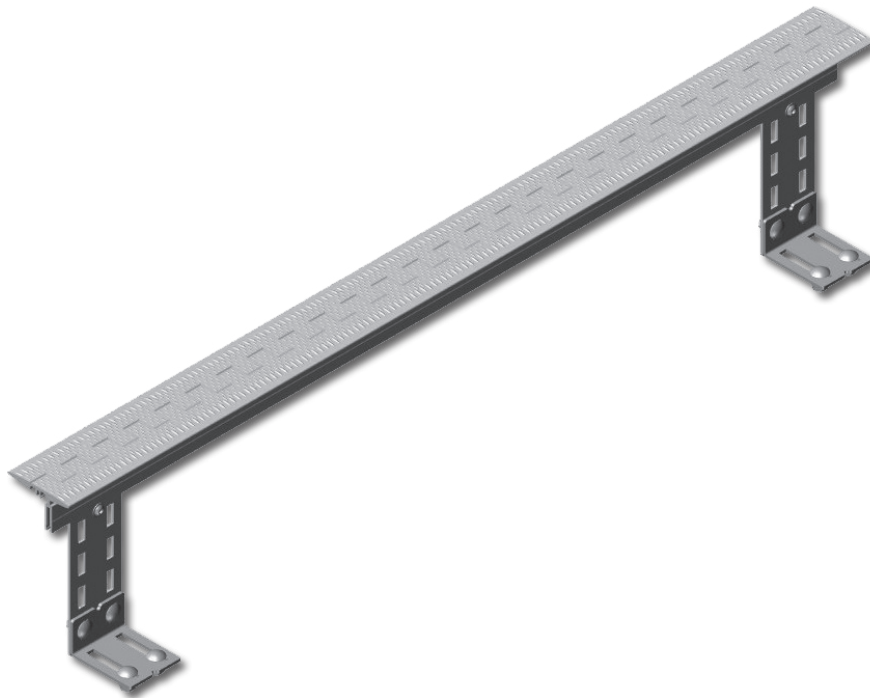


# Narrow Gap Segmented Transfer Plate (STP)

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## Installation, Operation & Maintenance Manual

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# Narrow Gap Segmented Transfer Plate

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Ordering Number:	_____
Installation Date:	_____
Purchase Date:	_____
Purchased From:	_____

This information will be helpful for any future inquiries or questions about Narrow Gap Segmented Transfer Plate replacement parts, specifications, or troubleshooting.

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# Section 1 – Important Information

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## 1.1 Introduction

We at Flexco are very pleased that you have selected the Narrow Gap Segmented Transfer Plate (STP) for your conveyor system.

This manual will help you to understand the operation of this product and assist you in making it perform to its maximum efficiency over its lifetime of service.

If you have any questions or problems that are not covered in this manual, please visit [www.flexco.com](http://www.flexco.com).

This manual is intended to be read and used by trained maintenance personnel and conveyor operators who will be directly responsible for installation, operation, and maintenance of this product. It is imperative that this manual be read thoroughly and in its entirety. While we have tried to make the installation and service tasks as simple as possible, the STP does require correct installation and regular inspections and adjustments to maintain top performance.

## 1.2 User Benefits

Correct installation and regular maintenance will provide the following benefits for your operation:

- Reduced conveyor downtime
- Reduced man-hour labor
- Lower maintenance costs
- Increased service life for the Narrow Gap Segmented Transfer Plate and other conveyor components

## 1.3 Service Option

The Narrow Gap Segmented Transfer Plate is designed to be easily installed and serviced by your on-site personnel. However, if you would prefer complete turn-key factory service, please contact your local Flexco Field Engineer or your Flexco Distributor.

# Section 2 – Safety Considerations and Precautions

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## 2.1 Intended Use

This product is intended to provide a sliding conveying surface between a discharge roller and a receiving roller of a stationary conveyor system. It is also intended to reduce conveyed product loss between to aforementioned rollers. Individual segments of the conveying surfaces are designed to eject when a sufficiently rigid object is encountered at an appropriate impact or prying angle. Segments must be immediately replaced after ejection. The product is intended to fully cover gaps across the assembled segment width. Areas outside of the segment width or other gaps remaining due to conveyor structure / configuration, are to be guarded by the integrator of the product or the owner of the conveyor.

## 2.2 Stationary Conveyors

Before installing and operating the Segmented Transfer Plate, it is important to review and understand the following safety information. There are set-up, maintenance, and operational activities involving both stationary and operating conveyors. Each case has a safety protocol.

The following activities are performed on stationary conveyors:

- Installation
- Tension adjustments
- Plastic segment replacement
- Cleaning
- Repairs

### **DANGER**

It is imperative that OSHA Lockout/Tagout (LOTO) regulations, 29 CFR 1910.147, be followed before undertaking the preceding activities. Failure to use LOTO exposes workers to uncontrolled behavior of the Segmented Transfer Plate caused by movement of the conveyor belt. Severe injury or death can result.

#### **Before working:**

- Lockout/Tagout the conveyor power source
- Disengage any takeups
- Clear the conveyor belt or clamp securely in place

### **WARNING**

#### **Use Personal Protective Equipment (PPE):**

- Safety eyewear
- Hardhats
- Safety footwear
- Gloves (especially when welding)

Close quarters, springs, and heavy components create a worksite that compromises a worker's eyes, feet, and skull. PPE must be worn to control the foreseeable hazards associated with conveyor maintenance. Serious injuries can be avoided.

## Section 2 – Safety Considerations and Precautions

### 2.3 Operating Conveyors

There are two routine tasks that must be performed while the conveyor is running:

- Inspection of the STP performance
- Dynamic troubleshooting

#### **DANGER**

Every Segmented Transfer Plate is an in-running nip hazard. Never touch or prod an operating STP. Transfer plate hazards can cause instantaneous amputation and entrapment.

#### **WARNING**

Transfer plate segments can become projectile hazards. Stay as far from the transfer plate as practical and use safety eyewear and headgear. Projectiles can inflict serious injury.

#### **WARNING**

Never adjust anything on an operating transfer plate. Unforeseeable belt projections and tears can catch on transfer plates and cause violent movements of the transfer plate segment or structure. Flailing hardware can cause serious injury or death.

### 2.4 Transport, Storage, Disposal Conditions of Incorporation - Residual Risk Remaining

This product is not intended to be interacted with by personnel while the conveyor is operating or while in a non-lock out state. Serious injury may occur. Only trained electro-mechanical maintenance staff and conveyor operators are to perform service and installation with the conveyor locked out. During conveyor operation, personnel must not be closer than the distances described in the "Target Interaction Groups" table of 2.4. Alternate conveyor system emergency stop curtains may be implemented within the Conveyor Operating distances shown of table 2.4 at the discretion and risk of the conveyor owner. This does not apply to the General Public or Children- under no circumstances are these two groups allowed near the operating conveyor and STP system.

All potential draw-in or entanglement hazards & other entanglement opportunities must be addressed in the final integrated system. Residual gaps around STP Segments must be guarded by the system integrator. Risk assessment of the completed system where this product is incorporated must be evaluated. Missing segments must be immediately replaced. The conveyor must be locked out to perform segment replacement.

#### Target Interaction Groups

Target Groups	Conveyor Training Level by Conveyor System Owner	Physical Access to Segmented Transfer Plate	Physical Proximity to Segmented Transfer Plate During Conveyor Operation
Maintenance Staff	Electro-Mechanical Safety	System Lockout ONLY	> 4 ft
Conveyor Operators	Operational Safety	System Lockout ONLY	> 6 ft
Conveyor Users	Usage Safety	None	> 6 ft
General Public	None	Prohibited	Prohibited
Children	None	Prohibited	Prohibited

## Section 3 – Pre-installation Checks and Options

---

This section will address the proper selection of the Narrow Gap Segmented Transfer Plate. It is important that you determine the length, width, and location of the transfer plate so you can properly install the Flexco Narrow Gap STP. Failure to follow this procedure will result in deficient product performance. It is extremely important that the length of the transfer plate (Dimension A), the width of the transfer plate (Dimension B), and the selection of the transfer plate segments are done in accordance to this installation manual in order to have a successful product installation. The Flexco Narrow Gap Segmented Transfer Plate is designed to have full contact with the smooth face of the belt. The System design allows for some flexing. The segments can and will move as the segments contact the belt, allowing for variation on the belt profile.

### 3.1 Checklist and Component Identification

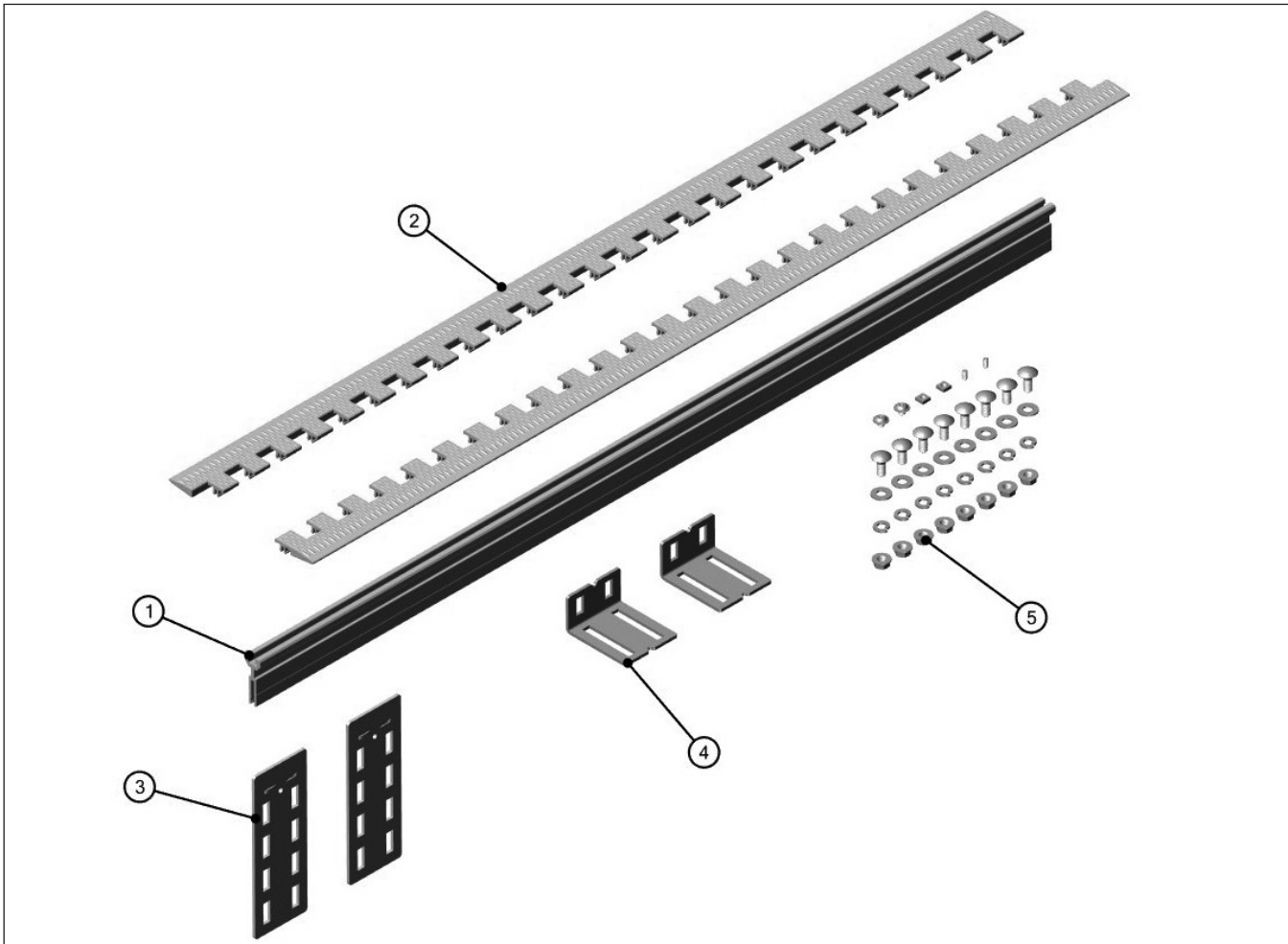
- Check that the Narrow Gap Segmented Transfer Plate size is correct for the beltline width.
- Check the Narrow Gap Segmented Transfer Plate carton and make sure all the parts are included.
- Familiarize yourself with the components.
- Review the “Tools Needed” list on the top of the installation instructions.
- Inspect the belt and splice(s) for damage (tears, gouges, raised splices, etc.) that may interfere with the Narrow Gap Segmented Transfer Plate.
- Narrow Gap Segmented Transfer Plates are not generally recommended for use on impression cover, textured, or cleated belts.
- Determine the material flow or direction of the movement of the belt.
- Determine the type of conveyor you have (S-Curve, Straight, Center Drive, etc.)
- Check the conveyor site:
  - Will the Narrow Gap Segmented Transfer Plate be installed on a power turn?
  - Will the drive pulley of the 1st conveyor belt be level with the tail pulley of the 2nd conveyor belt?
  - Will the Narrow Gap Segmented Transfer Plate be welded or fastened to the structure?
  - Is the install on an open head pulley requiring mounting structure?
  - Are there obstructions that may require Narrow Gap Segmented Transfer Plate location adjustments?
  - Will the belt be reversing during regular operation?

**CAUTION:** All parts of the Narrow Gap Segmented Transfer Plate must be firmly attached to the belt conveyor structure and be properly welded, bolted, or anchored in compliance with your company’s policies, specifications, and any applicable legal or regulatory requirements prior to installation and use.

## Section 3 – Pre-installation Checks and Options (cont.)

Flexco Narrow Gap Segment Transfer Plates are designed to absorb the damage of a foreign object and protect the belt from any injury while maintaining product flow. The transfer plate was designed to be compatible with polybags, nylon bags, small packages, and general parcel and material.

A Narrow Gap Segmented Transfer Plate has four (4) main components and one (1) set of fasteners.



Item	Description	Item Code	Ordering Number
1	Extruded Aluminum Bars	56639	TGB-EXT-ALUM-BAR-24/610
		56640	TGB-EXT-ALUM-BAR-36/914
		56641	TGB-EXT-ALUM-BAR-42/1067
		56642	TGB-EXT-ALUM-BAR-48/1219
		56643	TGB-EXT-ALUM-BAR-60/1524
2	Center Segments	56636	TGB-SEG-CENTER-.75/19MM
		56637	TGB-SEG-CENTER-1/25MM
		56638	TGB-SEG-CENTER-1.5/38MM
3	Mounting Kit Parts	56645	TGB-1.5-3.0-VERT-SUPPT-BRKT-KIT
4		56646	TGB-1.5-3.0-ANGLE-BRKT-KIT
5		56648	TGB-1.5-3.0-MTNG-HARDWARE-KIT
	Mounting Bracket Kit (Includes 2-#3, 2-#4, 1-#5)	56644	TGB-1.5-3.0-IN-GAP-MTNG-KIT



## Section 3 - Pre-installation Checks and Options (cont.)

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### 3.2 Tools Required for Installation

The following tools are required for the installation. Please note that some tools are optional, based on the preferred installation method. In this installation manual, we will describe both methods.

Tools required for installation:

- Flexco measurement gauge (part number 56669)
- Straight edge
- 3/32" (2.4 mm) Allen Wrench
- 5/32" (4 mm) Allen Wrench
- 1/2" (12 mm) wrench plus socket and ratchet
- Tape measure
- Hammer
- Hand held Band Saw or Hack Saw
- Saw or universal cutters
- Marker or grease pen
- Drill
- 3/8" (9.5 mm) Drill Bit
- Welder

Optional:

- Center Punch
- Flashlight

### 3.3 Conveyor Mounting Structure

The first step in installing your Narrow Gap STP is to verify that there is adequate structure between the belts to install the STP. In some cases, the preferred attachment method of the STP is by welding. Regardless of the preferred method, there must be adequate metallic structure to install the STP brackets. Please verify that the surfaces are firmly attached to the conveyor belt structure.

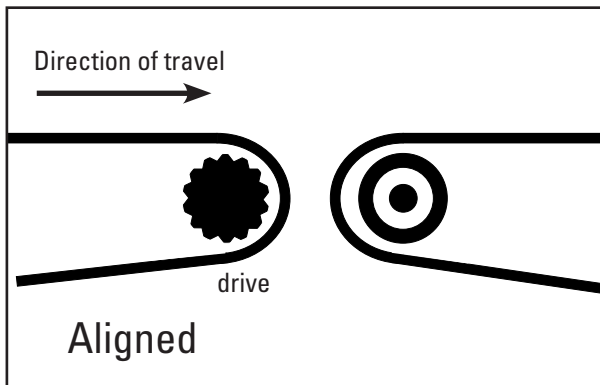
- If structure is not available to attach mounting brackets, please add the necessary structure to allow for proper installation.

### 3.4 Determine Belt Arrangement and Measure Internal Width of Structure

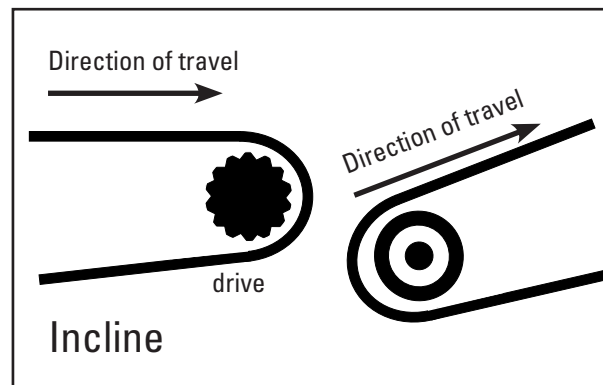
In order to properly select the correct Narrow Gap STP, the conveyor belt configuration needs to be determined and the internal width of the structure where the Narrow Gap STP will be installed needs to be measured.

## Section 3 - Pre-installation Checks and Options (cont.)

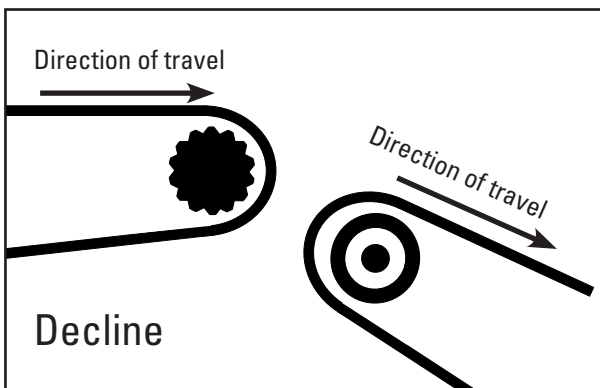
Select the closest conveyor belt arrangement where you plan to install the Narrow Gap STP and measure the distance between the pulleys where the transfer plate will be positioned:



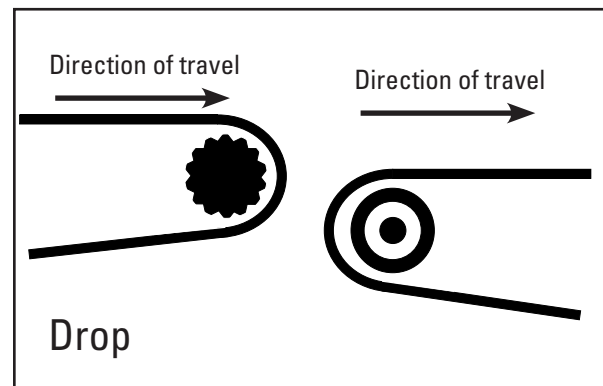
**1. Horizontal to Horizontal Conveyors** Both conveyors are aligned and the belts have the same direction of travel. This arrangement is usually level.



**2. Horizontal to Incline Conveyors** Both conveyors are aligned and the belts have the same direction of travel. The first belt will feed the second belt. The second belt will have an upward direction.



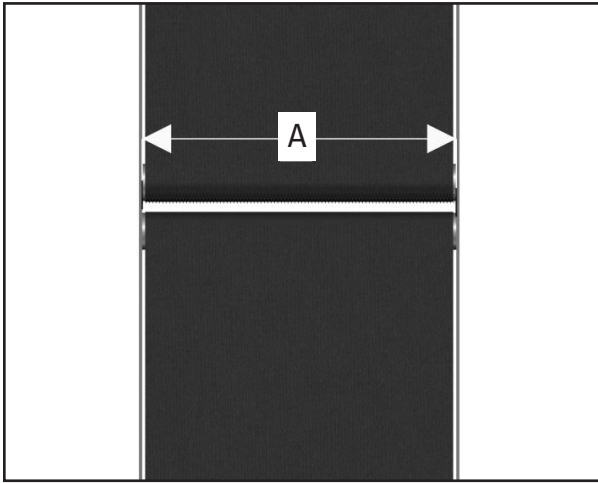
**3. Horizontal to Decline Conveyors** Both conveyors are aligned and the belts have the same direction of travel. The first belt will feed the second belt. The second belt will have a downward direction.



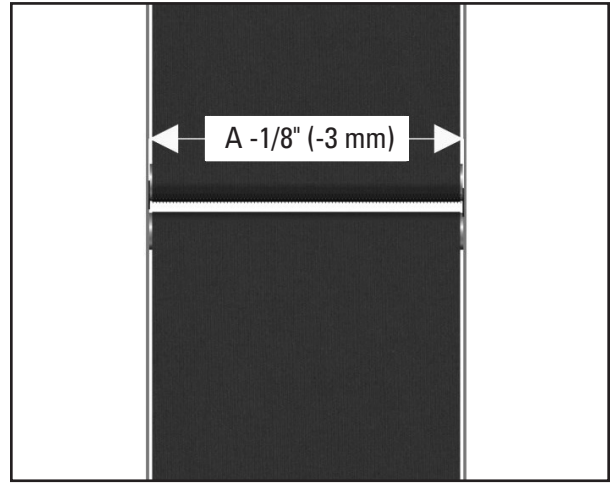
**4. Horizontal to Horizontal Drop Conveyors** Both conveyors are aligned, but not level and the belts have the same direction of travel. The first belt will feed the second belt. There is a clear drop between the belts.

## Section 3 - Pre-installation Checks and Options (cont.)

Once that the type of conveyor belt arrangement has been determined, measure the interior width of the structure. The measurement must be done at the widest point of the interior of the structure, where the transfer plate will be positioned.



1. Measure the inside of the structure in order to determine the length of the transfer plate (Dimension A) at the point of the desired installation. This measurement will be required to properly select the transfer plate and adequately install the plastic segments of the transfer plate.



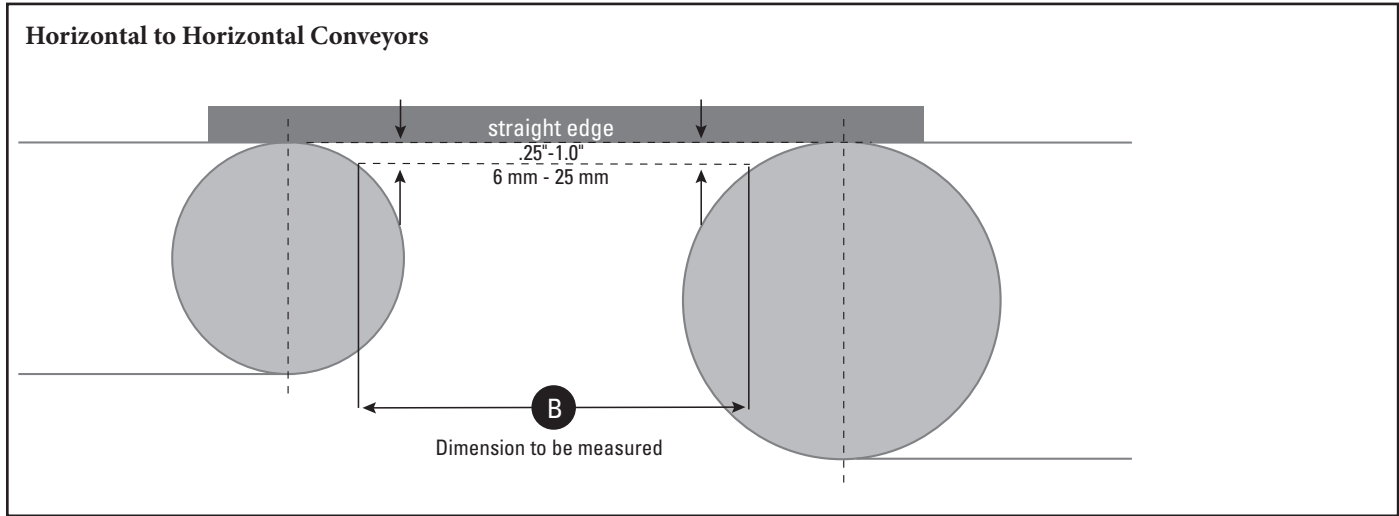
2. Installation hint: In the event that the bar does not pass the structure or if the bar and segments cannot pass through the side structure of conveyor, cut the support bar to the proper length: structure width minus 1/8\" (3 mm).

## Section 3 - Pre-installation Checks and Options (cont.)

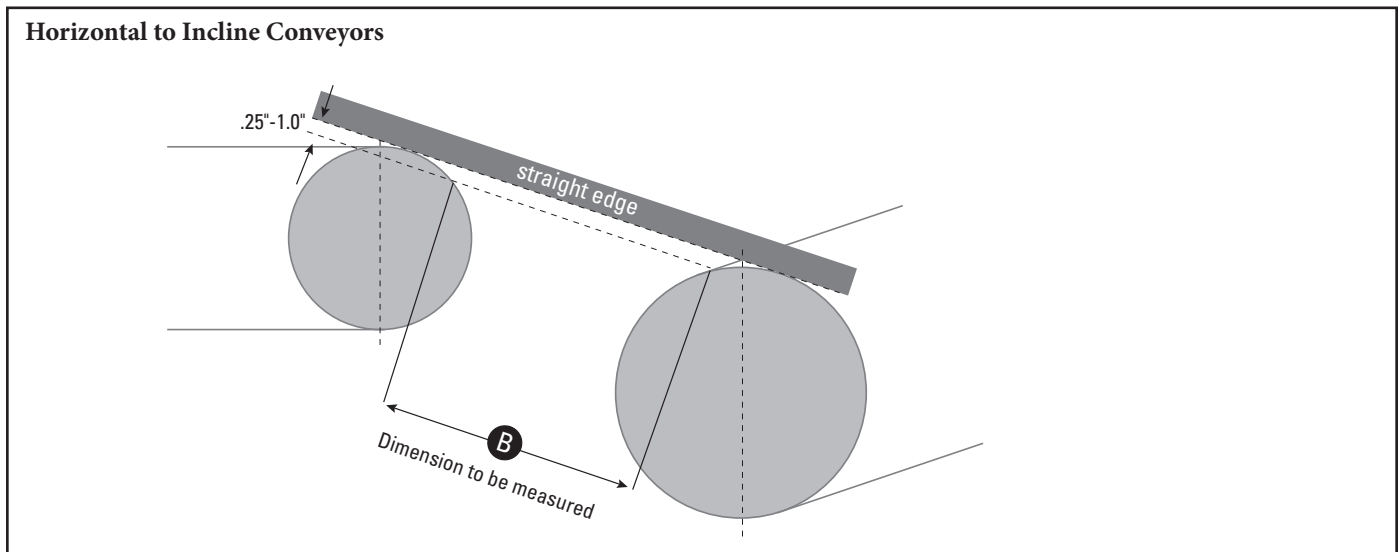
### 3.5 Determine Proper Narrow Gap Segmented Transfer Plate Width

The selection of the transfer plate is a delicate process. In order to properly go about this operation please use a Flexco measurement gauge (part number 56669) and make sure you have identified the conveyor arrangement (page 9) and identified Dimension "A."

The first thing to determine is the dimension that the transfer plate will have to bridge, or Dimension "B." This dimension is measured by using a straight edge and a tape measure. The dimension is taken 1/4" (6 mm) to 1" (25 mm) below a line between the tangent points on the pulleys. Each conveyor configuration will require a specific measuring technique. Please follow the diagrams below:

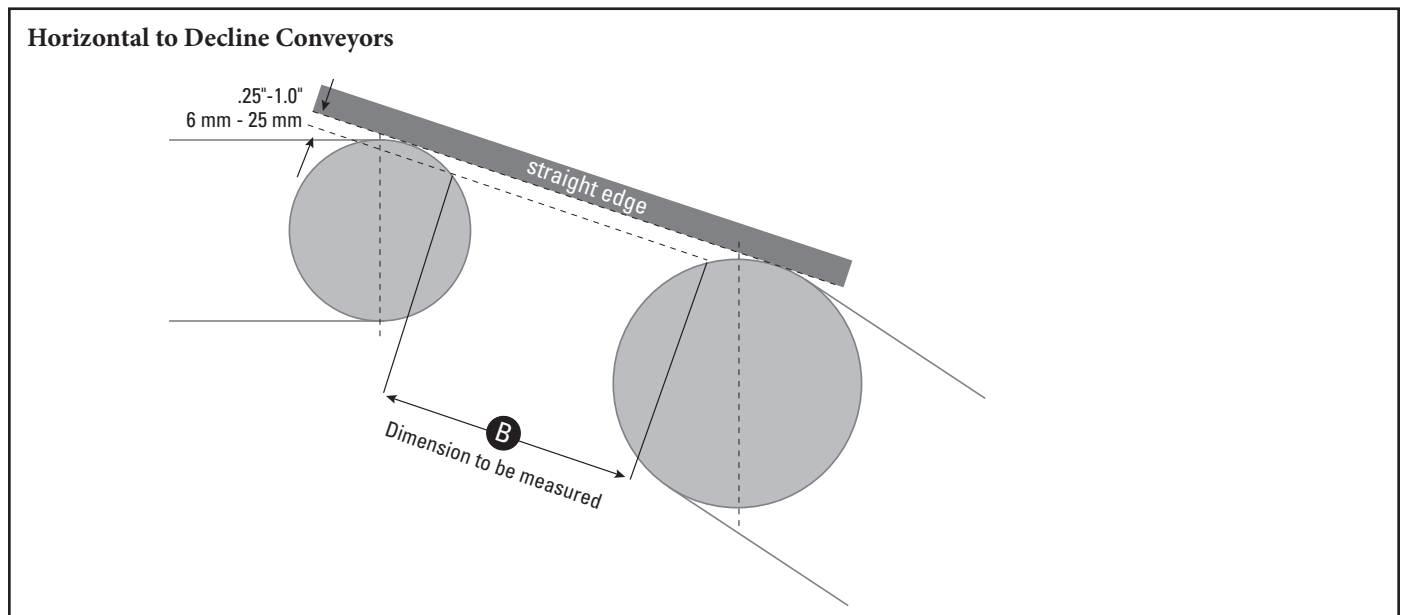


Dimension "B" will be obtained by locating a straight edge between the center lines of the pulleys. The dimension will be obtained by offsetting a parallel line towards the center of the pulley. The total offset should be between 1/4" (6 mm) for small pulleys to 1" (25 mm) for larger pulleys below a line between the tangent points on the pulleys. "B" dimension should be obtained by measuring the distance between the pulleys where the offset line intersects the outside diameter of the pulleys.

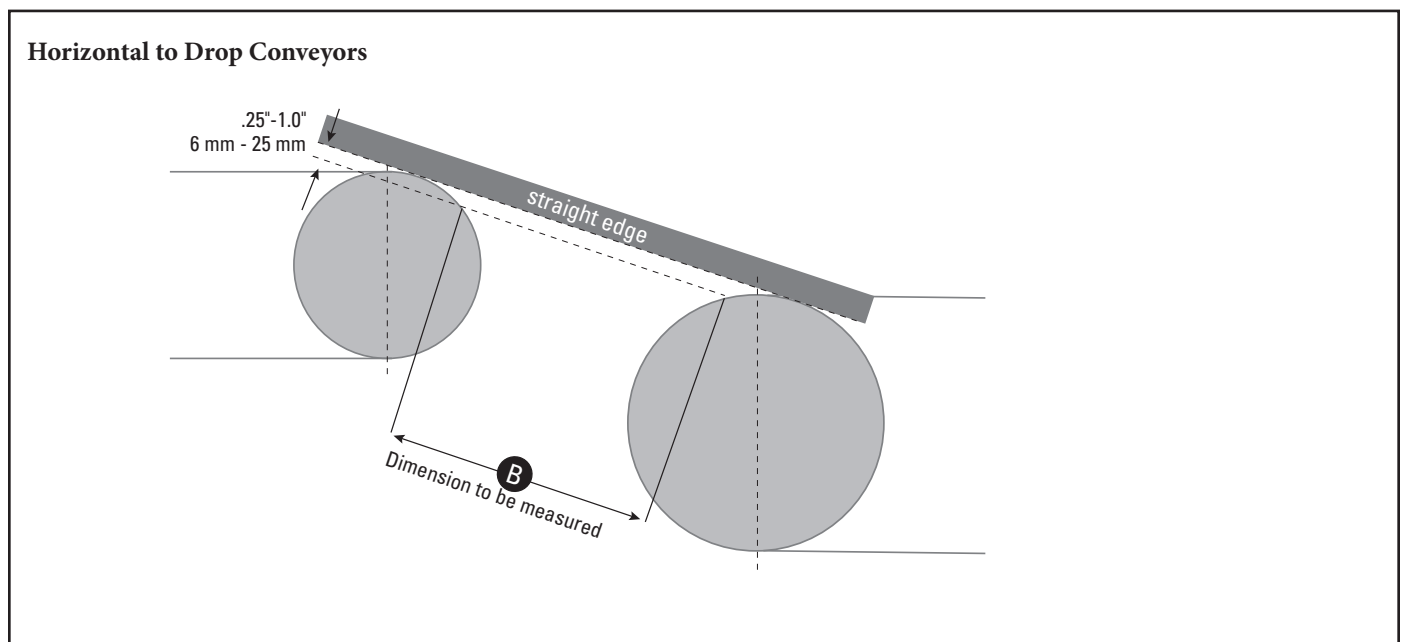


Dimension "B" will be obtained by locating a straight edge between the center lines of the pulleys. The dimension will be obtained by offsetting a parallel line towards the center of the pulley. The total offset should be between 1/4" (6 mm) for small pulleys to 1" (25 mm) for larger pulleys below a line between the tangent points on the pulleys. "B" dimension should be obtained by measuring the distance between the intersection of the offset line and the drive pulley outer diameter and the trailing pulley 12 o'clock position.

## Section 3 - Pre-installation Checks and Options (cont.)



Dimension "B" will be obtained by locating a straight edge between the center lines of the pulleys. The dimension will be obtained by offsetting a parallel line towards the center of the pulley. The total offset should be between 1/4" (6 mm) for small pulleys to 1" (25 mm) for larger pulleys below a line between the tangent points on the pulleys. "B" dimension should be obtained by measuring the distance between the intersection of the offset line and the drive pulley outer diameter and the trailing pulley 12 o'clock position.



Dimension "B" will be obtained by locating a straight edge between the center lines of the pulleys. The dimension will be obtained by offsetting a parallel line towards the center of the pulley. The total offset should be between 1/4" (6 mm) for small pulleys to 1" (25 mm) for larger pulleys below a line between the tangent points on the pulleys."B" dimension should be obtained by measuring the distance between the intersection of the offset line and the drive pulley outer diameter and the trailing pulley 12 o'clock position.

## Section 3 - Pre-installation Checks and Options (cont.)

### 3.6 Segmented Transfer Plate Selection

Once you have obtained Dimensions “A” and “B,” you will have to select the proper transfer plate item code so you can order your installation kit. Flexco Narrow Gap Segmented Transfer Plates can cover horizontal to horizontal or waterfall conveyor applications with gaps from 1.5" (37 mm) to 3" (75 mm) in 0.25" (6 mm) increments. For gaps larger than 3" (75 mm), please refer to installation operation manual X4064.

**IMPORTANT NOTE:** In the event that the Narrow Gap Segmented Transfer Plate requires an offset installation, please make sure the shorter segment is installed upstream (towards the head pulley or against the direction of travel). The downstream plastic segment (longer segment) must be installed towards the trailing pulley (in the direction of travel).

Using the information obtained in steps 3.4 to 3.6 and the following table to determine the proper item code to order. An alternative method to determine your kit is described in section 3.7.

Conveyor width Dimension A	1.5" (37 mm)	1.75" (44 mm)	2" (50 mm)	2.25" (57 mm)	2.5" (63 mm)	3" (75 mm)
	Item code	Item code	Item code	Item code	Item code	Item code
Up to 26" (660 mm)	56227	56232	56237	56242	56247	56252
Between 26.1 and 38" (661 – 965 mm)	56228	56233	56238	56243	56248	56253
Between 38.1 and 44" (966 – 1117 mm)	56229	56234	56239	56244	56249	56254
Between 44.1 and 50" (1118 – 1270 mm)	56230	56235	56240	56245	56250	56255
Between 50.1 and 62" (1271 mm – 1574 mm)	56231	56236	56241	56246	56251	56256

# Section 3 - Pre-installation Checks and Options (cont.)

## 3.7 Narrow Gap Segmented Transfer Plate selection using FLEXCO STP Gauge Kit 56669

Selecting the proper narrow gap transfer plate can also be done with the use of the Flexco STP Gauge kit (Part Number: 56669) specifically designed to be used with the Flexco Narrow Gap Segmented Transfer Plate.

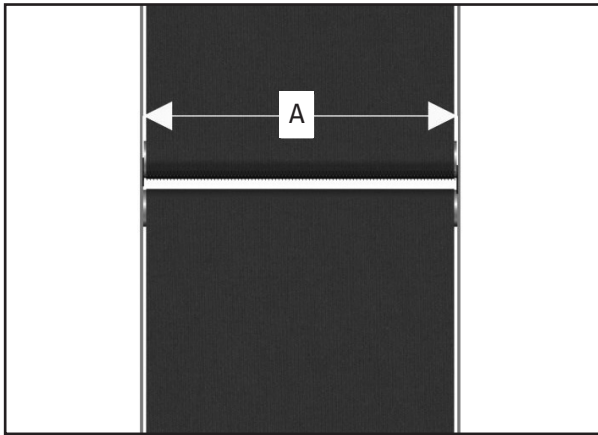
The STP Gauge Kit contains 6 narrow gap transfer plate profile keys. Each key allows the user to measure gap between the pulleys in a precise fashion while providing the necessary installation clearances required to ensure proper fit of the transfer plate.

**DANGER:** It is imperative that OSHA Lockout/Tagout (LOTO) regulations, 29 CFR 1910.147, be followed before undertaking the preceding activities. Failure to use LOTO exposes workers to uncontrolled behavior of the belt. Severe injury or death can result. Do not attempt any of the preceding activities on a live conveyor belt.

Following the same procedure as in step 3.4.1, determine the conveyor arrangement you are about to measure. Once that the type of conveyor belt arrangement has been determined, measure the interior width of the structure.

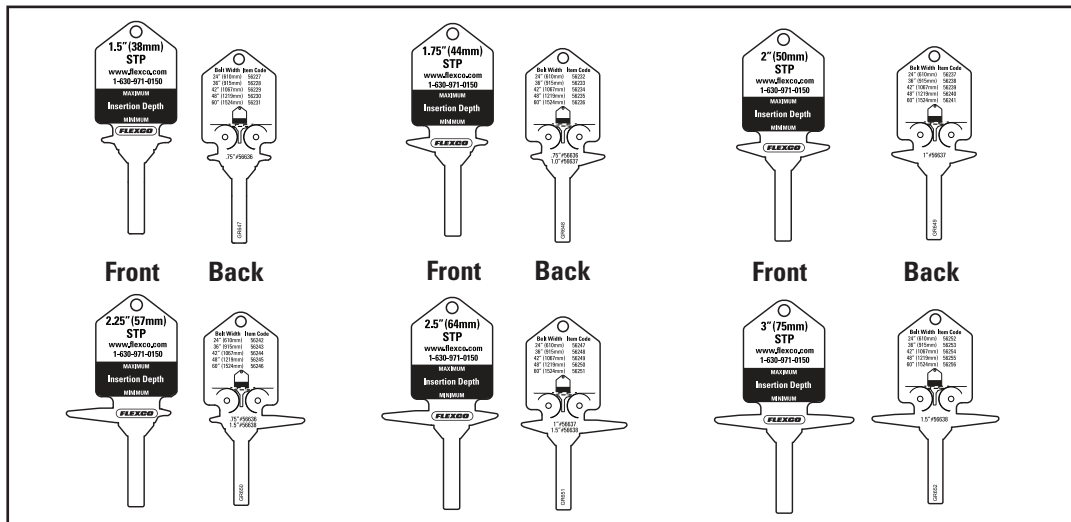
The measurement must be done at the widest point of the interior of the structure where the transfer plate will be positioned, this measurement will determine the total length of the narrow gap transfer plate.

Measure the inside of the structure in order to determine the length of the transfer plate (Dimension A) at the point of the desired installation. This measurement will be required to properly select the transfer plate length in combination with the Flexco STP key (Part number: 56669).



Once you have determined dimension “A” (overall width of the conveyor), select the STP gauge key that properly fits in between the pulley where the transfer plate will be installed.

In order to select the proper STP gauge key, you must consider the approximate distance that the transfer plate must cover and the correct position of the STP gauge key relative to the crown of the pulley.

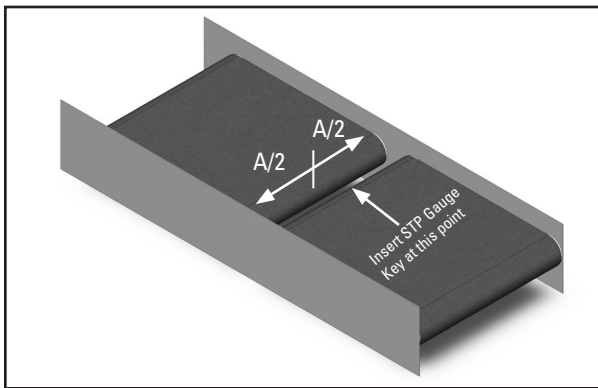


## Section 3 - Pre-installation Checks and Options (cont.)

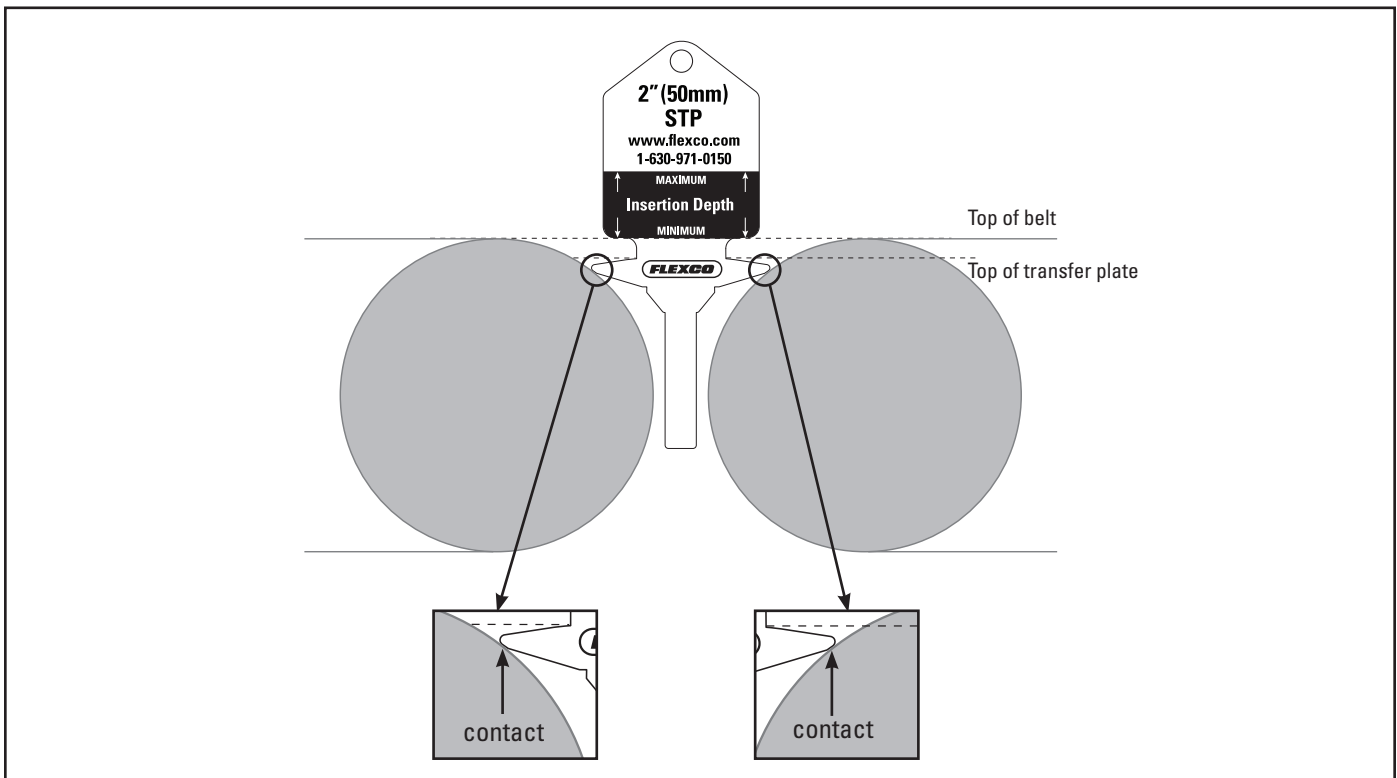
Determining the correct transfer plate item number and its location is a process of trial and error. We recommend that you prepare for the measurement process with an STP gauge key and measure the gap between the pulley until you achieve the correct fit between the STP gauge key and the pulleys. The following example will explain you the proper way to use the STP gauge key and how to select the correct Narrow Gap Segmented Transfer Plate item code for ordering.

Select the STP gauge key you believe will fit best the gap you are trying to bridge. Insert the key between the two pulleys and make sure you place the key at the center of the conveyor width (Dimension A). This is particularly important as some conveyors have some crowning.

The key must be inserted in the mid (center) of the span between the structure of the conveyor belt. This location can be obtained by dividing Dimension A in half ( $A/2$ ).



When inserting the STP gauge key, you should have a minimum distance between the top of the STP profile and the tangent point of the belt and the pulley of no less than 1/4" (6.25 mm) in smaller diameter pulleys. For large diameter pulleys, the distance should not exceed 1" (25 mm). The bottom corner of the transfer plate plastic segment must have full contact with the belt and the key should rest level to the imaginary line that joins the crowns of the pulleys.

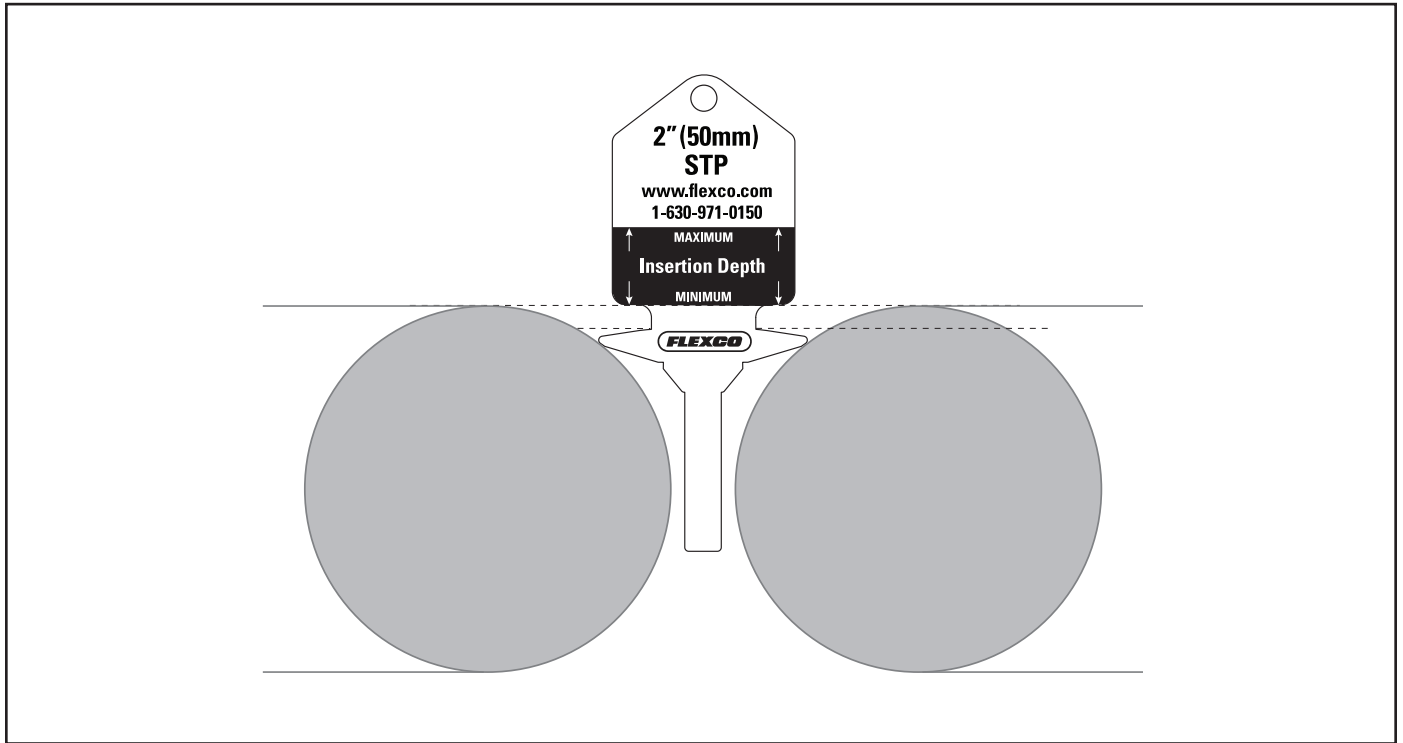




## Section 3 - Pre-installation Checks and Options (cont.)

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The correct placement of the key should look similar to the figure below:

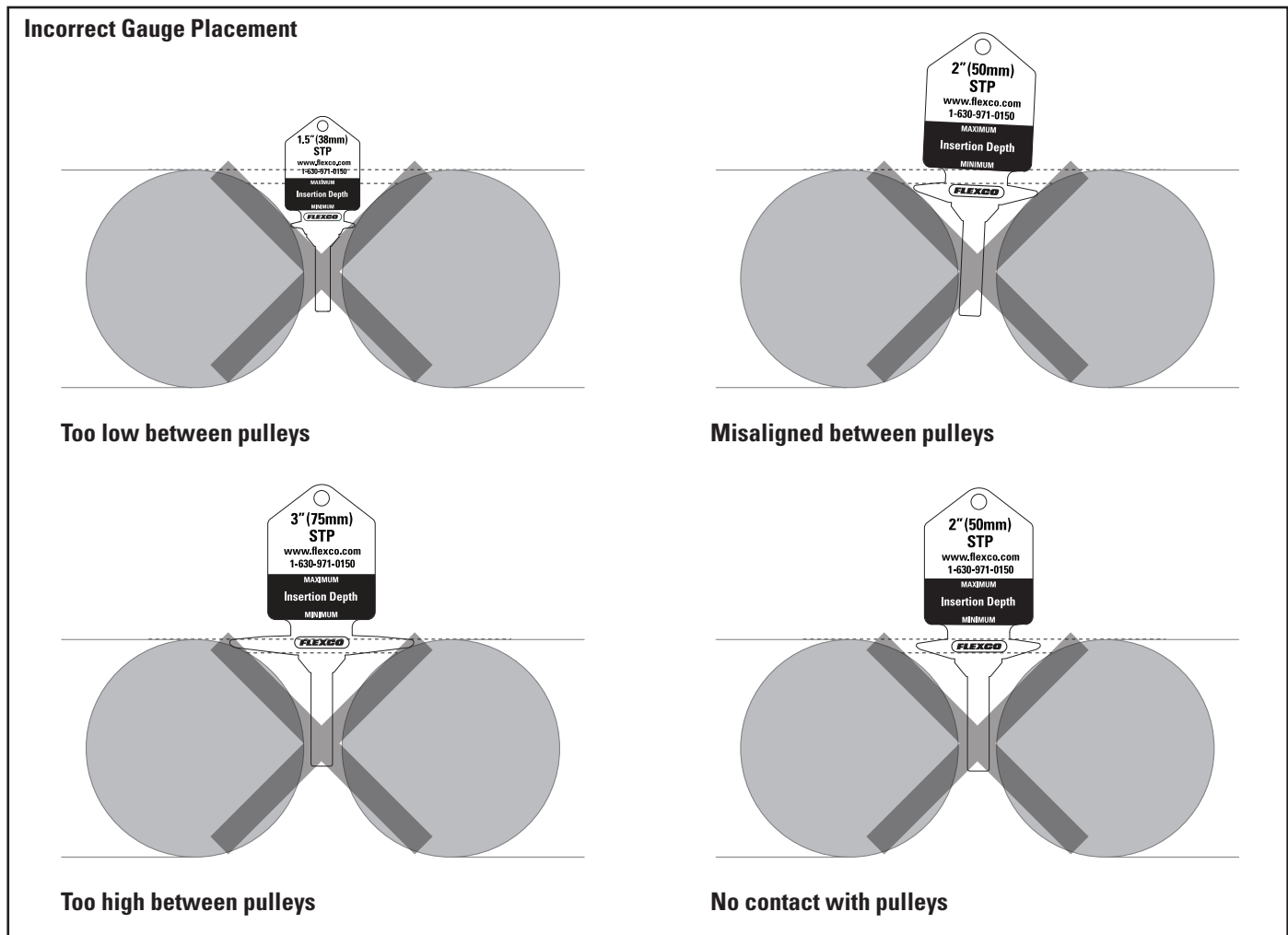


Incorrect placement of the STP Gauge Key, as described in the following examples, could lead to incorrect STP selection.

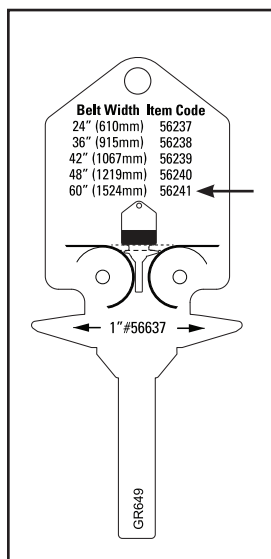
**WARNING:** Incorrect placement of the STP Gauge key will result in erroneous readings and will lead to the selection of the incorrect item code.

**WARNING:** Selecting an undersized or oversized Narrow Gap Segmented Transfer Plate, or placing the STP in a position that is not the one recommended in this instruction manual, can result in nip hazard or damage the conveyor belt. The following configurations are examples of incorrect Narrow Gap Segmented Transfer Plate installations.

## Section 3 - Pre-installation Checks and Options (cont.)



Once the STP gauge key has been correctly placed and you have determined the width of the conveyor belt (Dimension A), select the Segmented Transfer Plate ITEM CODE you need to order from your Flexco distributor.



In order to illustrate the process, let's suppose that Dimension A (internal width of the conveyor belt) is 60" (1500 mm) and a 2" (50 mm) narrow gap transfer plate will properly bridge the gap between the pulleys.

**Installation Hint:** Double-check that the actual Narrow Gap STP segments properly fit the installation

**Installation Hint:** The use of equal length plastic segments is ideal in most circumstances and facilitates final placement.

**IMPORTANT NOTE:** In the event that the narrow gap segment transfer plate requires an offset installation, make sure the short segment is installed upstream (towards the head pulley or against the direction of travel). The downstream plastic segment (long segment) must be installed towards the trailing pulley (direction of travel).

## Section 4 - Installation Instructions - Narrow Gap STP

---

### 4.1 Narrow Gap Segmented Transfer Plate Installation Instructions

**CAUTION:** Narrow Gap Segmented Transfer Plate Installation Instructions – it is the user’s responsibility to take the steps necessary to properly select and install the product. If you have questions or need assistance please contact Flexco using the information provided on page 4 of this manual.

Now that the Narrow Gap STP kit has been selected and the resting position of the transfer plate has been identified, we will proceed with the installation of the Narrow Gap Segmented Transfer Plate.

In this case, we will use the welding method as our preferred installation.

#### Tools Required

Welding method (preferred):

- Measurement gauge: Flexco part number 56669
- Tape Measure
- Straight edge
- 5/32" (4 mm) Allen Wrench
- Rubber Mallet
- Marking Pen or Chalk
- Hand Held Band Saw or Hack Saw
- Welder
- Welding Accessories
- Thread Locking Agent (Loctite or similar)

**DANGER: PHYSICALLY LOCK OUT AND TAG OUT THE CONVEYOR AT THE POWER SOURCE BEFORE YOU BEGIN THE INSTALLATION. FAILURE TO FOLLOW PROPER LOTO PROCEDURES COULD RESULT IN DEATH OR SERIOUS INJURY.**

#### Pre-Installation

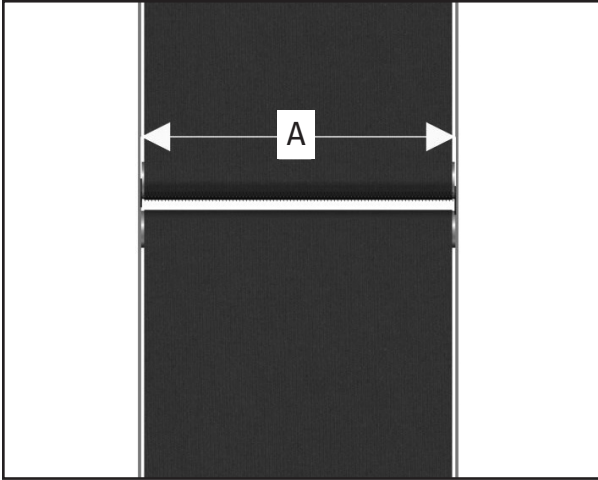
- Unpack the Narrow Gap STP from the packaging
- Verify that the correct size Narrow Gap STP has been ordered
- Verify that the correct components are included and in the right quantities
  - In most cases you will have some extra center pieces that are necessary to guarantee correct fitment

## Section 4 - Installation Instructions - Narrow Gap STP (cont.)

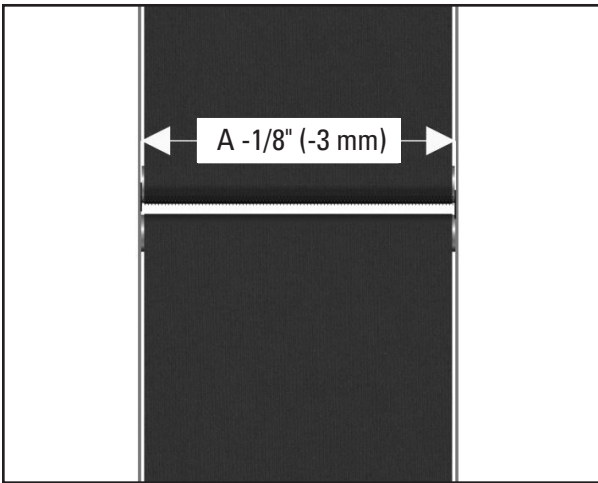
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### Installation Instructions

1. Cut the aluminum support bar to Dimension "A" (measured internal width of the conveyor structure). Deburr/file any sharp edges.



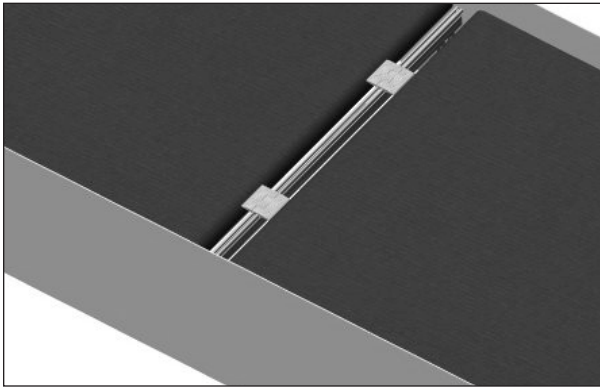
2. Measure the inside of the structure in order to determine the length of the transfer plate (Dimension A) at the point of the desired installation. This measurement will be required to properly select the transfer plate length and adequately install the plastic segments of the transfer plate.



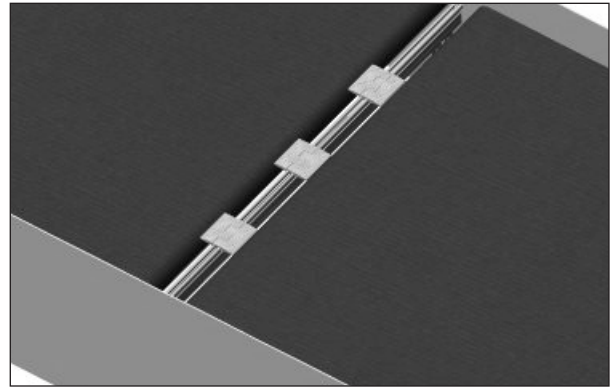
### Installation Hint:

- In the event that the bar does not pass the structure or if the bar and segments cannot pass through the side structure of conveyor, cut the support bar to the proper length: structure width minus 1/8" (3 mm)
- If conveyor structure is open, allowing the extruded support bar to pass through, leave bar full length (if no other interference)
- If conveyor structure opening is large enough for segment to also pass through, you will need to fix segments in position on extruded support bar. This is done after final segment pairs are installed.

## Section 4 - Installation Instructions - Narrow Gap STP (cont.)

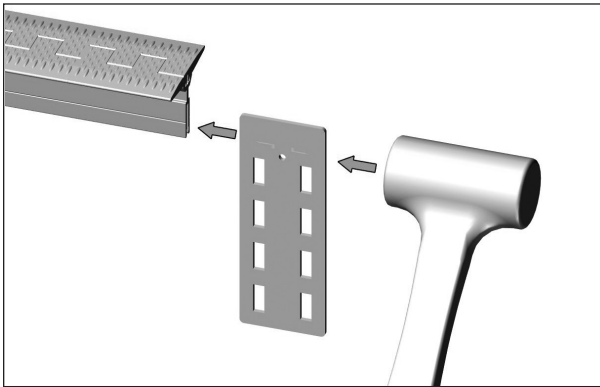


3. Slide one segment pair onto the bar from each end and position each approximately 1/4 (6 mm) of the total bar length from the end. If your kit comes pre-assembled, please proceed to the next step.

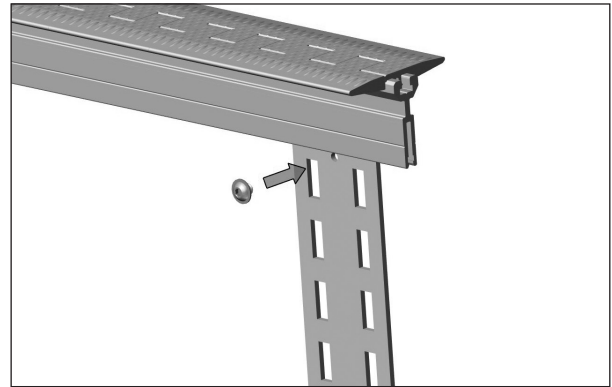


### Installation Hints:

- For conveyor belts with widths above 42" (1050 mm), use 3 segments evenly spaced across the span of the support bar.



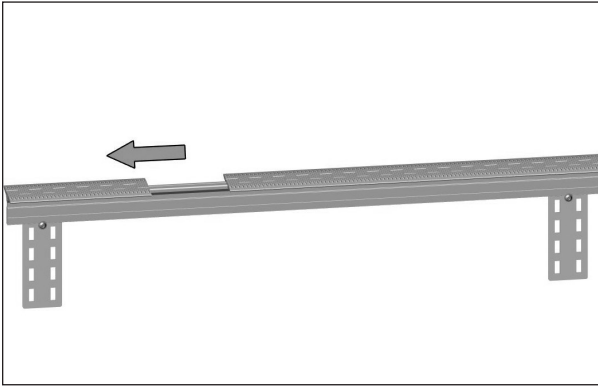
4. Insert vertical support mount into extruded support bar using light hammer taps (Fig 3). Position vertical support bracket in approximate final location, no further than 6" (150 mm) from end (final location to be determined in Step 4.1.8).



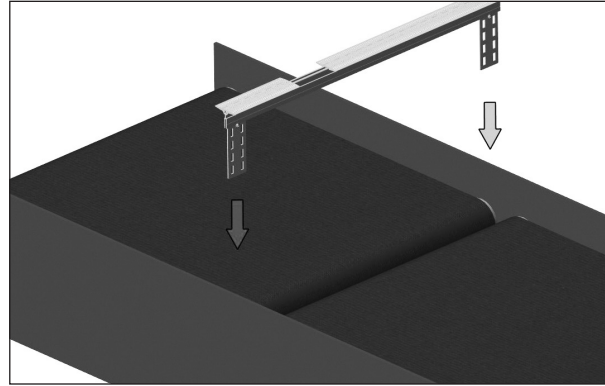
5. Use button head screw to lightly secure vertical support bracket to extruded support bar.

**NOTE:** Do not fully seat/tighten screw at this time.

## Section 4 - Installation Instructions - Narrow Gap STP (cont.)



6. Slide two to three segment pairs down to the end of the extruded aluminum bar.



7. Place Segmented Transfer Plate into transfer opening.

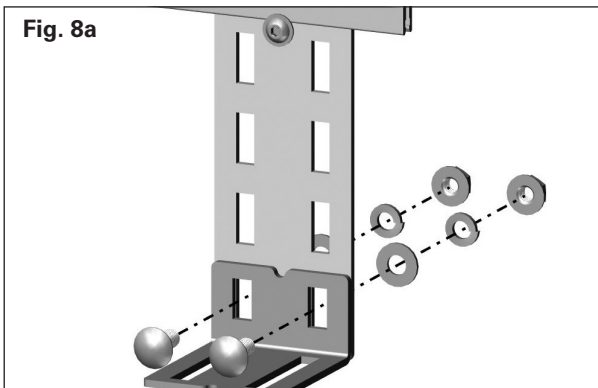


Fig. 8a

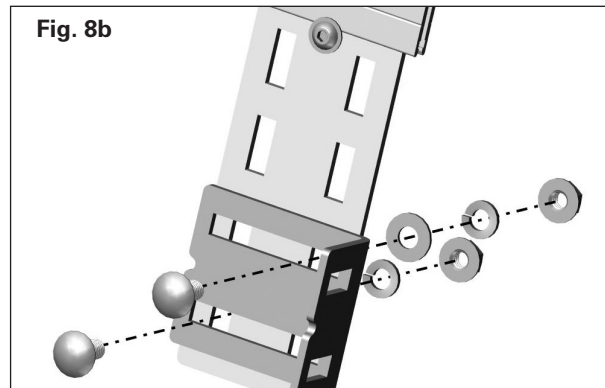
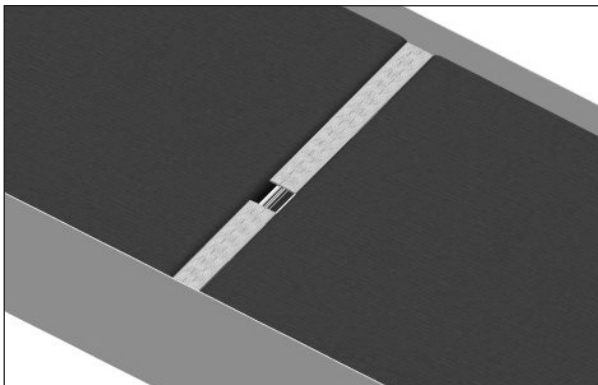


Fig. 8b

8. Determine desired position of the angle bracket (Fig. 8a). Use two bolts to loosely assemble angle bracket to vertical support at center of desired slot location (Fig. 8b).

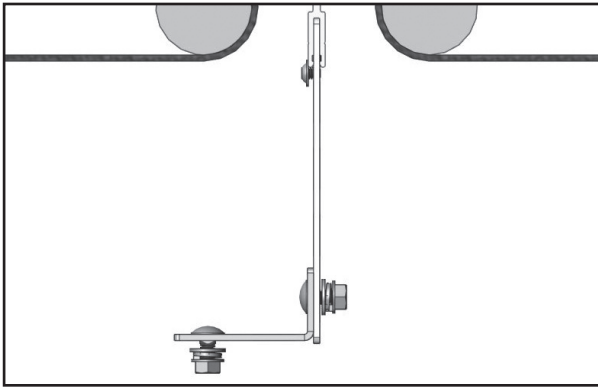
**NOTE:** Excess length of vertical or angle support brackets can be cut to proper length.

**NOTE:** Final set of bolts in Step 12C.

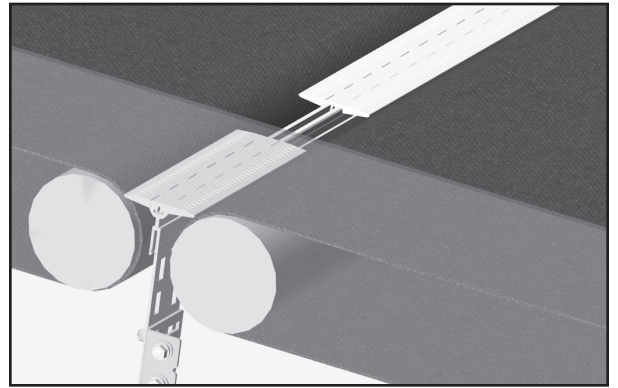


9. Determine final mounting structure location.

## Section 4 - Installation Instructions - Narrow Gap STP (cont.)



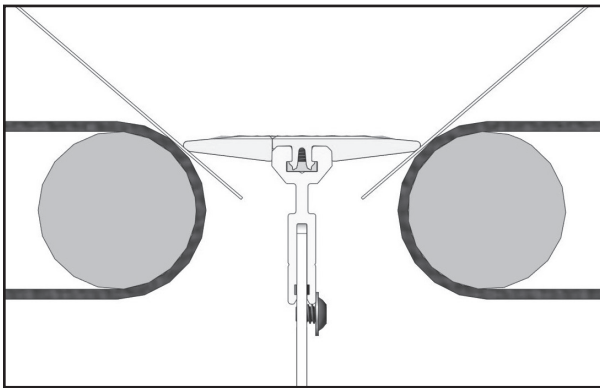
10. Position vertical support brackets so that the angle brackets are in position for final attachment to structure. Tighten the vertical support bracket to the extruded aluminum bar using the supplied button head screw. This will prevent extruded aluminum bar from migration.



11. Bolt or weld the angle brackets to the structure.

**NOTE:** In some instances, the installation will relax and you will have some drop after welding.

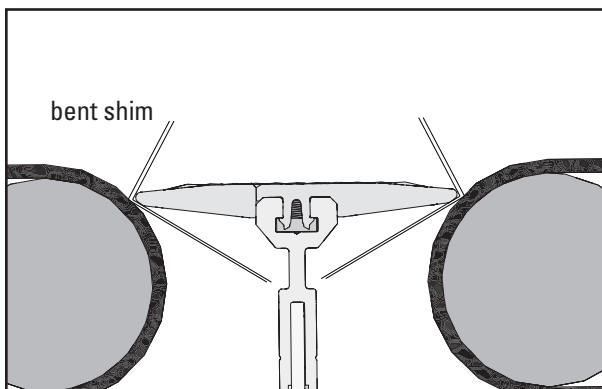
**NOTE:** Do not weld on the steel bracket that has direct contact with the aluminum support bar.



12. Prepare for final positioning of the segments to the extruded aluminum bar assembly.

- For non-textured belts, position so segments make light contact with the surface of the belt (Figure 9).
- For textured belts such as linear rib, rough top, or mini rough top, please use provided shims (.030"/.75 mm) under segments, spaced evenly across the belt width.

**NOTE:** Remove shims prior to running conveyor.



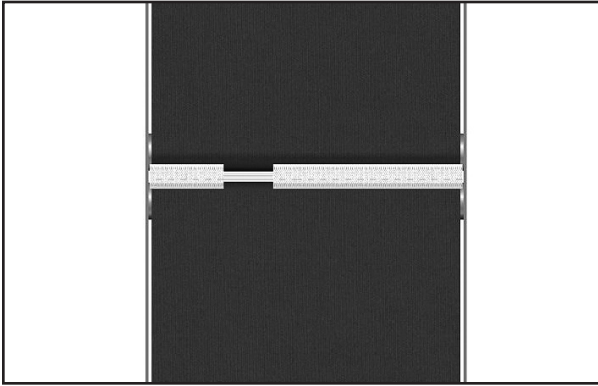
**Installation Hint:** In order for the shims to stay in place, you can bend them so that they will stay put while you maneuver the assembly into place.

**Installation Hint:** On crowned belts, use two shims per side to compensate for the crowning and allow for proper fitment.

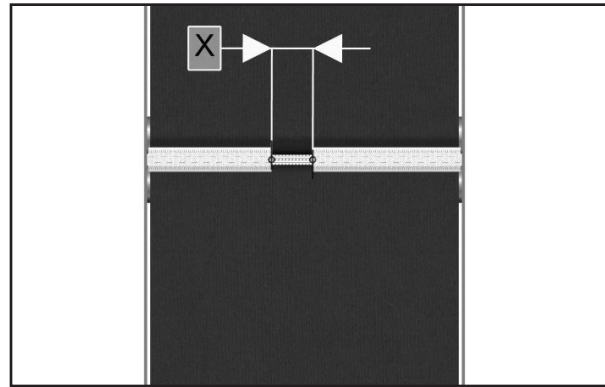
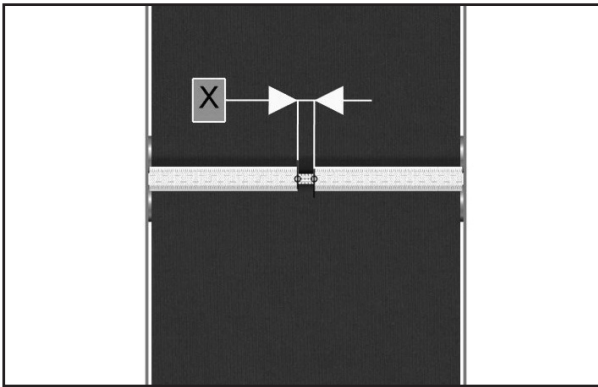
## Section 4 - Installation Instructions - Narrow Gap STP (cont.)

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13. Tighten bolts connecting vertical support until you have full contact with the bracket plus half a turn.



14. Install remaining segments until last gap remains. Gap will likely be smaller than segment width.

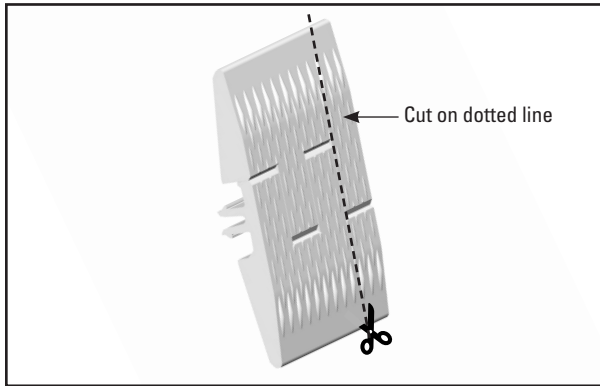


15. Measure remaining gap and determine if final segment sizing is required.

- a. If segment sizing is required, cut segment pair down to the size required, but no smaller than 1.5" (38 mm).
- b. If remaining gap is less than 1.5" (38 mm), remove one set of segments and take a measurement of remaining larger gap. Subtract 1/8" (3 mm) from the measurement. Divide the final number by 2. Cut two segment pairs down to this dimension.



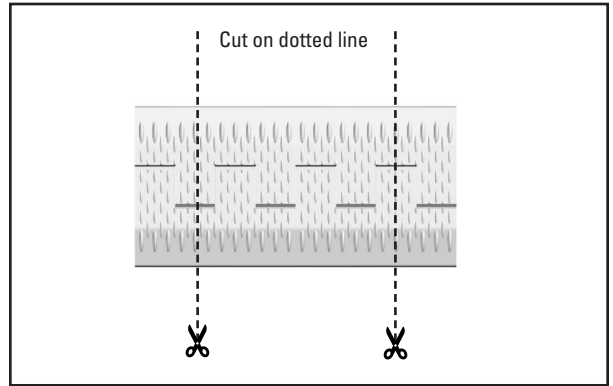
## Section 4 - Installation Instructions - Narrow Gap STP (cont.)



### 16. How to Cut Segments.

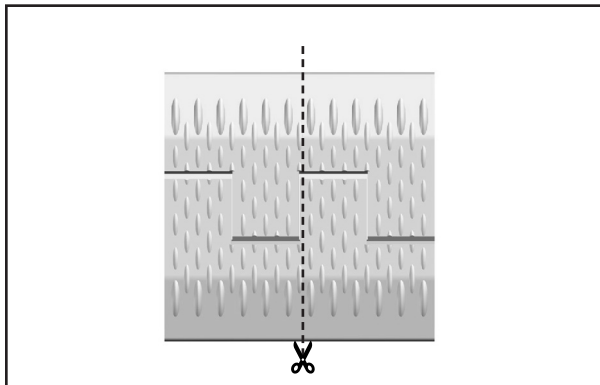
#### IMPORTANT NOTE:

- If MAX WIDTH is greater than 1.5" (38 mm), use a ratcheting scissor tubing cutter to cut a final segment to 1/16"-1/8" (1.5-3 mm) less than MAX WIDTH.



#### IMPORTANT NOTE:

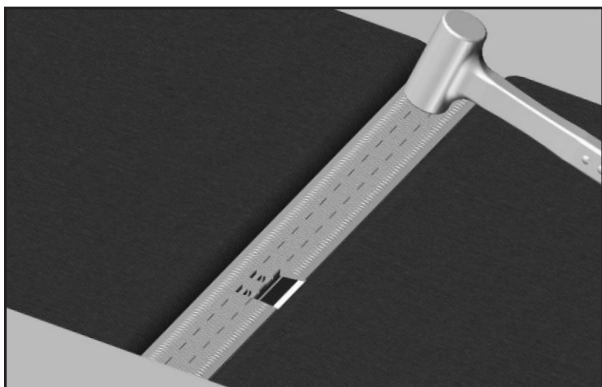
- If MAX WIDTH is less than 1.5" (38 mm):
  - a. Remove one additional segment adjacent to the gap.
  - b. Measure MAX WIDTH opening and divide by 2. ( $X / 2$ )
  - c. Using a ratcheting scissor tubing cutter, cut two final segment pairs 1/16"-1/8" (1.5-3 mm) less than MAX.



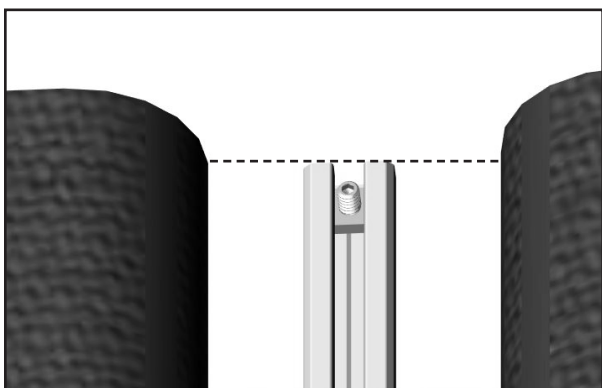
**CAUTION:** Do not trim more than half off a segment pair or 1-1/2" (38 mm) off a segment pair. It is recommended to trim both segments of a segment pair while they are nested to ensure consistent segment.

## Section 4 - Installation Instructions - Narrow Gap STP (cont.)

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17. Install the last (trimmed) segments into the remaining gap.



18. If the side structure is open and the extruded aluminum bar is cut longer than the inside wall of the conveyor structure, use included square nut and set screw to fix segments at both ends in place. This will prevent segment migration.



**Installation Hint:**

Slide square nut and set screw until full contact with plastic segment.

# Section 5 - Pre-Operation Checklist and Testing

---

## 5.1 Pre-Op Checklist

- Recheck that all fasteners are tightened properly.
- Check the Narrow Gap STP location on the belt.
- Be sure that all installation materials and tools have been removed from the belt and the conveyor area.

## 5.2 Test Run the Conveyor

- Run the conveyor for at least 15 minutes and inspect the Narrow Gap STP performance.
- If performance is inadequate, stop the belt and adjust the Narrow Gap STP using steps 12-14 of installation instructions procedure.
- Return to step 5.1 if any adjustments have occurred.

**NOTE:** Observing the Narrow Gap STP when the conveyor belt is running and performing properly will help detect problems in the future.

## Section 6 – Maintenance

---

Flexco Narrow Gap STPs are designed to operate with minimum maintenance. However, to maintain superior performance, some service is required. When the STP is installed, a regular maintenance program should be set up. This program will ensure that the STP operates at optimal efficiency and problems can be identified and fixed before the STP suffers any damage or stops working as expected.

All safety procedures for inspection of equipment (stationary or operating) must be observed. The Narrow Gap STP operates at the discharge end of the conveyor and is in direct contact with the moving belt. Only visual observations can be made while the belt is running. Service tasks can be done only with the conveyor stopped and the correct lockout/tagout procedures observed.

### 6.1 New Installation Inspection

After the new Narrow Gap STP has run for a few days, a visual inspection should be made to ensure the STP is performing properly. Make adjustments as needed.

To ensure optimal STP performance, keep segments free of product buildup (stickers, plastic bags, debris, etc).

### 6.2 Routine Visual Inspection (every 2-4 weeks)

A visual inspection of the STP and belt can determine:

- If the belt looks damaged or if there are areas that are eroding.
- If a plastic segment is worn out and needs to be replaced.
- If there is damage to the STP or other transfer plate components.
- If fugitive material is caught or built up on the STP segments.
- If there is cover damage to the belt.
- If there is vibration or bouncing of the STP on the belt.

If any of the above conditions exist, a determination should be made on when the conveyor can be stopped for STP maintenance.

### 6.3 Routine Physical Inspection (every 6-8 weeks)

When the conveyor is not in operation and is properly locked and tagged out, conduct a physical inspection of the STP to perform the following tasks:

- Clean material buildup off of the STP segment and rod.
- Closely inspect the segments for wear and damage. Replace if needed.
- Ensure proper STP segment-to-belt contact.
- Inspect the STP rod and outer brackets for damage.
- Inspect all fasteners for tightness and wear. Tighten or replace as needed.
- Replace any worn or damaged components.
- When maintenance tasks are completed, test run the conveyor to ensure the STP is performing properly.

### 6.4 Cleaning Instructions

Narrow Gap STP plastic segments need to be cleaned of any material stuck to or adhered to the top surface of the segment. If the plastic shows sign of damage or severe erosion, replace the segment.

### 6.5 STP Wear Inspection

**Note:** Belt type, belt speed, material being conveyed, installation, and other application factors will affect STP wear. Visual inspection of missing segments or fasteners is necessary.

## Section 6 - Maintenance (cont.)

---

### 6.6 Narrow Gap STP Maintenance Log

Conveyor Name/No. \_\_\_\_\_

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

---

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Activity: \_\_\_\_\_

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## Section 6 - Maintenance (cont.)

### 6.7 Narrow Gap STP Maintenance Checklist

STP Transfer Plate: \_\_\_\_\_ Ordering Number: \_\_\_\_\_

**Conveyor Information:**

Conveyor Number: \_\_\_\_\_ Belt Condition: \_\_\_\_\_

Belt Width:  12" (300 mm)  18" (450 mm)  24" (600 mm)  30" (750 mm)  36" (900 mm)  42" (1050 mm)  48" (1200 mm)  54" (1350 mm)  60" (1500 mm)

Head Pulley Diameter (Belt & Lagging): \_\_\_\_\_

Belt Speed: \_\_\_\_\_ fpm Belt Thickness: \_\_\_\_\_

Belt Splice: \_\_\_\_\_ Condition of Splice: \_\_\_\_\_ Number of splices: \_\_\_\_\_  Skived  Unskived

Material conveyed: \_\_\_\_\_

Days per week run: \_\_\_\_\_ Hours per day run: \_\_\_\_\_

**Segment Life:**

Date plastic transfer segment installed: \_\_\_\_\_ Date plastic transfer segment inspected: \_\_\_\_\_

Estimated plastic transfer segment life: \_\_\_\_\_

Is STP segment making proper contact with belt?  Yes  No

Transfer plate condition:  Good  Grooved  Smiled  Not contacting belt  Damaged

Was STP Adjusted:  Yes  No

Bar Condition:  Good  Bent  Worn

Lagging:  Slide lag  Ceramic  Rubber  Other  None

Condition of lagging:  Good  Bad  Other \_\_\_\_\_

**STP Overall Performance:** (Rate the following 1 - 5, 1 = very poor - 5 = very good)

Appearance:  Comments: \_\_\_\_\_

Location:  Comments: \_\_\_\_\_

Maintenance:  Comments: \_\_\_\_\_

Performance:  Comments: \_\_\_\_\_

**Other Comments:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Section 7 - Troubleshooting

Problem	Possible Cause	Possible Solutions
Missing plastic segments on transfer plate	If a segment is missing, it may mean that foreign object debris got caught between the surface of the belt and the segment.	Replace with a new segment of same size and length
	Damage to belt	Repair the belt
	Improper installation	Transfer plates with a gap between segments and belt as opposed to light contact on both the leading and trailing tips which they are designed for.
	Repeated use of damaged or dislodged segments	Replace with new segments of same size and length
Transfer Plate assembly flexes with movement of belt	High points on belt	Transfer plate was designed to flex with the belt movement
	Roller has uneven wear	Transfer plate was designed to tolerate system wear
	Missing screws from mounting bracket assembly	Install missing fasteners and add removable thread locker
	Pulley out of round	Remove and replace out of round pulley
Mounting screws missing	Not enough removable thread locker added during installation	Replace fastener and add removable thread locker
Excessive Vibration or noise of the Segmented Transfer Plate	Installation is too tight to the belt	Add shims to mounting bracket to decrease tension between plastic segments and belt
	Installation of Segmented Transfer Plate was not done with cardboard shims	Add shims to mounting bracket to decrease tension between plastic segments and belt
	Belt fastener hitting transfer plate	High splice profile – does not damage belt or STP. A bias splice will minimize this effect
Uneven transfer plate segment position	Mismatch component selection	The transfer plate support bar must be replaced with a correct 1.25" bar
Segmented transfer plate is misaligned	Power turn separation is mismatched with adjacent conveyor	Transfer plate on power turn needs to be installed with a slight angle such that it can accommodate the power turn tapered roller and the adjacent conveyor roller
	Power turn gap to height conveyor is mismatched	Transfer plate on power turn needs to be installed with a slight angle such that it can accommodate the power turn tapered roller and the adjacent conveyor roller
Too high or too low transfer installation	Not enough shims added during installation	Add shims between backing plate and front plate to raise transfer plate
	Too many shims added during installation	Remove shims between backing plate and front plate to lower transfer plate
Segments migrate outside of the bar	Square nut is not installed on extruded aluminum bar	Install square nut and set screw on bar

## Section 8 – Narrow Gap STP Measurement Form

---

### 8.1 Narrow Gap Segmented Transfer Plate Conveyor Information

Conveyor Name/No. \_\_\_\_\_

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Dimension A: \_\_\_\_\_ Dimension B: \_\_\_\_\_ ITEM CODE: \_\_\_\_\_

---

Conveyor Name/No. \_\_\_\_\_

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Dimension A: \_\_\_\_\_ Dimension B: \_\_\_\_\_ ITEM CODE: \_\_\_\_\_

---

Conveyor Name/No. \_\_\_\_\_

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Dimension A: \_\_\_\_\_ Dimension B: \_\_\_\_\_ ITEM CODE: \_\_\_\_\_

---

Conveyor Name/No. \_\_\_\_\_

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Dimension A: \_\_\_\_\_ Dimension B: \_\_\_\_\_ ITEM CODE: \_\_\_\_\_

---

Conveyor Name/No. \_\_\_\_\_

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Dimension A: \_\_\_\_\_ Dimension B: \_\_\_\_\_ ITEM CODE: \_\_\_\_\_

---

Conveyor Name/No. \_\_\_\_\_

Date: \_\_\_\_\_ Work done by: \_\_\_\_\_ Service Quote #: \_\_\_\_\_

Dimension A: \_\_\_\_\_ Dimension B: \_\_\_\_\_ ITEM CODE: \_\_\_\_\_

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If you have any questions or problems reading measurement and selection of your Narrow Gap Segmented Transfer Plate please contact Customer Service in the United States and Canada: 1-800-541-8028 or visit [Flexco.com](http://Flexco.com) for more information.

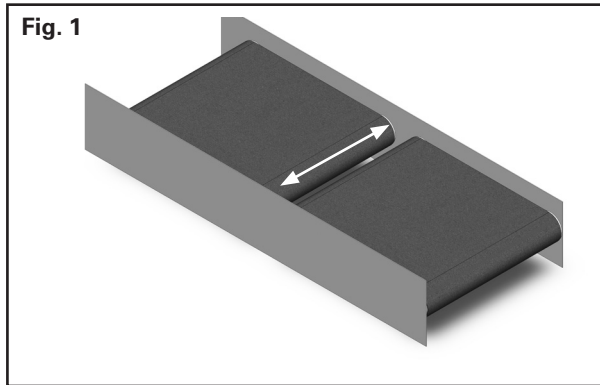


# Section 9 – Narrow Gap STP Ordering Form

## Structure Width

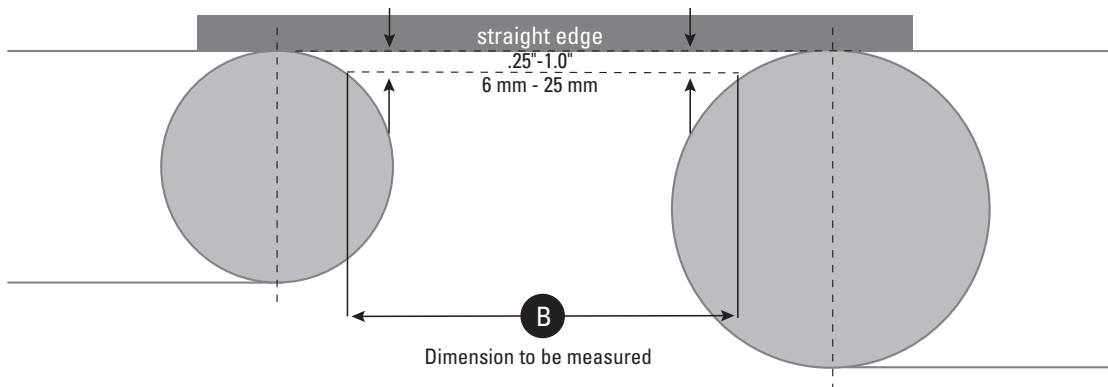
Dimension A: \_\_\_\_\_

Head Pulley Diameter (Belt & Lagging): \_\_\_\_\_



## Narrow Gap STP Width

Dimension of Gap to cover with transfer plate (Dimension B): \_\_\_\_\_



## Item Code Selection

Conveyor width Dimension A	1.5" (37 mm)	1.75" (44 mm)	2" (50 mm)	2.25" (57 mm)	2.5" (63 mm)	3" (75 mm)
	Item code	Item code	Item code	Item code	Item code	Item code
Up to 26" (660 mm)	56227	56232	56237	56242	56247	56252
Between 26.1 and 38" (661 – 965 mm)	56228	56233	56238	56243	56248	56253
Between 38.1 and 44" (966 – 1117 mm)	56229	56234	56239	56244	56249	56254
Between 44.1 and 50" (1118 – 1270 mm)	56230	56235	56240	56245	56250	56255
Between 50.1 and 62" (1271 mm – 1574 mm)	56231	56236	56241	56246	56251	56256

## Section 10 – Replacement Parts

---

### SEGMENTED TRANSFER PLATES REPLACEMENT PARTS

DESCRIPTION	ORDERING NUMBER	ITEM CODE
MOUNTING BRACKET KIT	TGB-1.5-3.0-IN-GAP-MTNG-KIT	56644
MOUNTING KIT PARTS	TGB-1.5-3.0-VERT-SUPPT-BRKT-KT	56645
	TGB-1.5-3.0-ANGLE-BRKT-KT	56646
SUPPORT BARS	TGB-EXT-ALUM-BAR-24/610	56639
	TGB-EXT-ALUM-BAR-36/914	56640
	TGB-EXT-ALUM-BAR-42/1067	56641
	TGB-EXT-ALUM-BAR-48/1219	56642
	TGB-EXT-ALUM-BAR-60/1524	56643
CENTER SEGMENTS	TGB-SEG-CENTER-.75/19MM	56636
	TGB-SEG-CENTER-1/25MM	56637
	TGB-SEG-CENTER-1.5/38MM	56638
	TGB-SEG-CENTER-2 2 IN CTR SEG	56611

# Section 11 – Declaration of Incorporation

## EU DECLARATION OF INCORPORATION

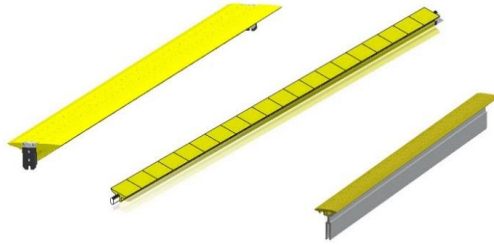
**Product:** Transfer Solution

**Manufacturer:** Flexible Steel Lacing Co. (Flexco)  
1854 Northridge Drive NW  
Walker, Michigan 49544

**European office:** Flexco Europe GmbH  
Maybachstrasse 9  
72348 Rosenfeld Germany  
Telephone 49-7428-9406-0

This declaration of incorporation is issued under the sole responsibility of the manufacturer.

**Object of this declaration:**



Segment Transfer Plate Image

**Model(s):** 04319-04322, 04339, 04343, 04344, 04442-04445, 04973, 04988, 56100-56123, 56128-56135, 56140-56143, 56148-56151, 56160, 56181-56190, 56206-56225, 56227-56256, 56258, 56667-56669, 56707

**Conforms to European Directives:**

2006/42/EC

Machinery Directive

**Harmonized Standards and Technical Specifications applied:**

ISO 12100:2010

Safety of machinery—General principle for design—Risk assessment and risk reduction

**Conditions of Incorporation - Residual Risk Remaining**

This product is not intended to be interacted with by personnel while the conveyor is operating or while in a non-lock out state. Serious injury may occur.

All potential draw-in or entanglement hazards & other entanglement opportunities must be addressed in the final integrated system. Risk assessment of the completed system where this product is incorporated must be evaluated, particularly for public settings.

**Signed for and on behalf of:**

Flexible Steel Lacing Company (Flexco)

*Timothy A. Gunter Jr.*  
Timothy A. Gunter Jr, Product Compliance

24/4/2023  
Date

Visit [www.flexco.com](http://www.flexco.com) for other Flexco locations and products, or to find an authorized distributor.

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