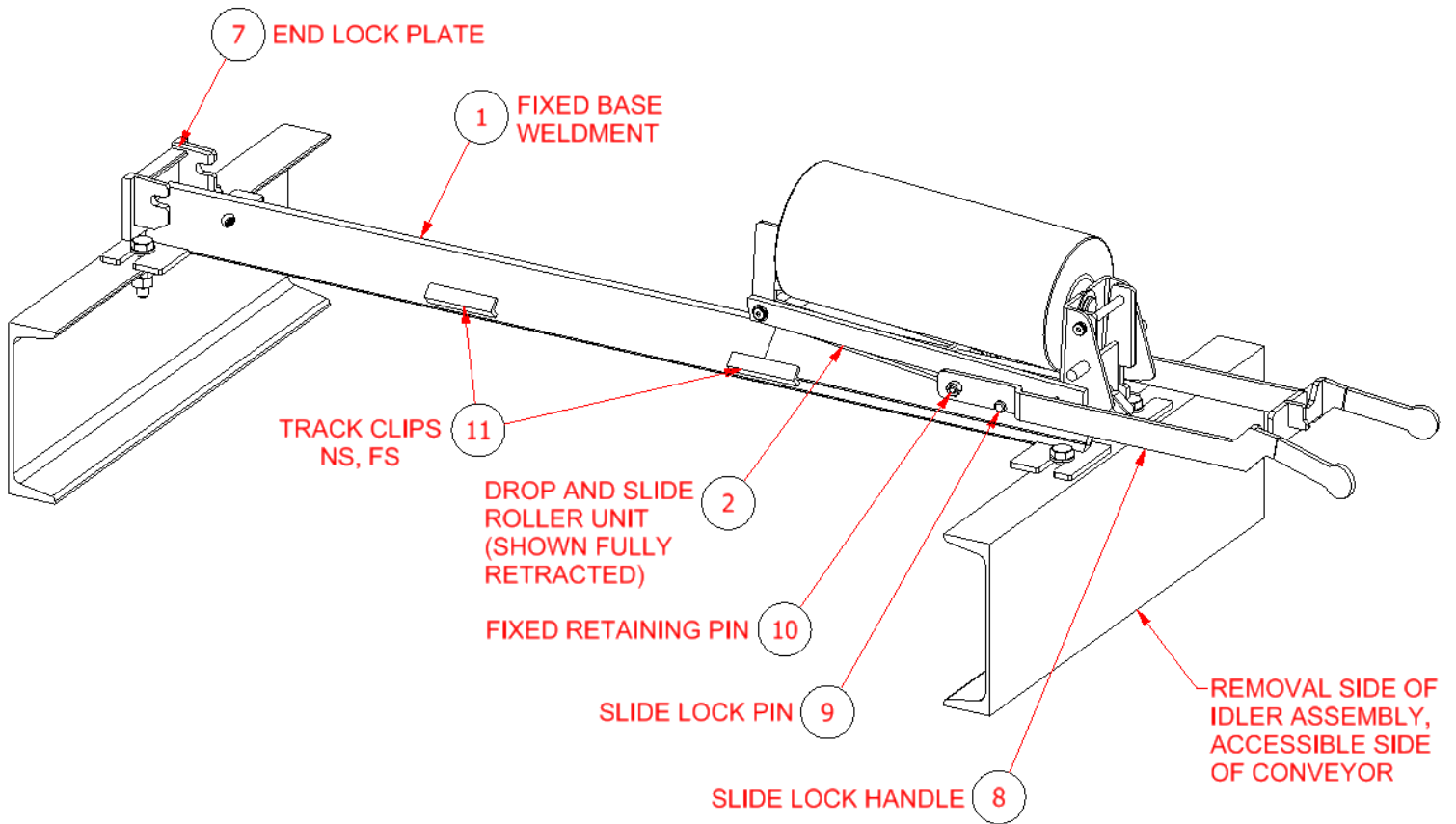


Figure 2

4. Slide the Drop and Slide Roller Unit (2) onto Fixed Base Weldment (1). This must be done from the accessible side of the conveyor (which may be opposite of side illustrated in Figure 2). Note; when properly installed, all roller units will be slid under the Track Clips (11).
5. With the Slide Lock Handle (8) properly engaged with the Slide Lock Pin (9) as shown in Figure 2, slide the Drop and Slide Roller Unit (2) toward the End Lock Plate (7) until the unit stops fully against it as shown in Figure 3 below.

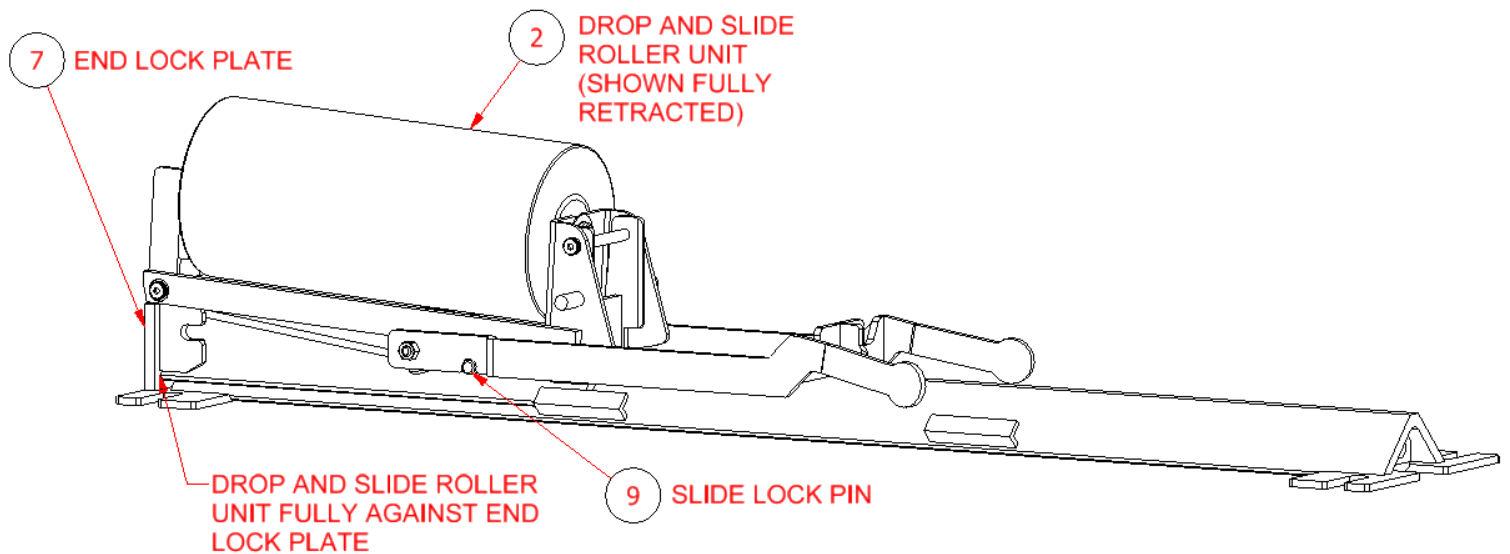


Figure 3

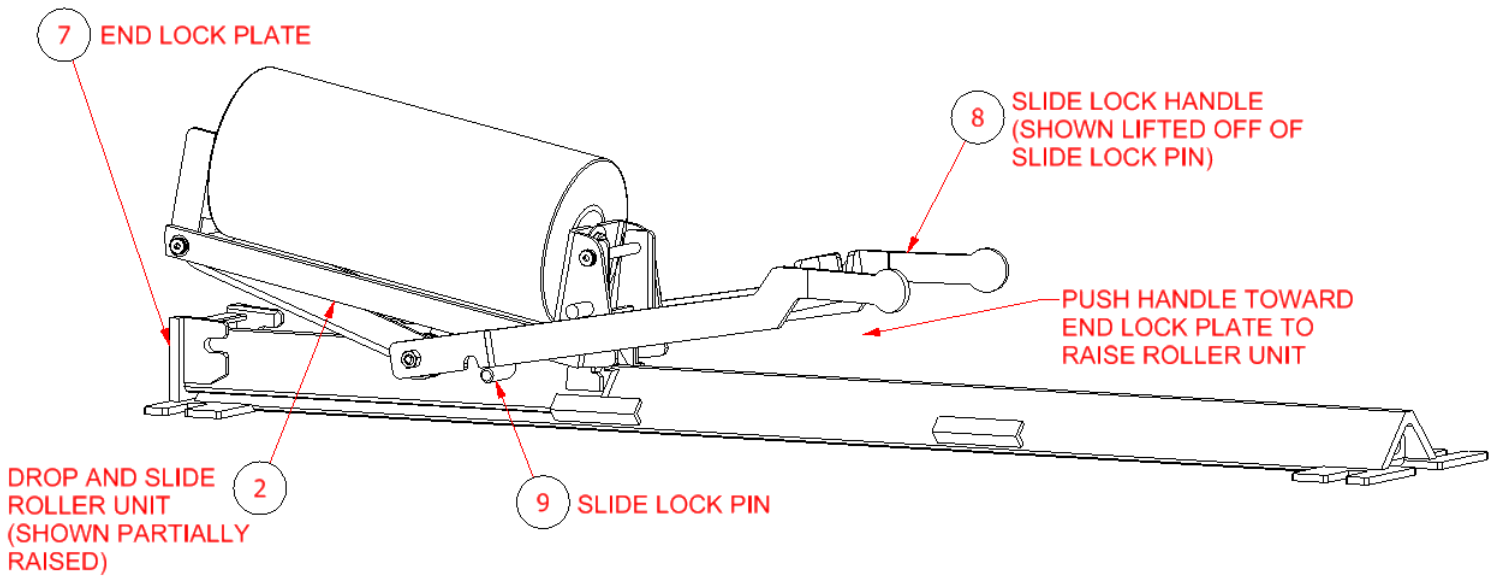


Figure 4

- With the Drop and Slide Roller Unit (2) fully stopped against the End Lock Plate (7), lift the Slide Lock Handle (8) such that it disengages from the Slide Lock Pin (9) and push the handle forward as illustrated in Figure 4 above. Continue pushing on the handle until the unit is in the fully upright position as illustrated in Figure 5 below.

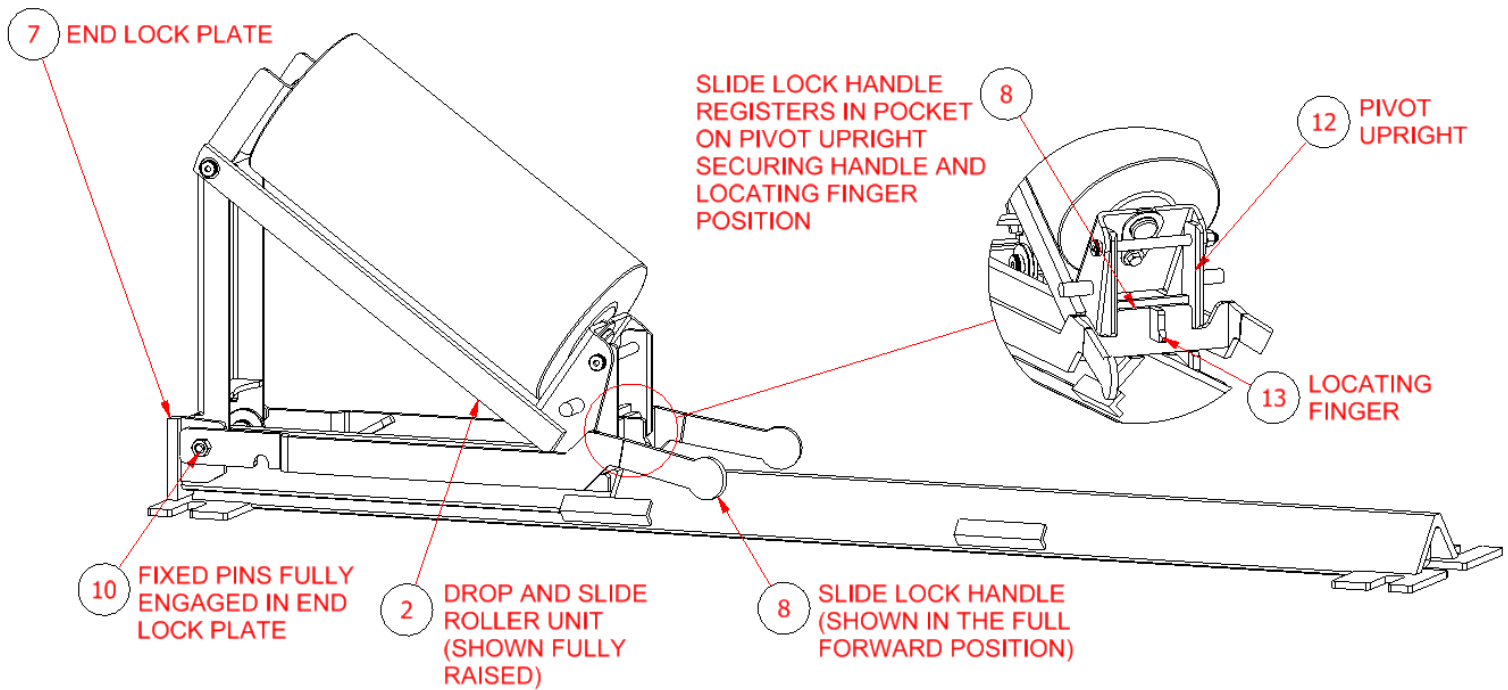


Figure 5

- With the Drop and Slide Roller Unit (2) fully installed, slide the Middle Roller Unit (4) onto the Fixed Base Weldment (1) and slide the unit forward until it stops fully against the Drop and Slide Roller Unit (2). See Figure 6 and Figure 7 below for illustration.

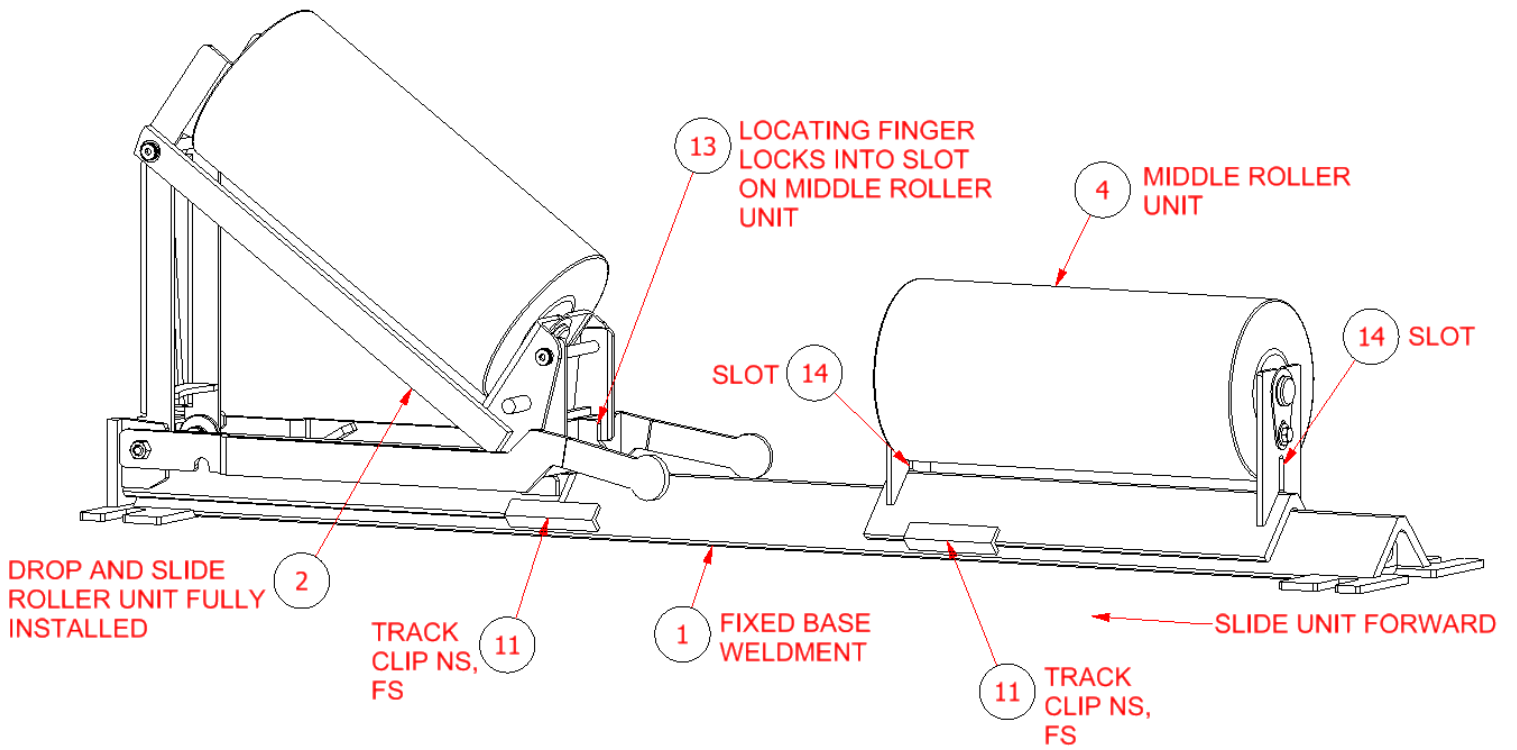


Figure 6

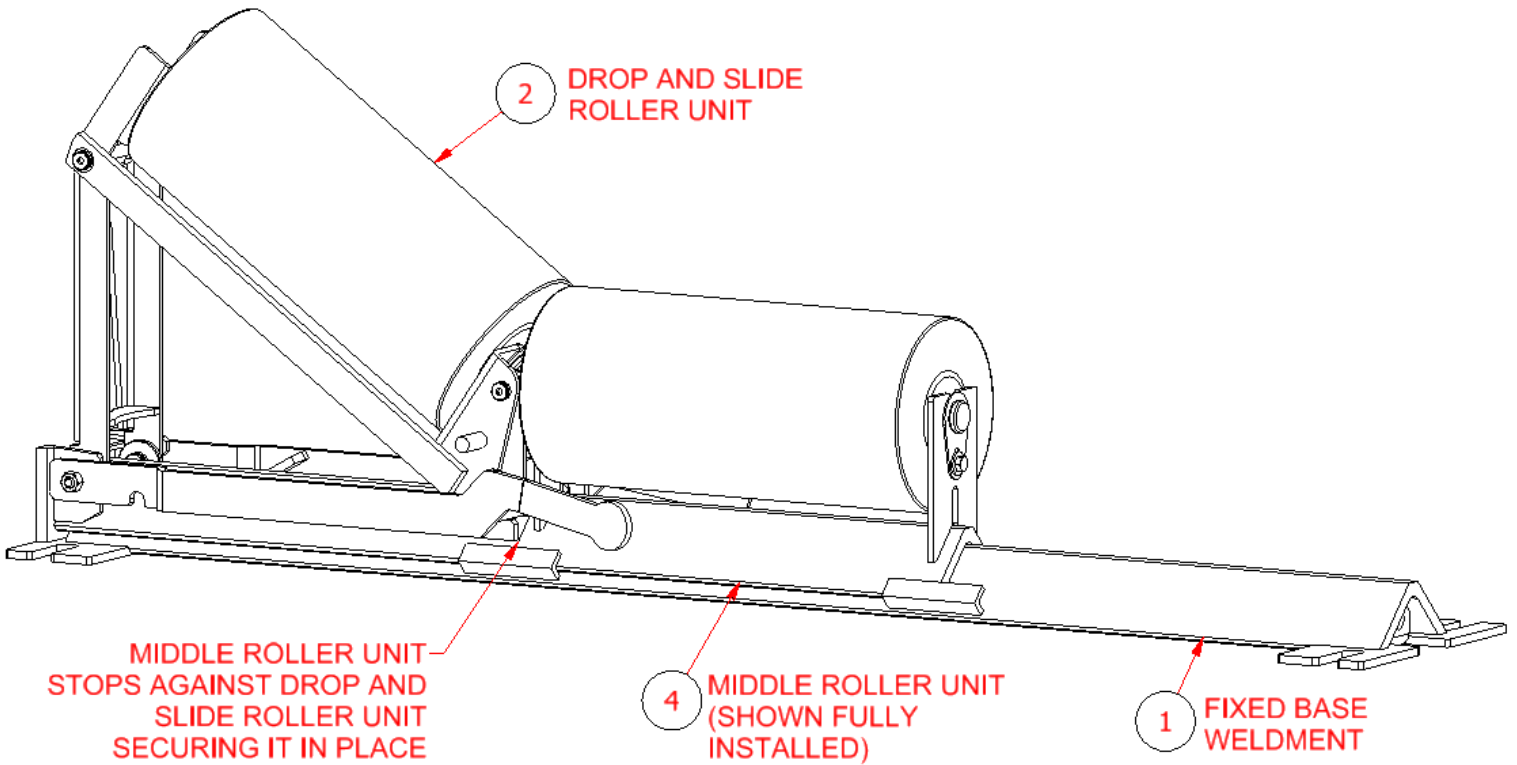


Figure 7

8. With the Middle Roller Unit (4) fully installed, slide the End Roller Unit (3) onto the Fixed Base Weldment (1) and slide the unit forward until it stops fully against the Middle Roller Unit (4). See Figure 8 and Figure 9 below for illustration.

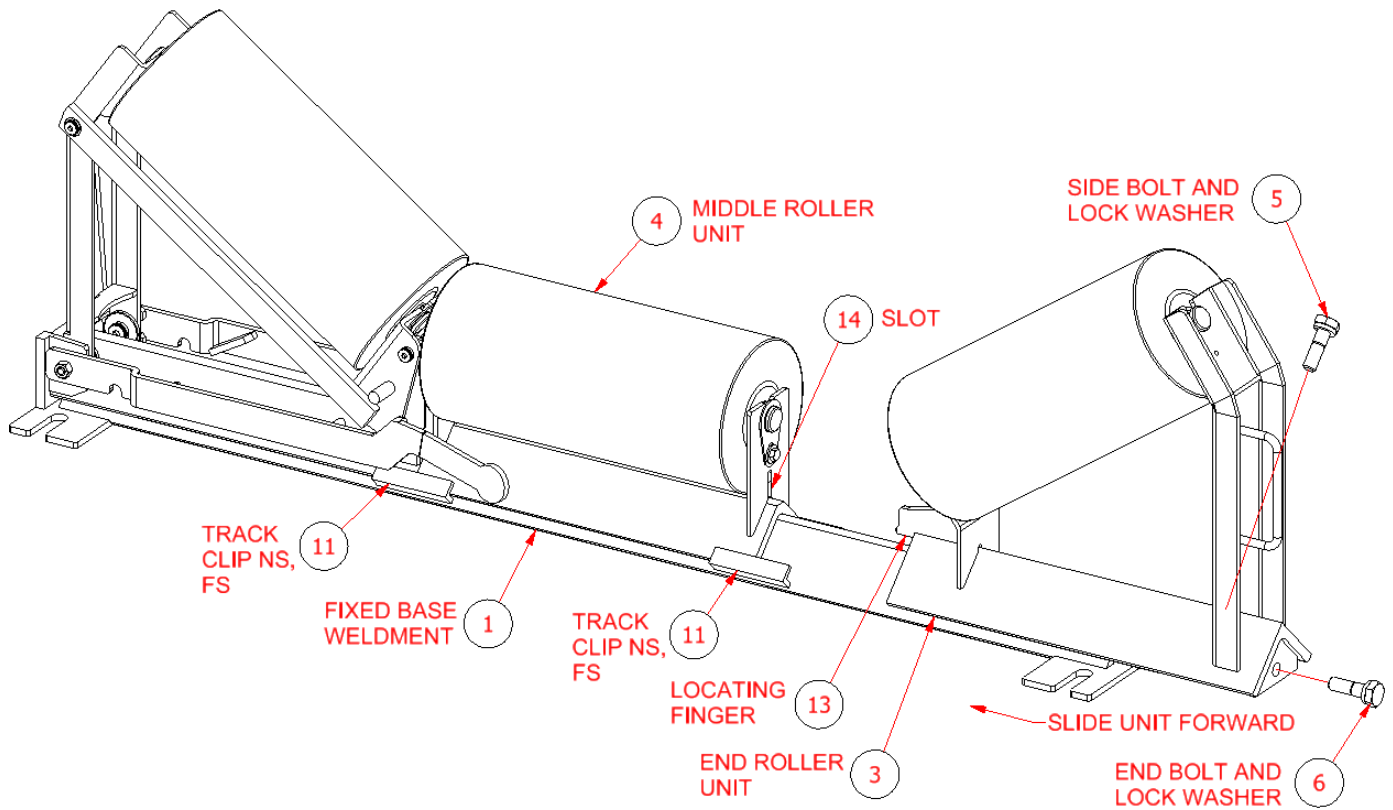


Figure 8

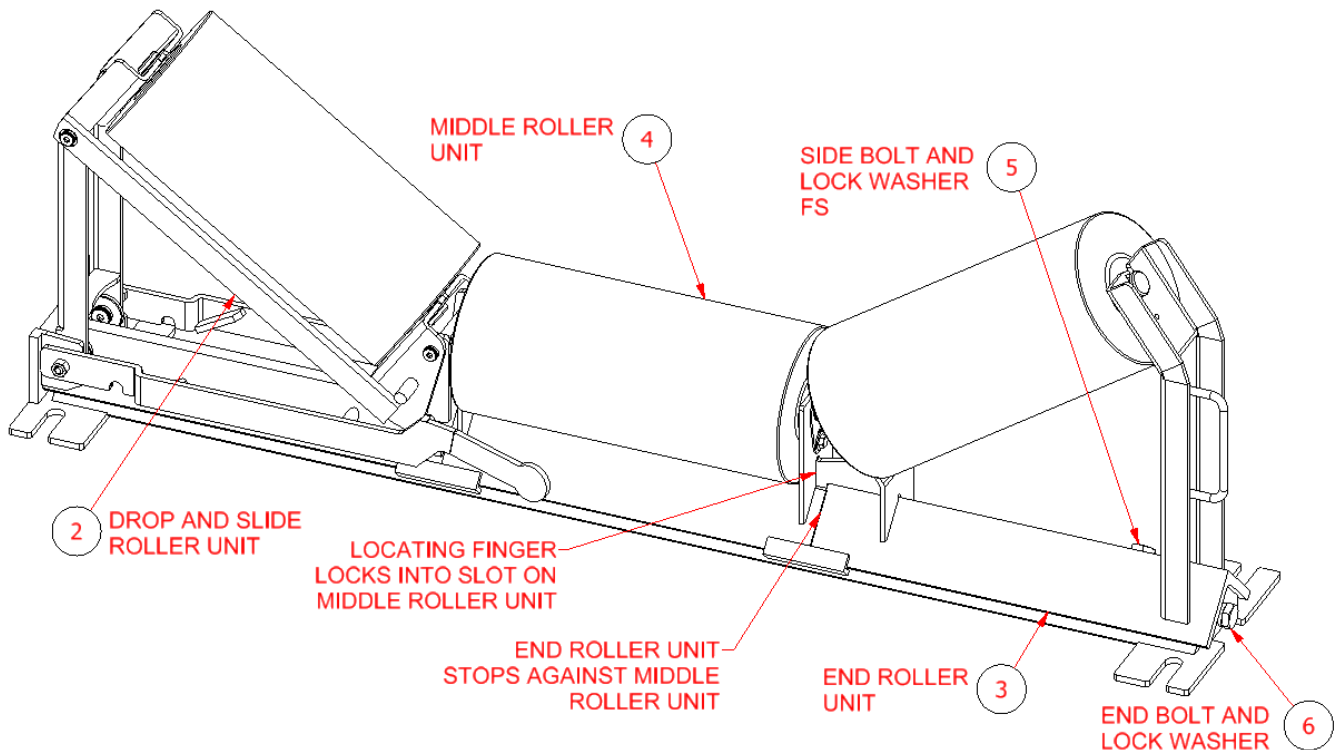


Figure 9

9. With all roller units properly installed on the Fixed Base Weldment (1), install Side Bolt and Lock Washer (5) and End Bolt and Lock Washer (6) and tighten as required.
10. Inspect center roller height to ensure it matches existing adjacent center roller heights. Idler assemblies can be shimmed (shims not included) if required to achieve consistent center roller height. If mounting, alignment or configuration of the Drop and Slide Out Idler is unclear, contact a Benetech Inc specialist for assistance.

! NOTE !

Note: Belt Support Systems require the center heights of the idlers and support cradles to be level and spaced properly to prevent spillage and dust.

! WARNING !

Failure to remove tools from installation area and conveyor belt before turning on energy source can cause serious injury to personnel and damage to belt.

! WARNING !

Do not touch or go near conveyor belt or conveyor accessories when conveyor belt is running. Body or clothing can get caught and pull body into conveyor belt, causing severe injury or death.

Operation and Maintenance



- 1) Once installation is complete turn on conveyor belt and inspect to ensure the Drop and Slide Out Idler rolls are making good contact with the conveyor belt and that the rolls are turning, then turn the conveyor belt off. Retighten all mounting nuts, bolts, etc. Check for belt condition and proper tensioner settings. Readjust if necessary.

! DANGER !

Before installing, servicing, or adjusting the Drop and Slide Out Idler, turn off and lock out/tag out all energy sources to the conveyor and conveyor accessories according to ANSI standards. Failure to do so could result in serious injury or death.



- 2) Periodic inspection and maintenance **MUST** be performed on a regular basis to ensure the equipment is functioning properly.
 - a. Inspect the idler frame to ensure it is stable and not rocking or moving in any way.
 - b. During conveyor belt operation ensure that all of the idler rolls are turning appropriately and that they are no slipping or sliding on the conveyor belt.
 - c. Make sure all fasteners are tight on the assembly and on the conveyor structure. Tighten if necessary.
 - d. Remove equipment from service if there is any indication it is not functioning properly. Call BENETECH, INC. or a representative for assistance.

! NOTE !

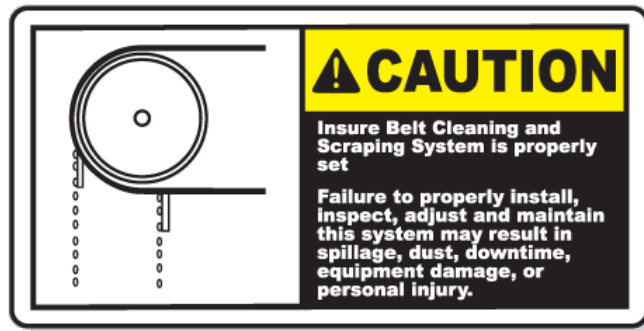
Maintenance inspection should be performed no less than weekly. Some applications may require more frequent maintenance inspections.

! WARNING !

Failure to remove tools from installation area and conveyor belt before turning on energy source can cause serious injury to personnel and damage to belt.

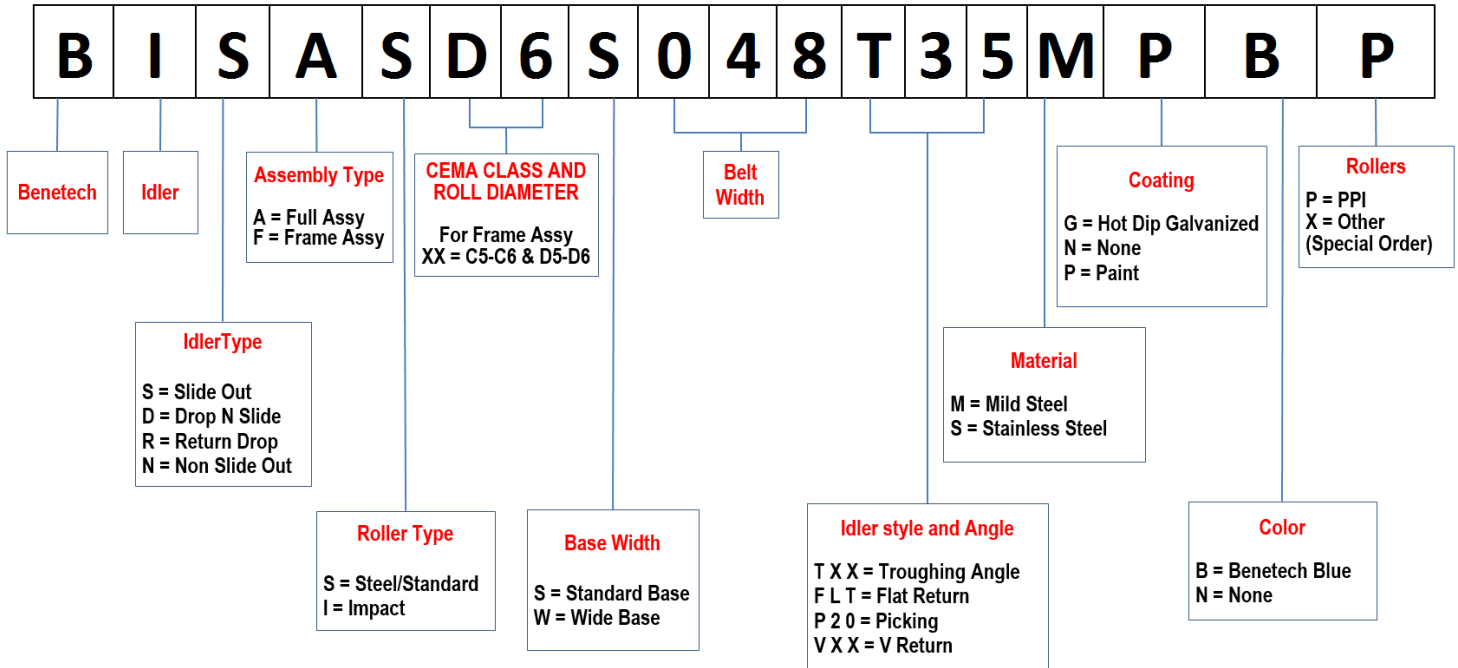
! WARNING !

Do not touch or go near conveyor belt or conveyor accessories when conveyor belt is running. Body or clothing can get caught and pull body into conveyor belt, causing severe injury or death.



Part Numbers

This section provides product names and corresponding part numbers for the Benetech Drop and Slide Out Idler. For a more detailed parts list please contact Benetech Inc.



References

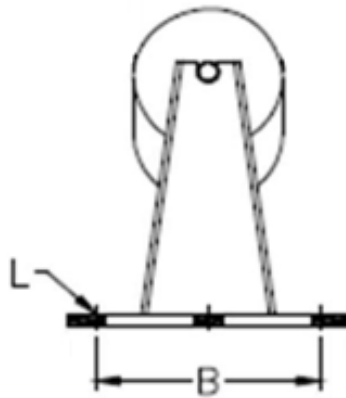
The following documents are referenced in this manual:

- American National Standards Institute (ANSI) z244.1-1982, American National Standard for Personal Protection - Lockout/Tagout of Energy Sources - Minimum Safety Requirements, American National Standards Institute Inc., 1430 Broadway, New York, NY 10018.
- Federal Register, Volume 54, Number 169, Part IV, 29 CFR Part 1910, Control of Hazardous Energy Source (Lockout/Tagout); Final Rule, Department of Labor, Occupational Safety and Health Administration (OSHA), 32nd Floor, Room 3244, 230 South Dearborn Street, Chicago, IL 60604.

Appendix

The diagram shows a cross-section of a CEMA Troughing Idler. It consists of a cylindrical roller with a central hole, mounted on a V-shaped support. Dimension 'L' is indicated as the length of the roller, and dimension 'B' is indicated as the width of the support structure.

CEMA TROUGHING IDLERS - MOUNT BOLT AND MOUNT BOLT SPAN														
	CEMA CLASS B			CEMA CLASS C			CEMA CLASS D			CEMA CLASS E			CEMA CLASS F	
	L in (mm)	B in (mm)	L in (mm)	B in (mm)	L in (mm)	B in (mm)	L in (mm)	B in (mm)	L in (mm)	B in (mm)	L in (mm)	B in (mm)	L in (mm)	B in (mm)
BELT WIDTH in (mm)														
18 (457)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)				
24 (610)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)				
30 (762)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)				
36 (914)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	3/4 (19)	9 1/2 (241)				
42 (1067)	1/2 (12)	7 1/2 (191)	5/8 (16)	7 1/2 (191)	5/8 (16)	7 1/2 (191)	5/8 (16)	7 1/2 (191)	3/4 (19)	9 1/2 (241)				
48 (1219)	1/2 (12)	7 1/2 (191)	5/8 (16)	7 1/2 (191)	5/8 (16)	7 1/2 (191)	5/8 (16)	7 1/2 (191)	3/4 (19)	9 1/2 (241)				
54 (1372)			5/8 (16)	9 (229)	5/8 (16)	9 (229)	5/8 (16)	9 (229)	3/4 (19)	9 1/2 (241)				
60 (1524)			5/8 (16)	9 (229)	5/8 (16)	9 (229)	5/8 (16)	9 (229)	3/4 (19)	9 1/2 (241)	3/4 (19)	12 (305)		
72 (1829)					3/4 (19)	9 (229)	3/4 (19)	9 (229)	3/4 (19)	9 1/2 (241)	3/4 (19)	12 (305)		
84 (2134)									3/4 (19)	12 (305)	3/4 (19)	12 (305)		
96 (2438)									3/4 (19)	12 (305)	3/4 (19)	12 (305)		



CEMA PICKING IDLERS - MOUNT BOLT AND MOUNT BOLT SPAN

BELT WIDTH in (mm)	CEMA CLASS C		CEMA CLASS D		CEMA CLASS E	
	L in (mm)	B in (mm)	L in (mm)	B in (mm)	L in (mm)	B in (mm)
24 (610)	1/2 (12)	6 (152)	1/2 (12)	6 (152)		
30 (762)	1/2 (12)	6 (152)	1/2 (12)	6 (152)		
36 (914)	1/2 (12)	6 (152)	1/2 (12)	6 (152)	3/4 (19)	9 1/2 (241)
42 (1067)	5/8 (16)	7 1/2 (191)	5/8 (16)	7 1/2 (191)	3/4 (19)	9 1/2 (241)
48 (1219)	5/8 (16)	7 1/2 (191)	5/8 (16)	7 1/2 (191)	3/4 (19)	9 1/2 (241)
54 (1372)	5/8 (16)	9 (229)	5/8 (16)	9 (229)	3/4 (19)	9 1/2 (241)
60 (1524)	5/8 (16)	9 (229)	5/8 (16)	9 (229)	3/4 (19)	9 1/2 (241)
72 (1829)			5/8 (16)	9 (229)	3/4 (19)	9 1/2 (241)
84 (2134)					3/4 (19)	12 (305)
96 (2438)					3/4 (19)	12 (305)

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