



**EZGUIDE™ Manual Adjustable Guide Rail  
Owner's Manual**

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*Before installing or operating EZGUIDE™ Manual Adjustable Guide Rail system, read and understand this Manual. Failure to follow instructions and safety precautions could result in serious injury, death, or property damage.*

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# Safety

## Installation

When installing EZGUIDE™ Manual Adjustable Guide Rail ensure the guide rail clears the conveyor in both the retracted and fully extended positions. Inadequate clearance can cause damage to both the conveyor and EZGUIDE™.

## Operation

Never adjust the EZGUIDE™ Manual Adjustable Guide Rail while the conveyor is in motion. Follow your Standard Operating Procedure and Safety Protocols to shut down the conveyor before adjusting the Adjustable Guide Rail to prevent damage or personal injury.

## Prohibited Environments

EZGUIDE™ Manual Adjustable Rail should not be used in certain environments. If you are unsure of the safety or suitability of your intended environment, contact a qualified Span Tech representative. Never use EZGUIDE™ Manual Adjustable Rail conveyor in any of the following environments:

- Where chemicals that react with acetal copolymer are used
- Where strong acids or caustics are present
- Where ultraviolet light is present
- Where flammable materials are present (i.e., gasoline, solvents, etc.)

## In Case of Fire



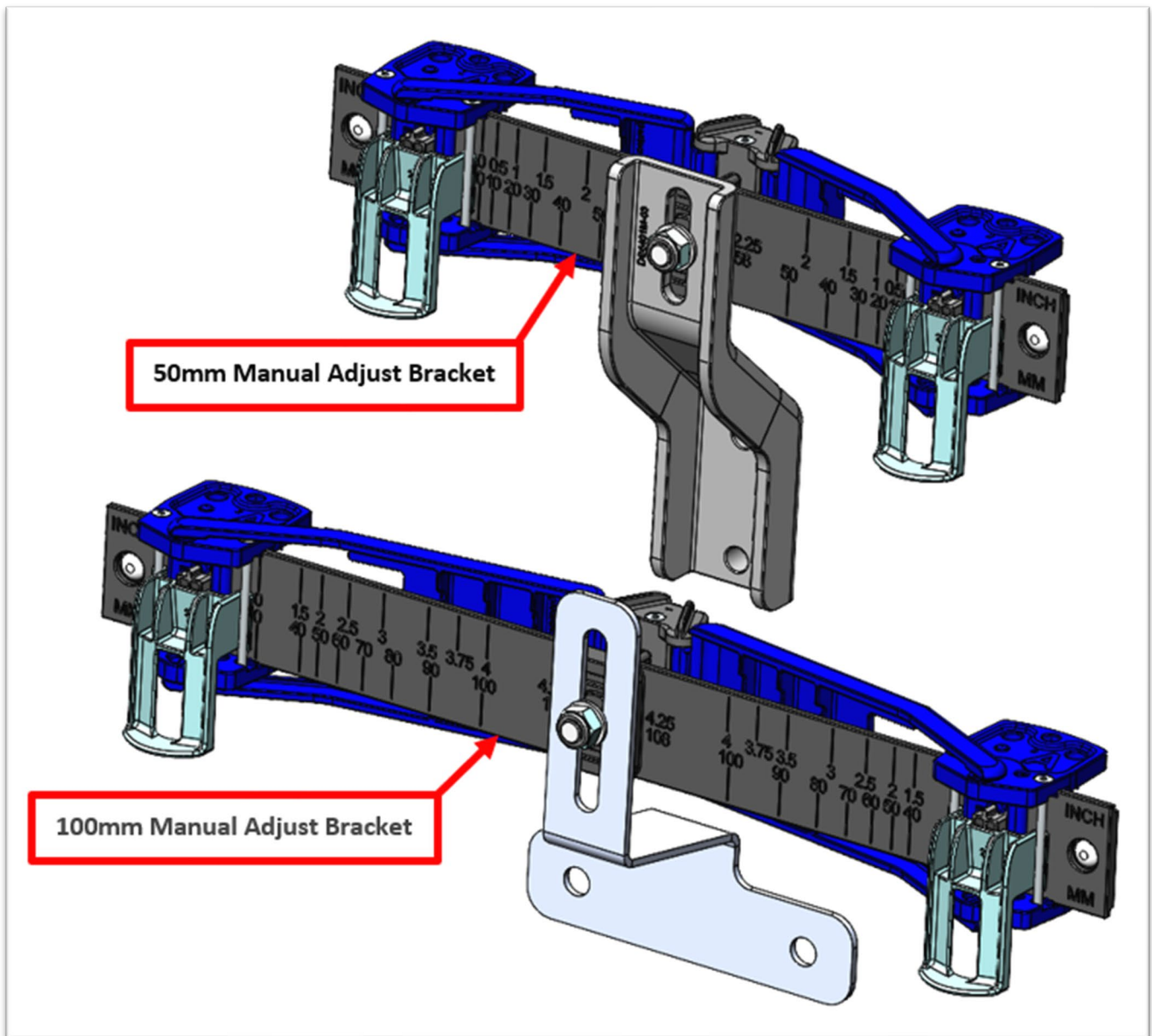
*The acetal material of the conveyor chain burns with a very hot, very faint flame. In case of fire, use Water, Foam, CO2, or Dry Chemical extinguishers only. Use of other material will not extinguish the fire and could result in serious injury, death, or significant property damage.*

If an EZGUIDE™ Manual Adjustable Guide Rail acetal bracket were to catch fire, a blue flame would be barely visible, and little or no smoke would be produced. In case of fire, immediately stop conveyor system operation. The fire can then be extinguished using a water, foam, CO2, or dry chemical fire extinguisher. Report any fire to the applicable Fire Department and plant management personnel immediately. Do not re-operate conveyor until all repairs have been made.

## General Information

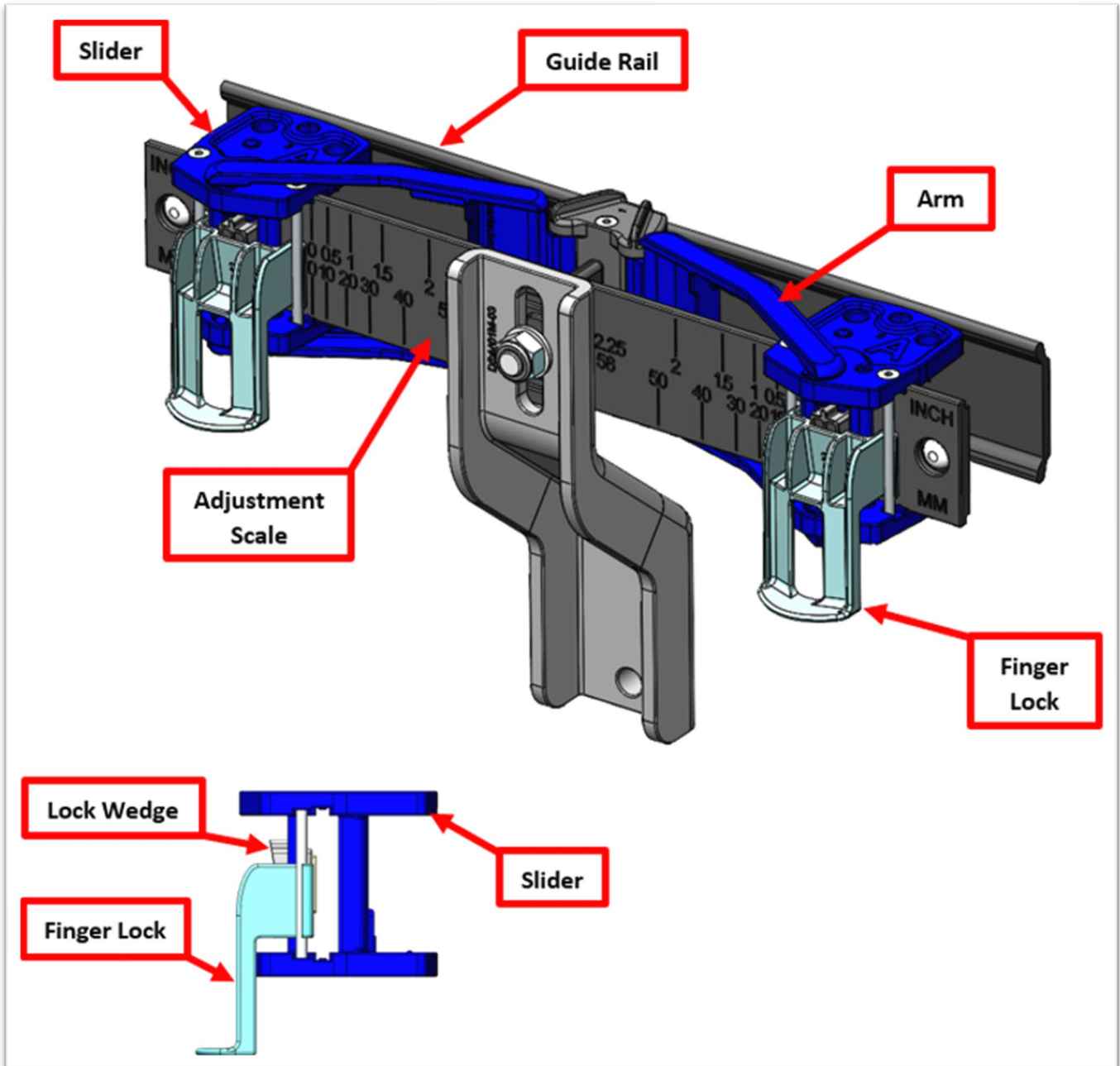
### Overview

The EZGUIDE™ Manual Adjustable Guide Rail is a conveyor product retention system designed to accommodate multiple sized products on the same system. A key feature of the Manual Adjustable Rail is its ability to adjust the guide rail through curves as well as straight sections. The Modular Bracket has a visible scale for fast and precise adjustments and is designed to mount to any conveyor system. Offered in 50mm and 100mm stroke variants, the Manual Adjustable Rail system eliminates the adjustment rods that protrude out the back of other adjustable guide rail systems.



### **Adjustment Method**

Adjusting the Manual Adjustable rail is made easy due to the system's wedge lock design. To change the position of the guide rails, simply pull down on the Finger Locks on the sliders, move the sliders to the desired location, and then push the Finger Locks back up into the Slider bodies. Metric and English scales on the back of the bracket aid in precise adjustments.

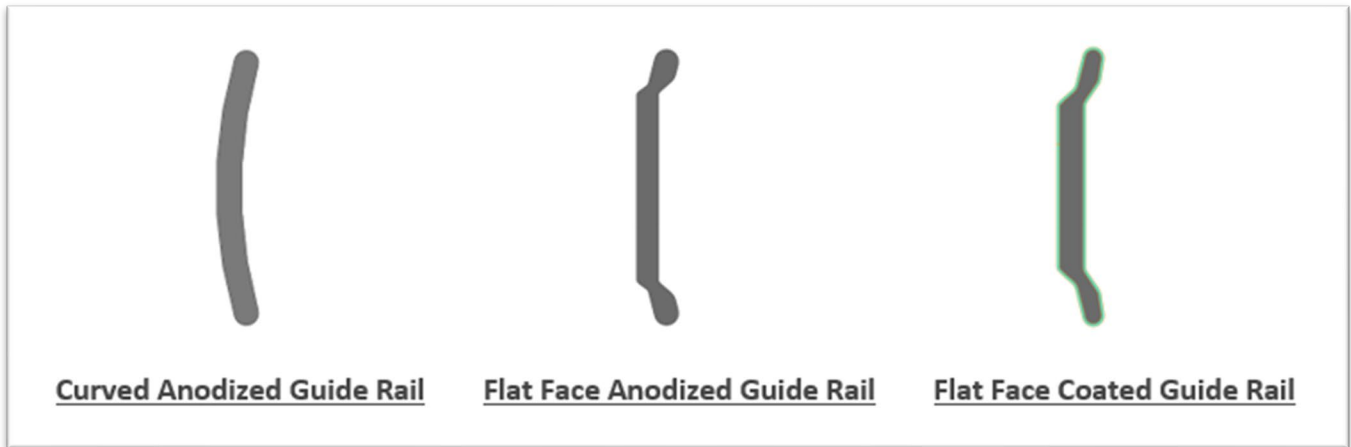


## **Guide Rails**

The rails used in the EZGUIDE™ system are provided in 4.87m (16ft) standard lengths. They are all 45mm (1.77in) tall and have (3) profiles:

- **Curved Anodized Guide Rail** is a military grade hardcoat anodized aluminum rail with a rounded profile, allowing for minimal product contact while still maintaining product retention on the conveyor.
- **Flat Face Anodized Guide Rail** is a military grade hardcoat anodized aluminum rail with a 30mm flat contact surface for larger or irregular shaped products.

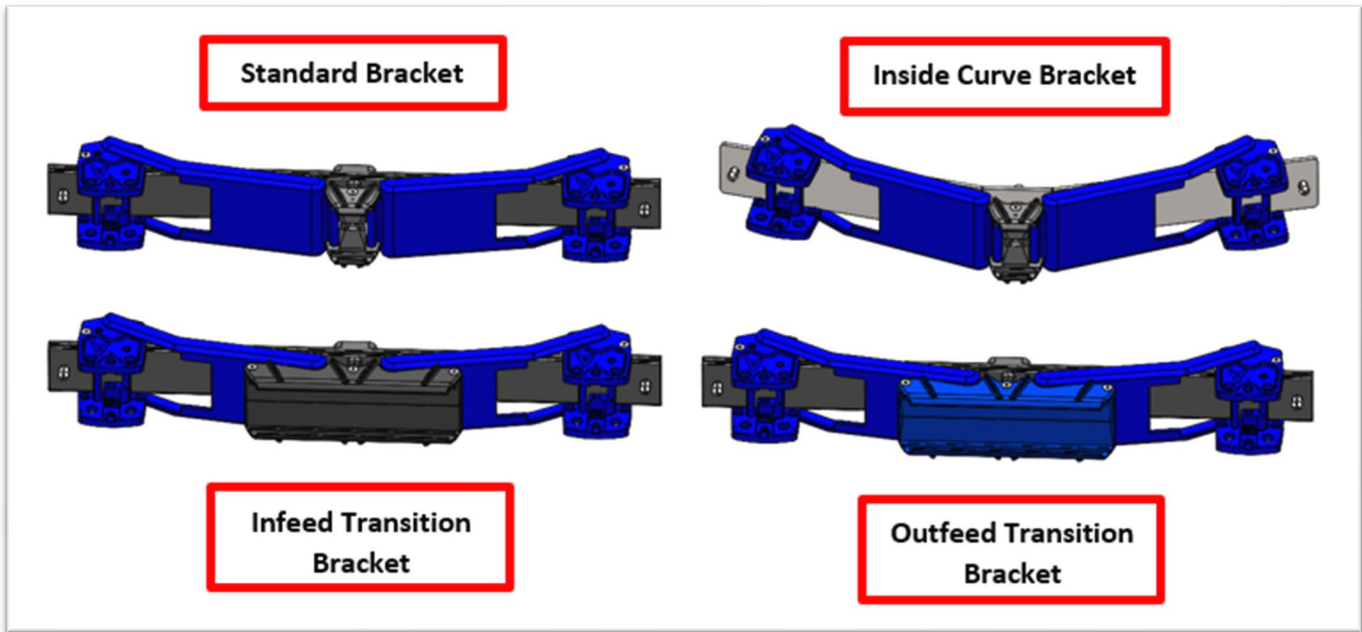
- **Flat Face Coated Guide Rail** is a white HDPE coated aluminum rail that increases chemical resistance and decreases friction.



### **Bracket Types**

There are 4 styles of brackets used when installing EZGUIDE™ Manual Adjustable Rail throughout a system. Each bracket serves a different purpose and is placed in specific places to allow the Manual Adjustable rail to function properly.

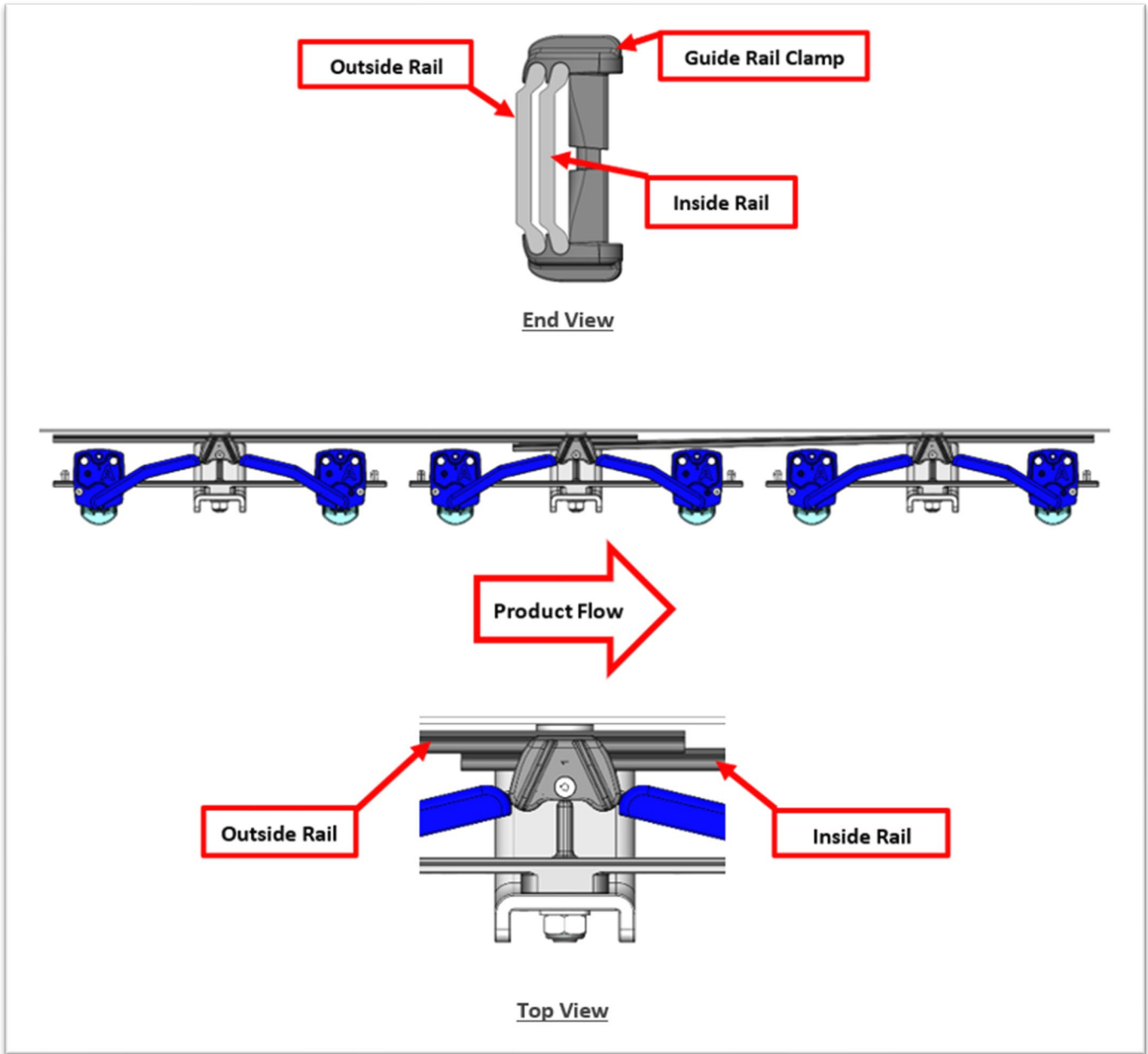
- **Standard Manual Adjust Bracket (DA4412-STXX)** used on straight portions of conveyors as well as the outside of curves.
- **Inside Curve Manual Adjust Bracket (DA4412-SMXX)** used on the inside of curves.
- **Infeed Transition Manual Adjust Bracket (DA4412-TTXX-INF)** used as the last bracket on a straight section of conveyor before entering a curve.
- **Outfeed Transition Manual Adjust Bracket (DA4412-TTXX-OUT)** used as the first bracket on a straight section of conveyor following a curve.



### **Extended Distances**

All EZGUIDE™ guide rail profiles are designed to nest, allowing pieces to be lapped over each other for extended distances. The Guide Rail Clamp has (2) locations to attach the lapping guiderail (inside and outside). To extend the Manual Adjustable Rail system beyond the length of a single rail, simply lap (2) guide rails together at the end of the first rail. When lapping (2) rails together, make sure the lap always occurs in the direction of the product flow as illustrated bellow. The lapped guide rail does **not** allow for bi-directional product flow.

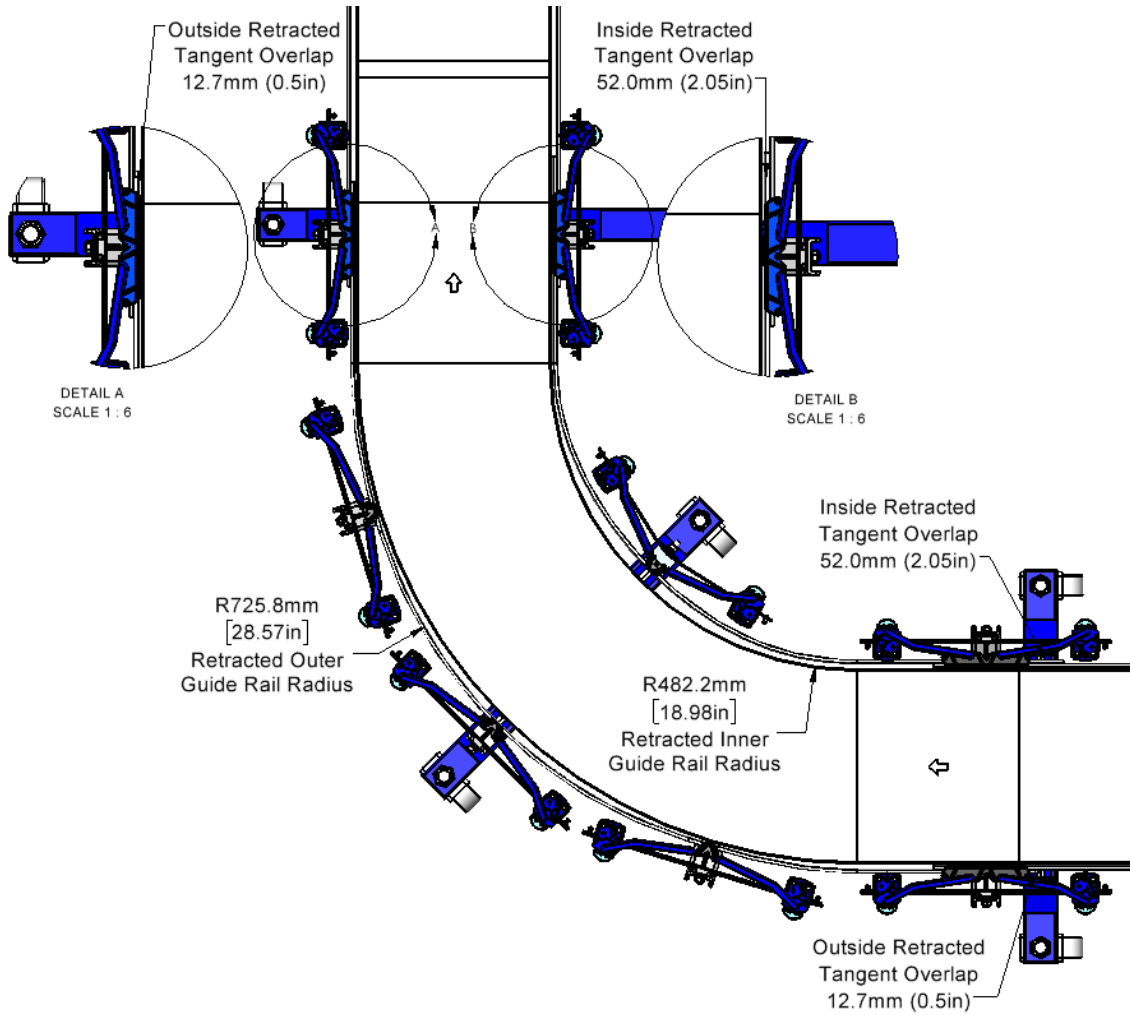


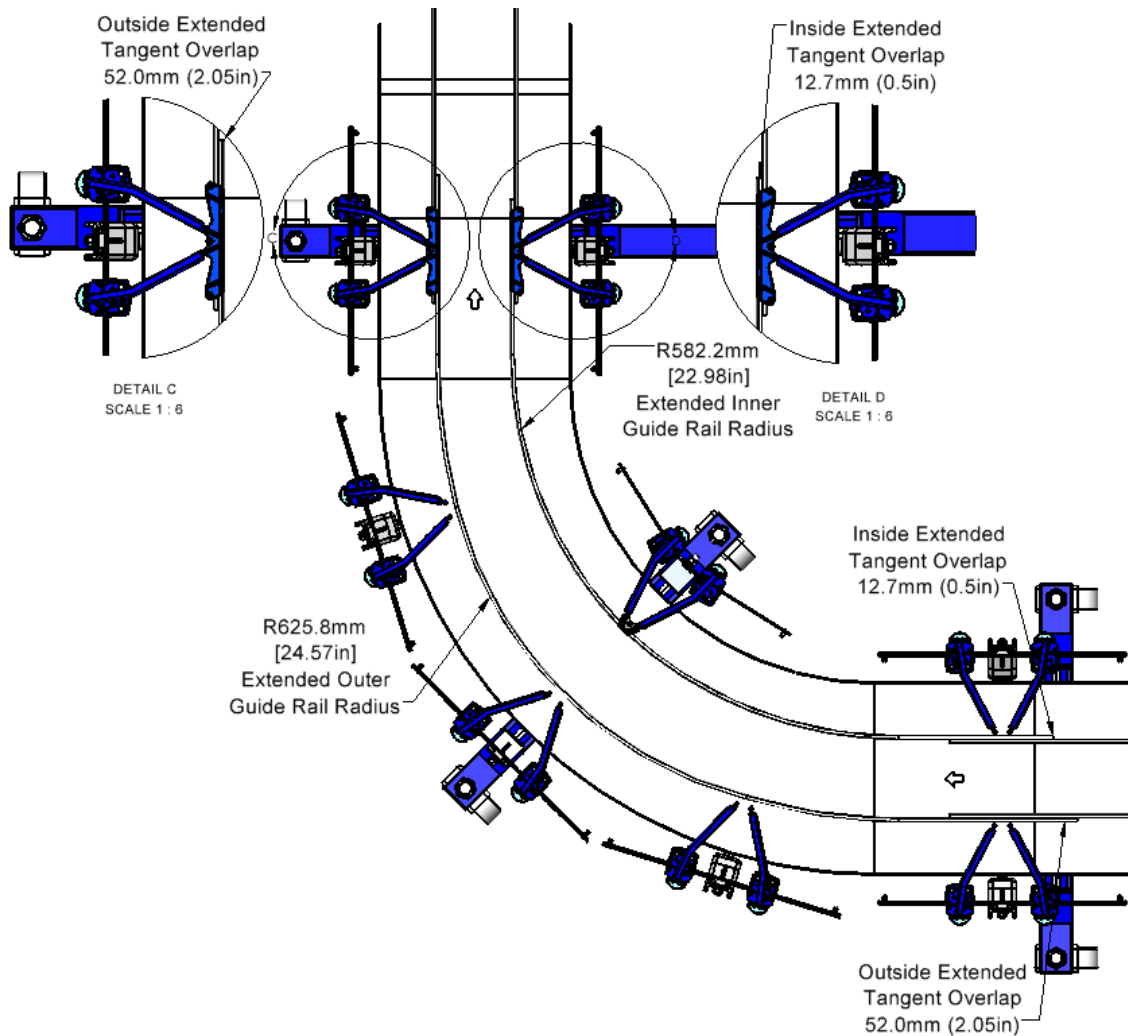


### **Adjustability Through Curves**

The EZGUIDE™ Manual Adjustable Rail system's unique nesting profile allows it to adjust the rail through a curve. When the guide rail is adjusted for a different product width, the guide rail is designed to change radius as necessary. As the guide rail radius changes, the amount of overlap at the end of the curve changes based on the bend angle and stroke. Because the radius and tangents change as you adjust the system the guide rail in the curves must be a separate piece from straight sections. Examples of the changing tangent lengths can be found in the chart below:

Bend Angle	System Stroke	Length Change
45°	50mm	19.6mm (0.77in)
	100mm	39.3mm (1.55in)
90°	50mm	39.3mm (1.55in)
	100mm	78.5mm (3.09in)
180°	50mm	78.5mm (3.09in)
	100mm	157.1mm (6.18in)

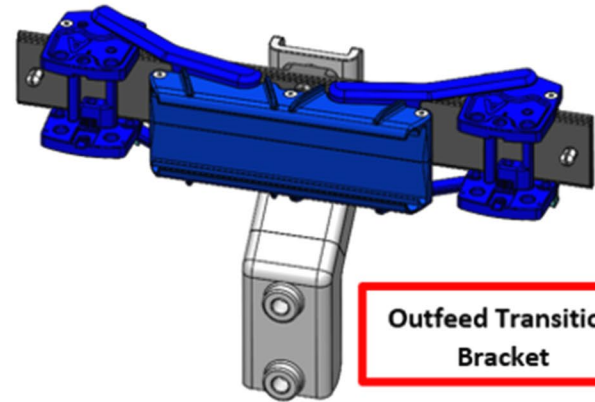
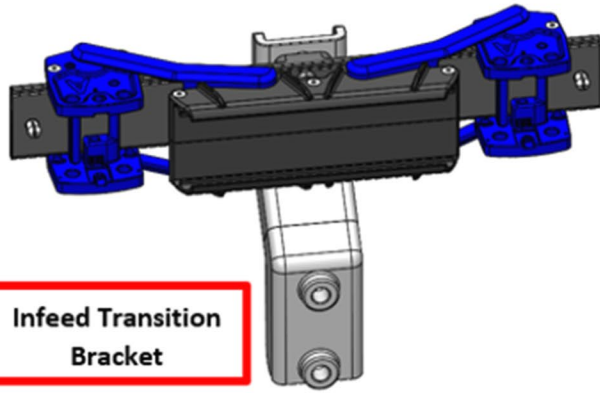


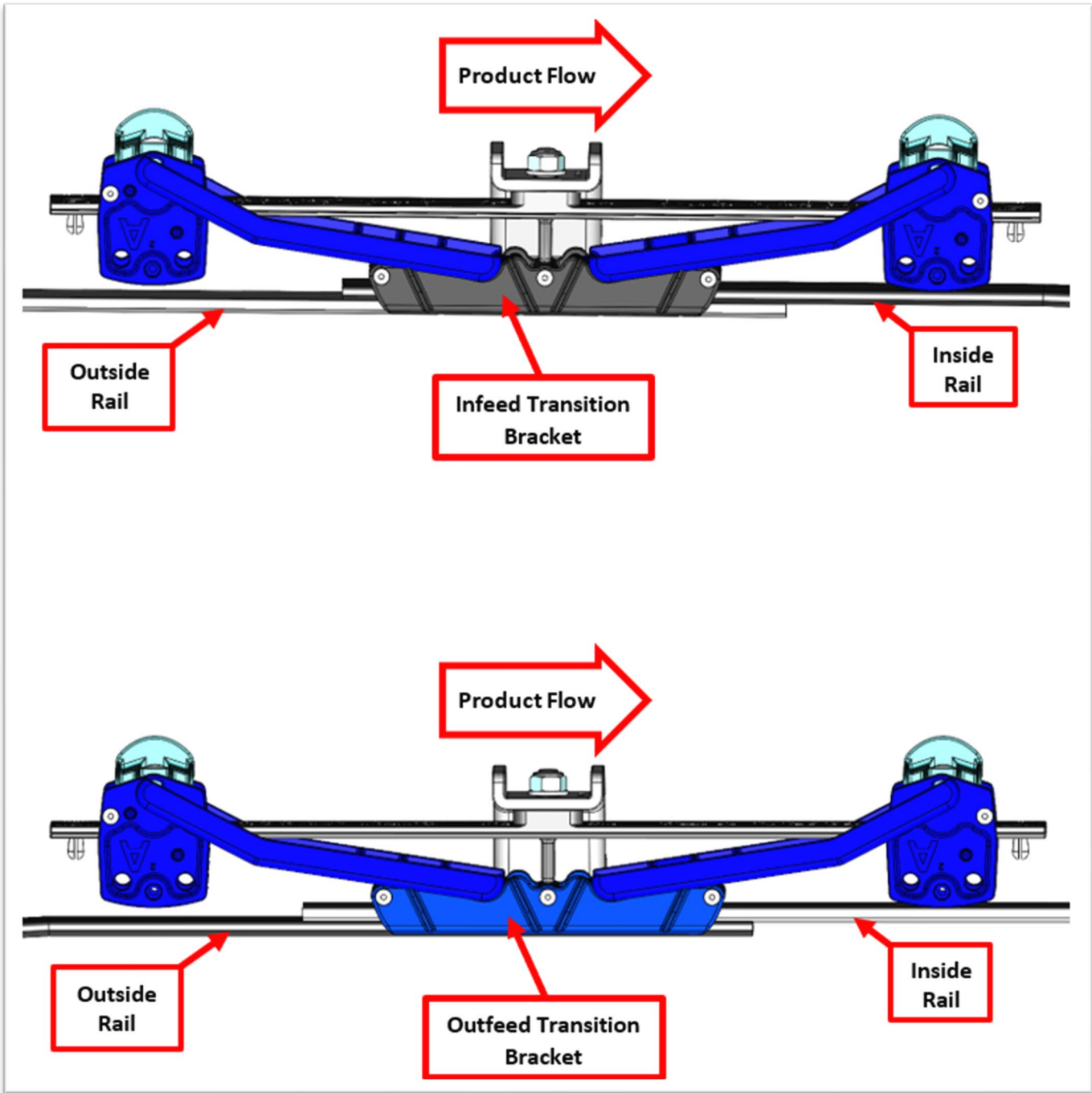


Instructions for rolling the guide rail will be discussed further in this manual in the **Bending Guide Rail** (page 20) section of this manual.

### **Curve Transitions**

Special transition brackets are used to connect the curved and straight guide rail sections together. The transition clamps are designed to hold the straight section of guide rail in place while the curved rail can slide allowing it to change radius. Because the guide rail nests together and makes a lapped joint, this means that the transition brackets are flow-direction specific. The (2) styles of transition clamps are color coded for easy recognition, the **Infeed Transition Clamp** is black, while the **Outfeed Transition Clamp** is blue.



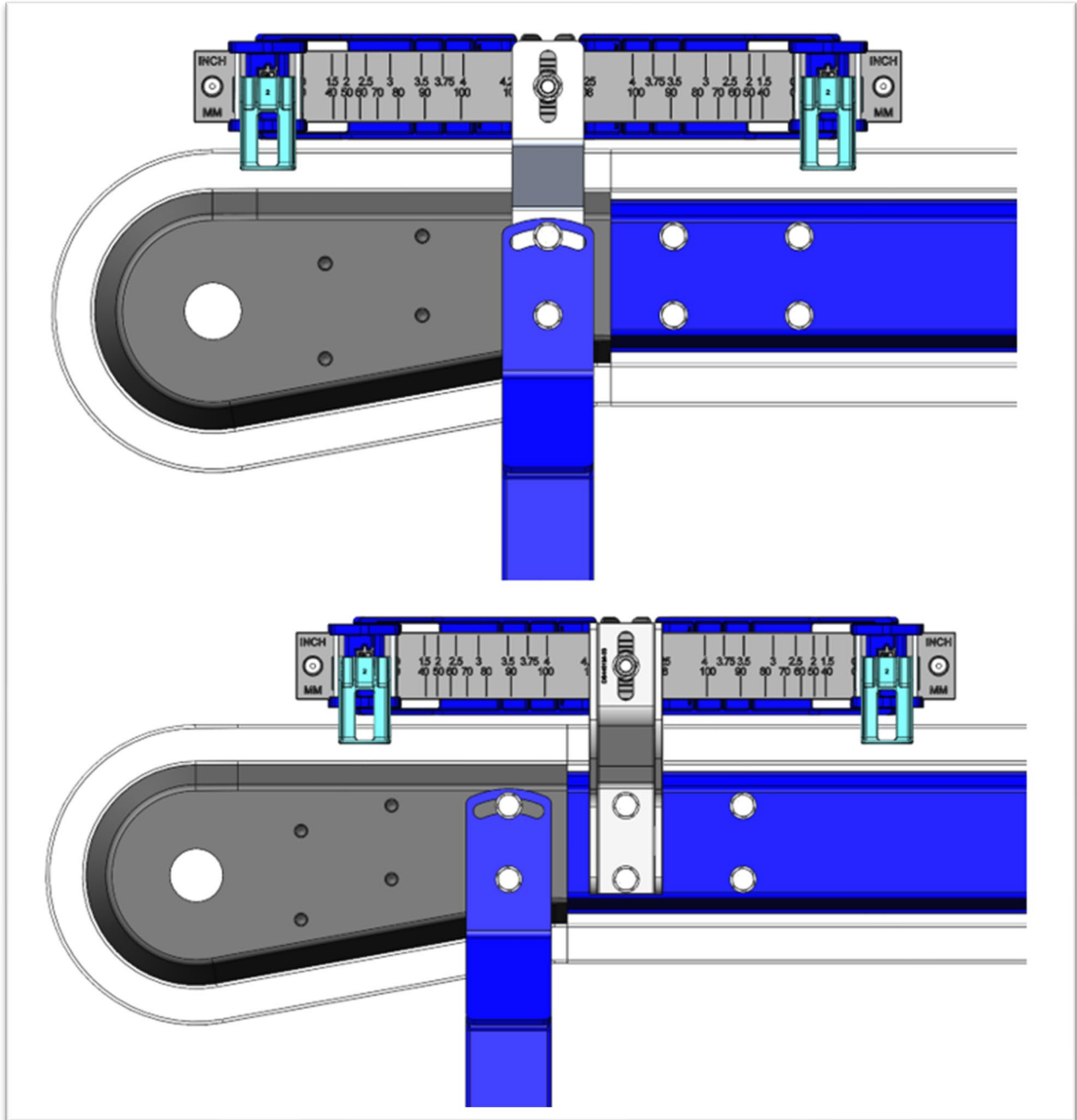


## Bracket Installation Guide

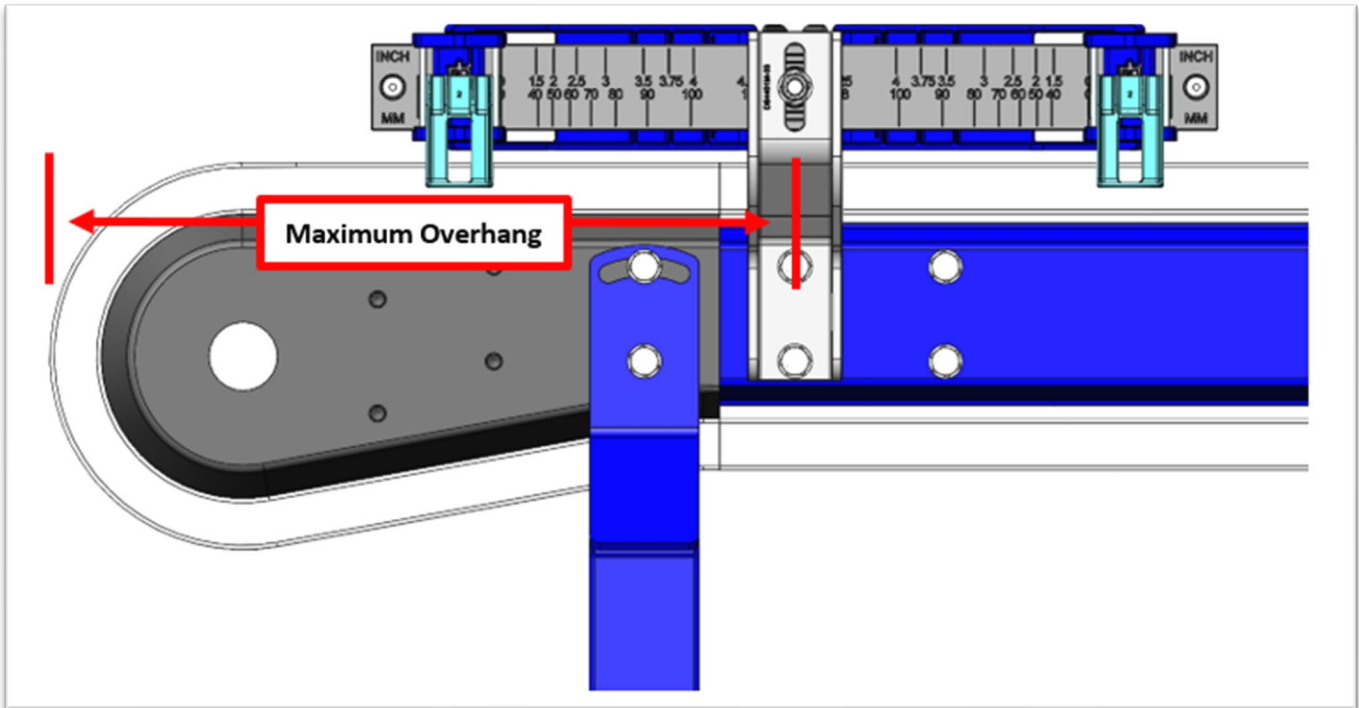
### Straight Conveyers

For a straight conveyor (no curves), follow the directions in this section.

1. Place brackets as close to the end of the conveyor as possible.



2. To ensure the rigidity of the guide rail, it is recommended not to exceed a rail overhang greater than **347mm (13.6in)**.



3. Place the EZGUIDE™ Manual Adjustable Rail Brackets along the conveyor between the end brackets noting the following (2) rules.
  - a. Maximum spacing between bracket assemblies is 610mm (24in)
  - b. Minimum spacing between bracket assemblies is:
    - i. **292mm (11.5in)** for 50mm arms
    - ii. **400mm (15.75in)** for 100mm arms

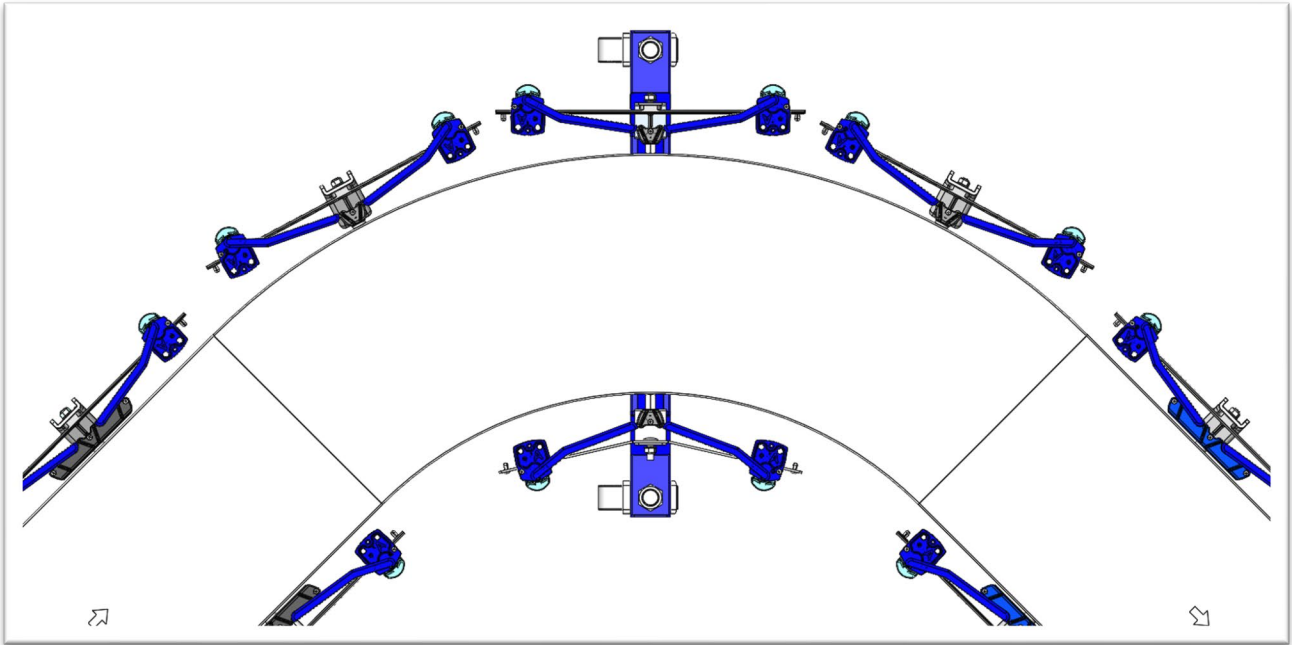


### **Curved Conveyors**

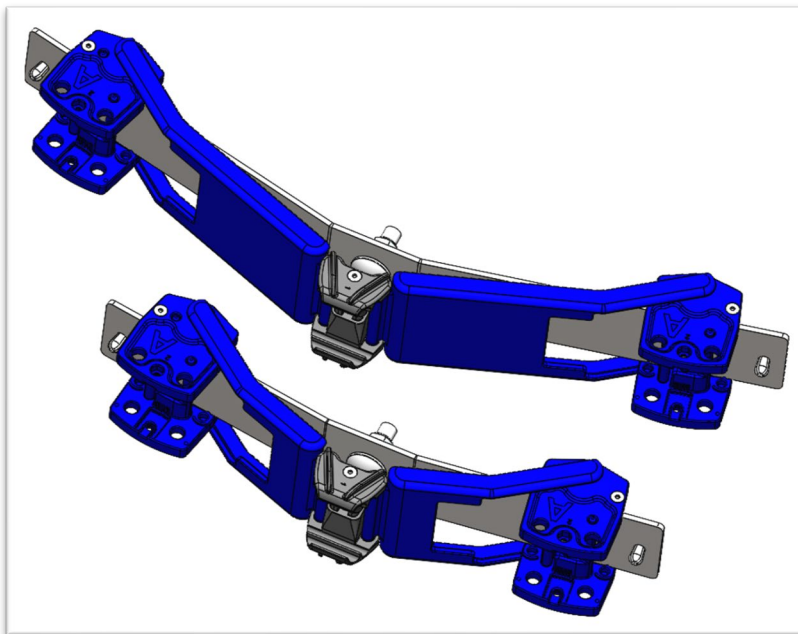
For a conveyor with curves, follow the directions in this section.

1. Begin by placing brackets in the conveyor curve(s).
  - a. Place as many brackets in the curve as possible, keeping the space between brackets the same (where possible).



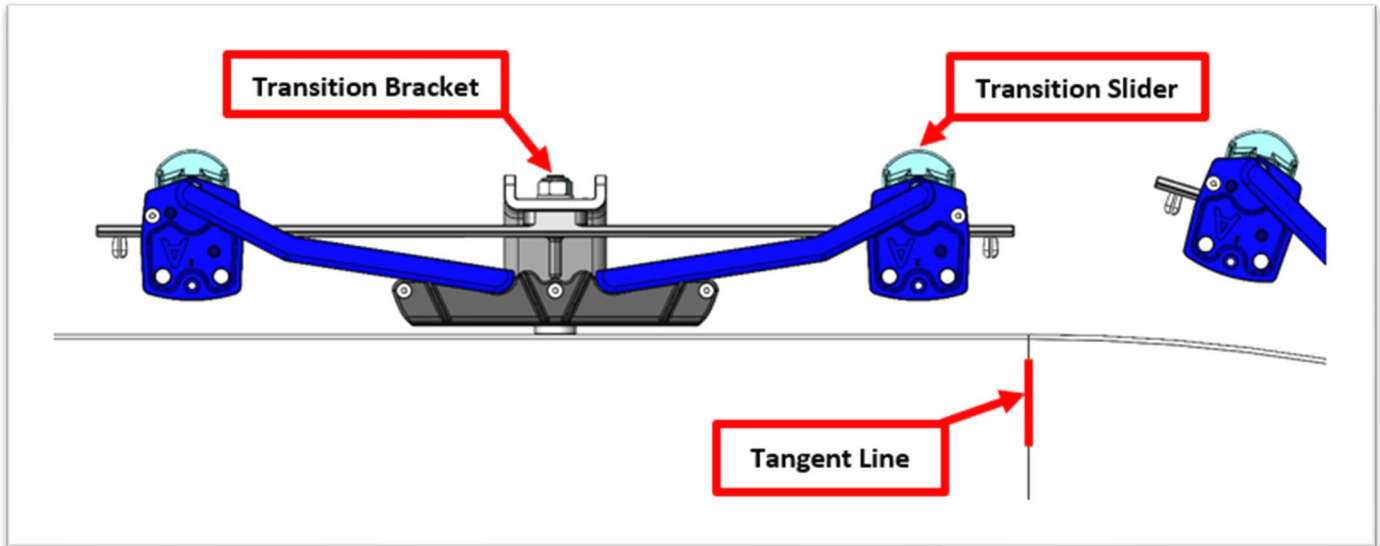


- b. Use the DA4412-SM05 or DA4412-SM10 brackets for the inside curve of the conveyor.

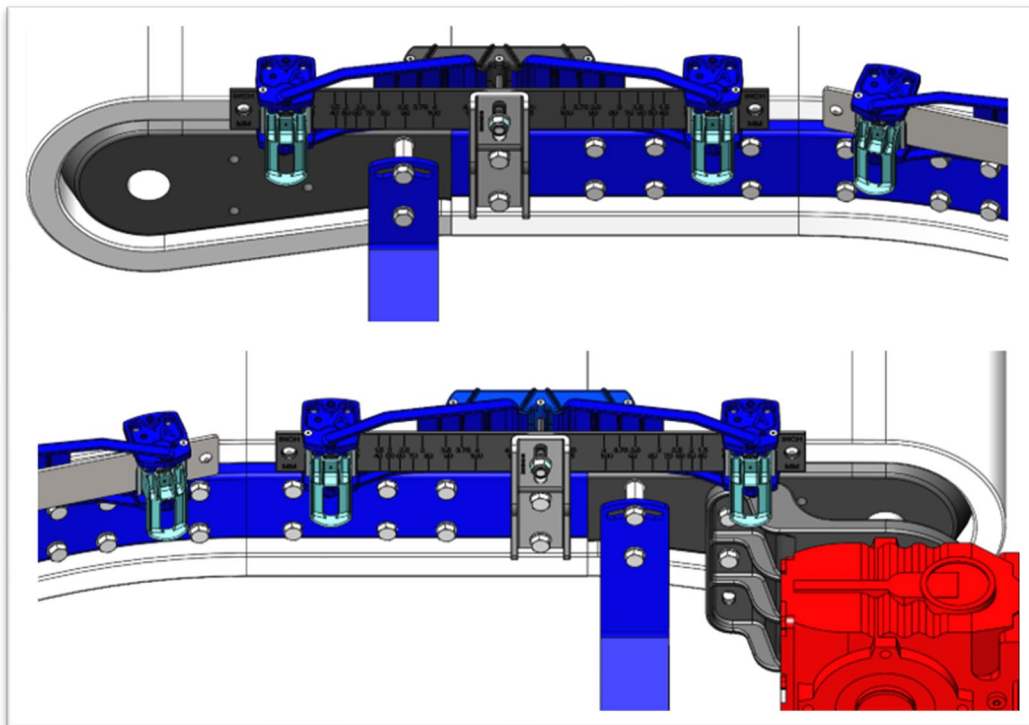


2. With the curve brackets in place, the Transition Brackets can be positioned on either side of the curve. Place the **Transition Bracket** on the straight section as close to the **Tangent Line** as possible, making sure the **Transition Slider** does not cross the tangent line.





- a. If your conveyor is too short to fit both a Transition Bracket and a Standard Bracket after the tangent line, both the Infeed and Outfeed Transition Bracket can act as a Short Tangent Transition.

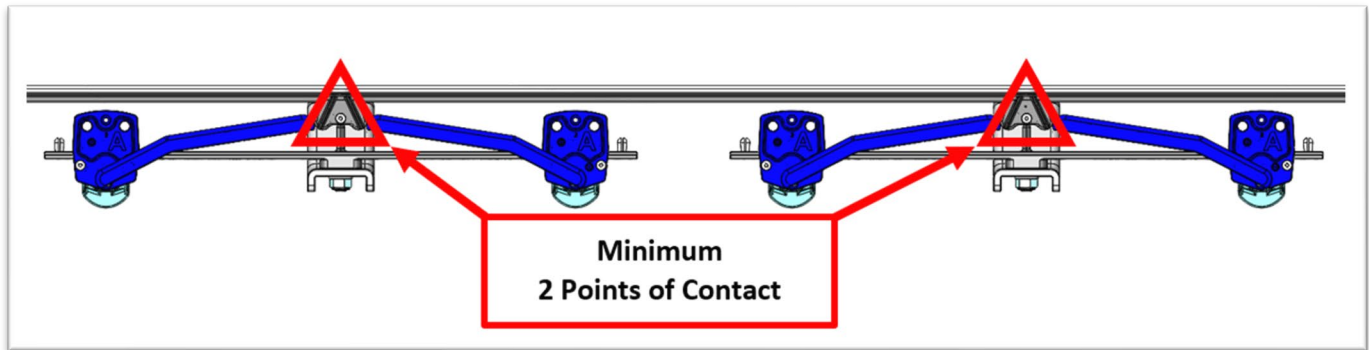


3. With the brackets in the curve and tangents placed, attach a bracket as close to the end of the conveyor as possible, not exceeding a rail overhang greater than **347mm (13.6in)**. See Straight Conveyors bracket placement Steps 1 and 2 (**Page 14**) for diagrams.
4. Place brackets along the conveyor between the end bracket and the transition bracket following the spacing rules, see the Straight Conveyors bracket placement Step 3 (**Page 15**) for a diagram.
  - a. Maximum spacing between bracket assemblies is **610mm (24in)**

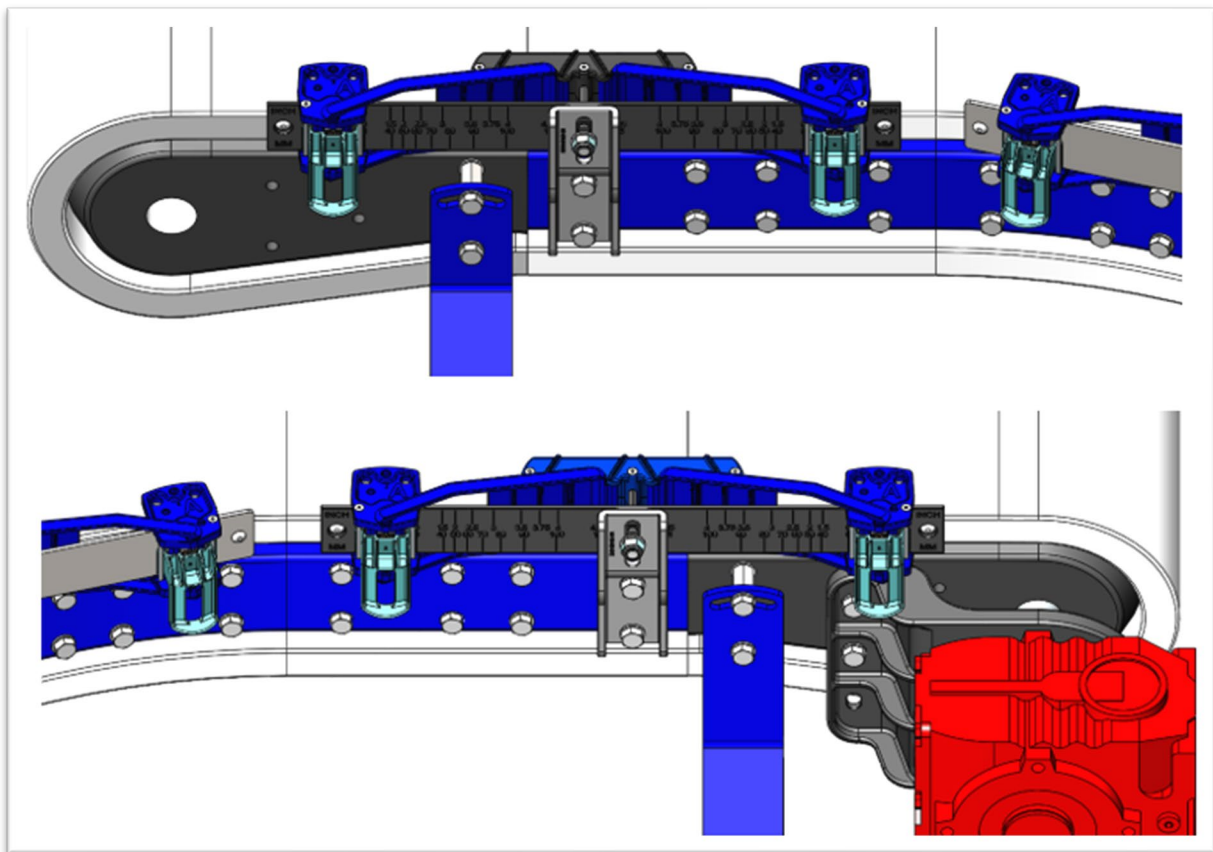
- b. Minimum spacing between bracket assemblies is:
  - i. **292mm (11.5in)** for 50mm arms
  - ii. **400mm (15.75in)** for 100mm arms

### **Additional Rules**

1. Some gearmotors may need to be positioned with the motor down to use the EZGUIDE™ Manual Adjustable Rail.
2. Guiderail sections must maintain at least two points of contact - i.e., a section of guiderail must be supported by two clamps, except when using a Short Tangent Transition.



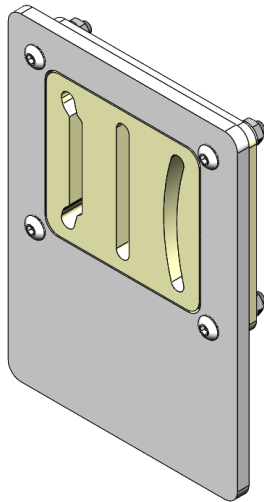
3. If a conveyor ends abruptly after a curve (without enough space for both a standard and transition Manual Adjustable Rail Assembly), a Short Tangent Transition will be needed. A Short Tangent Transition is created by using an Infeed or Outfeed Transition bracket at the conveyor drive/idler.



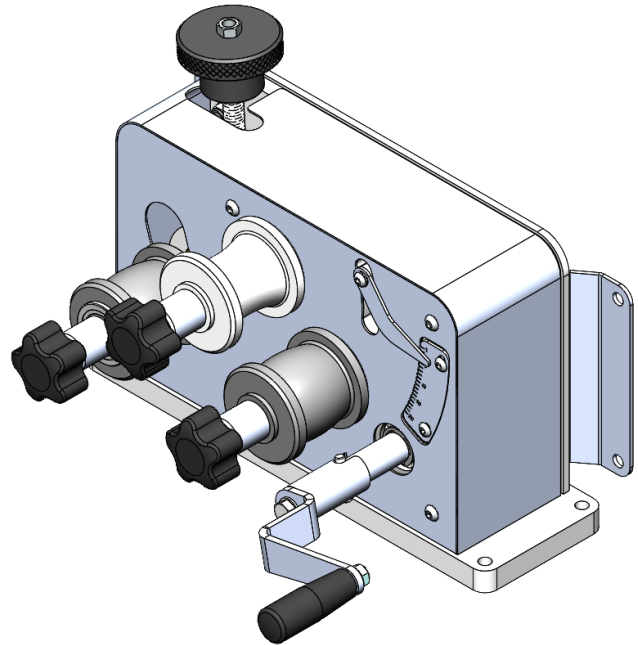
### **Bending Guide Rail**

## Introduction

There are (2) tool options when it comes to bending EZGUIDE™ Guide Rail, the EZGUIDE™ Hand Bender and the EZGUIDE™ Rail Roller. The Hand Bender is designed to be chucked into a vice and have the rail pressed against it to make the required bends. Due to the potential to scuff the HDPE coating, the Hand Bender is only designed to bend anodized versions of EZGUIDE™ Guide Rail. The EZGUIDE™ Rail Roller is a hand cranked roller tool designed to roll all versions of EZGUIDE™ rail. The Rail Roller has several sets of rollers designed to roll the rail without distorting its shape.



EZGUIDE™ Hand Bender



EZGUIDE™ Rail Roller

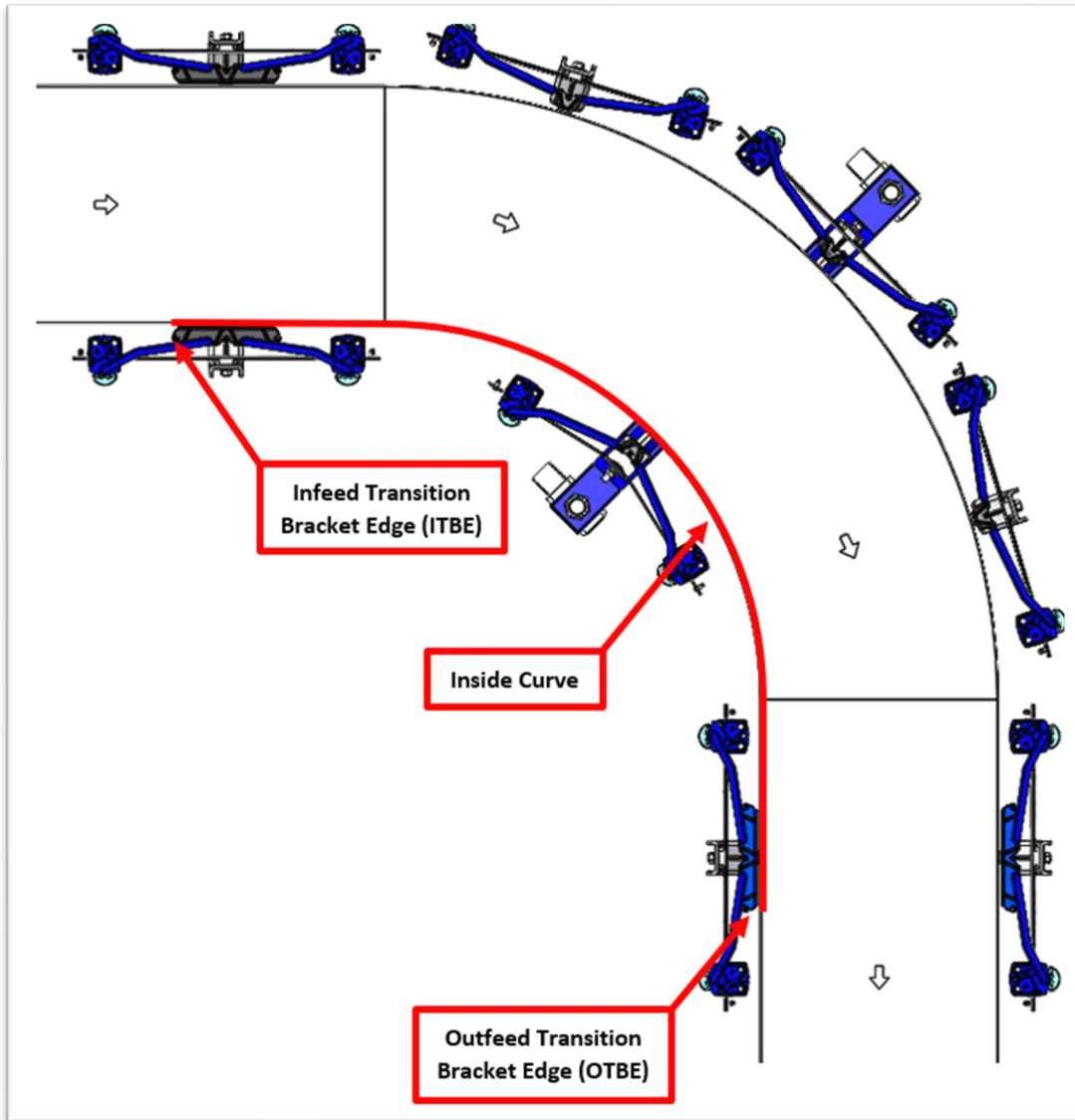
## Preparation

### Step 1

Run a tape measure along the **Inside Curve** of the conveyor, between the **Infeed Transition Bracket Edge** and the **Outfeed Transition Bracket Edge** to find the **Inside Edge-to-Edge Measurement**. The **Inside Edge-to-Edge Measurement** is illustrated by the red line in the picture below.

- **Inside Curve** – the side of the conveyor with smaller radius.

- **Infeed Transition Bracket Edge (ITBE)** – the outer edge of the Infeed Transition Bracket.
- **Outfeed Transition Bracket Edge (OTBE)** – the outer edge of the Outfeed Transition Bracket.
- **Inside Edge-to-Edge Measurement** – the distance measured between the ITBE and the OTBE on the Inside Curve.



## **Step 2**

Use the provided chart to find the correct **Overhang Length**. The **Overhang Length** is dependent on the conveyor curve angle and which Manual Adjust Bracket length you are installing.

- **Overhang Length** – the amount of protruding guide rail past the transition brackets needed for the system to function.

Inside Curve		
Arm Length	Curve Angle	Overhang Length
50mm	90°	100mm (4 in)
	180°	200mm (8 in)
100mm	90°	200mm (8 in)
	180°	350mm (14 in)

### **Step 3**

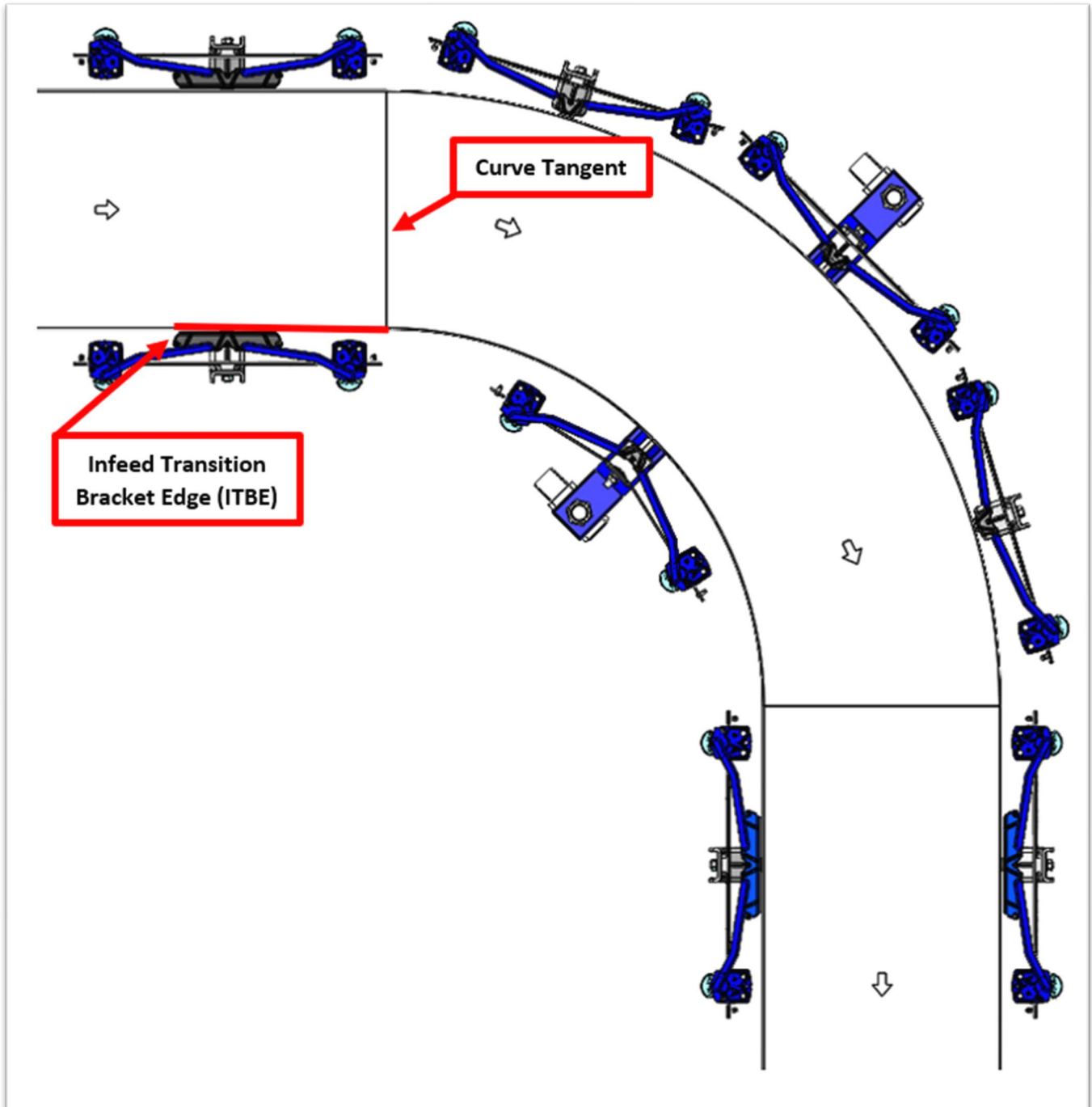
Add the **Inside Edge-to-Edge Measurement** to the correct **Overhang Length** to get the **Total Inside Rail Cut Length**. Cut the rail to length and use a file or emery cloth to take any burrs off the end of the guide rail.

**Inside Edge-to-Edge Measurement + Overhang Length = Total Inside Rail Length**

### **Step 4**

Use a tape measure to find the distance from the **ITBE** to the **Curve Tangent**, this is the **Infeed Tangent Measurement** and is illustrated by the red line in the picture below.

- **Curve Tangent** – the spot on the conveyor where the curve begins or ends.
- **Infeed Tangent Measurement** – the distance between the ITBE and the Curve Tangent.



### **Step 5**

With the **Infeed Tangent Measurement** found, use the chart below to find the correct **Infeed Rail Overhang** for the infeed tangent. Like mentioned previously the **Infeed Rail Overhang** is dependent on the conveyor curve angle and which Manual Adjust Bracket length you are installing.

- **Infeed Rail Overhang** – the amount of protruding guide rail past the infeed transition bracket needed for the system to function.

Inside Curve		
Arm Length	Curve Angle	Infeed Rail Overhang
50mm	90°	50mm (2in)
	180°	100mm (4in)
100mm	90°	100mm (4in)
	180°	175mm (7in)

### **Step 6**

Add the **Infeed Tangent Measurement** to the **Infeed Rail Overhang** to get the **Total Infeed Tangent**. Mark one end of the guide rail with the **Total Infeed Tangent** distance.

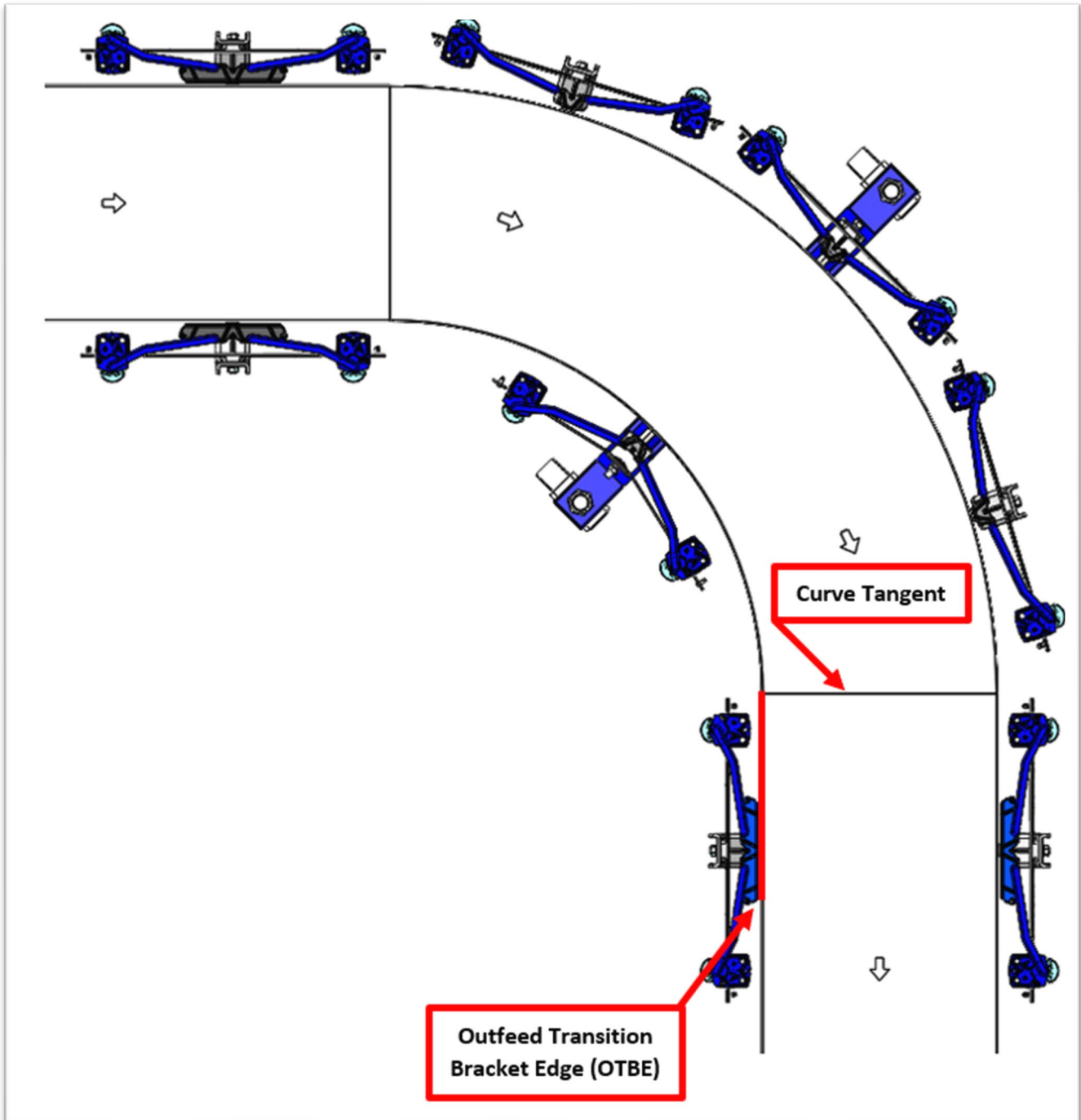
**Infeed Tangent Measurement + Infeed Rail Overhang = Total Infeed Tangent**

### **Step 7**

Use a tape measure to find the distance from the **Curve Tangent** to the **OTBE**, this is the **Outfeed Tangent Measurement** and is illustrated by the red line in the picture below.

- **Curve Tangent** – the spot on the conveyor where the curve begins or ends.
- **Outfeed Tangent Measurement** – the distance between the Curve Tangent and the OTBE.





### **Step 8**

With the **Outfeed Tangent Measurement** found, use the chart below to find the correct **Outfeed Rail Overhang** for the outfeed tangent. The **Outfeed Rail Overhang** is dependent on the conveyor curve angle and which Manual Adjust Bracket length you are installing.

- **Outfeed Rail Overhang** – the amount of protruding guide rail past the infeed transition bracket needed for the system to function.

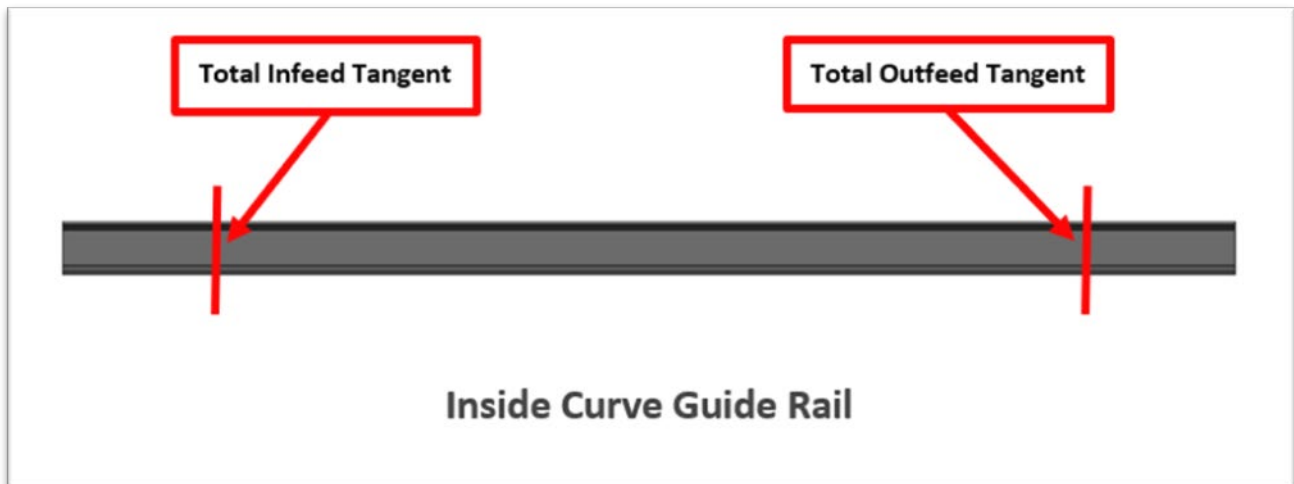
Inside Curve		
Arm Length	Curve Angle	Outfeed Rail Overhang
50mm	90°	50mm (2in)
	180°	100mm (4in)
100mm	90°	100mm (4in)
	180°	175mm (7in)

### **Step 9**

Add the **Outfeed Tangent Measurement** to the **Outfeed Rail Overhang** to get the **Total Outfeed Tangent**. Mark the other end of the guide rail with the **Total Outfeed Tangent** distance.

### **Outfeed Tangent Measurement + Outfeed Rail Overhang = Total Outfeed Tangent**

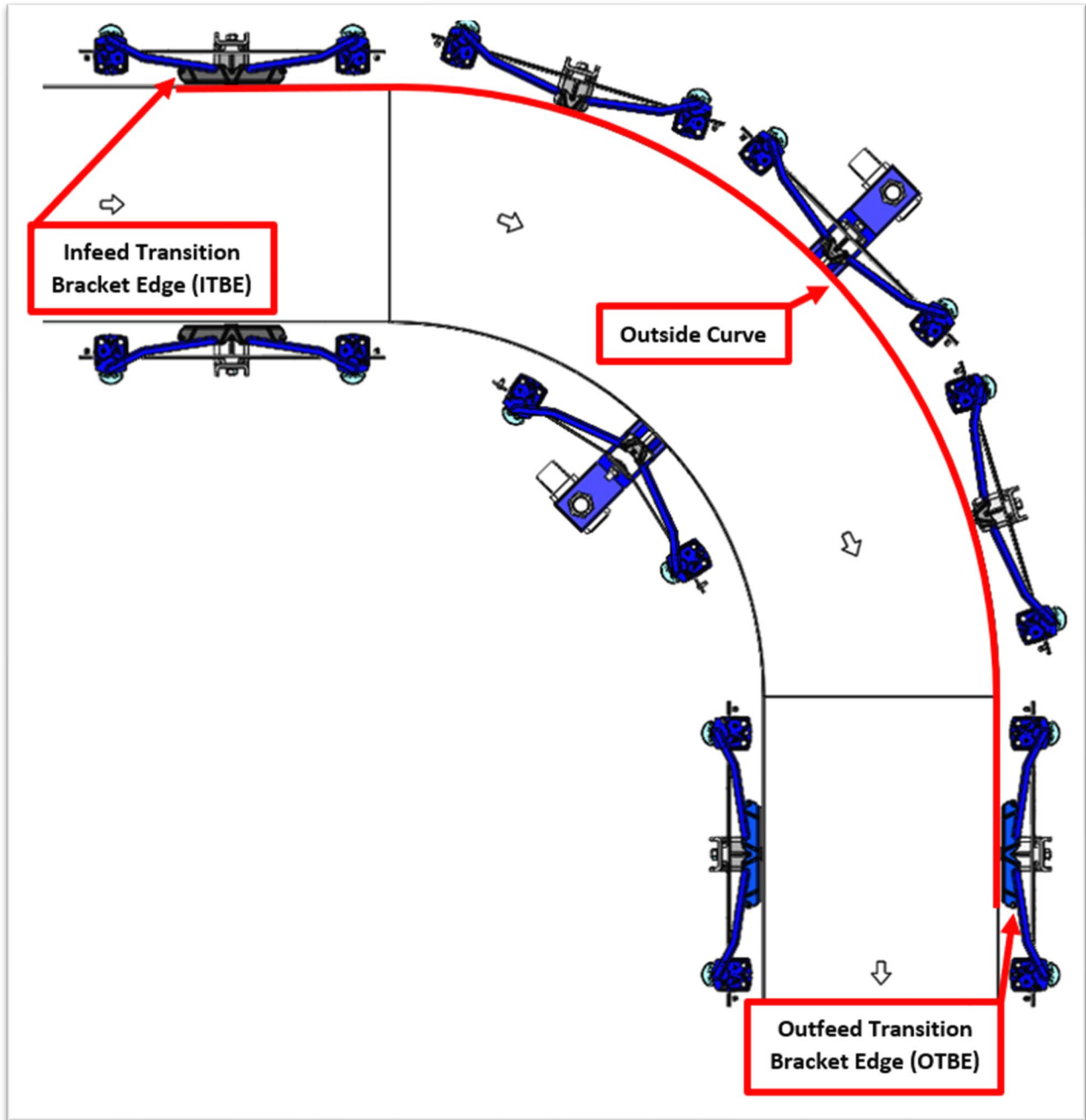
With the infeed and outfeed tangents marked, the inside curve guide rail is now ready to bend to shape.



### **Step 10**

Run a tape measure along the **Outside Curve** of the conveyor, between the **Infeed Transition Bracket Edge** and the **Outfeed Transition Bracket Edge** to find the **Outside Edge-to-Edge Measurement**. The **Outside Edge-to-Edge Measurement** is illustrated by the red line in the picture below.

- **Outside Curve** – the side of the conveyor with larger radius.
- **Outside Edge-to-Edge Measurement** – the distance measured between the ITBE and the OTBE on the Outside Curve



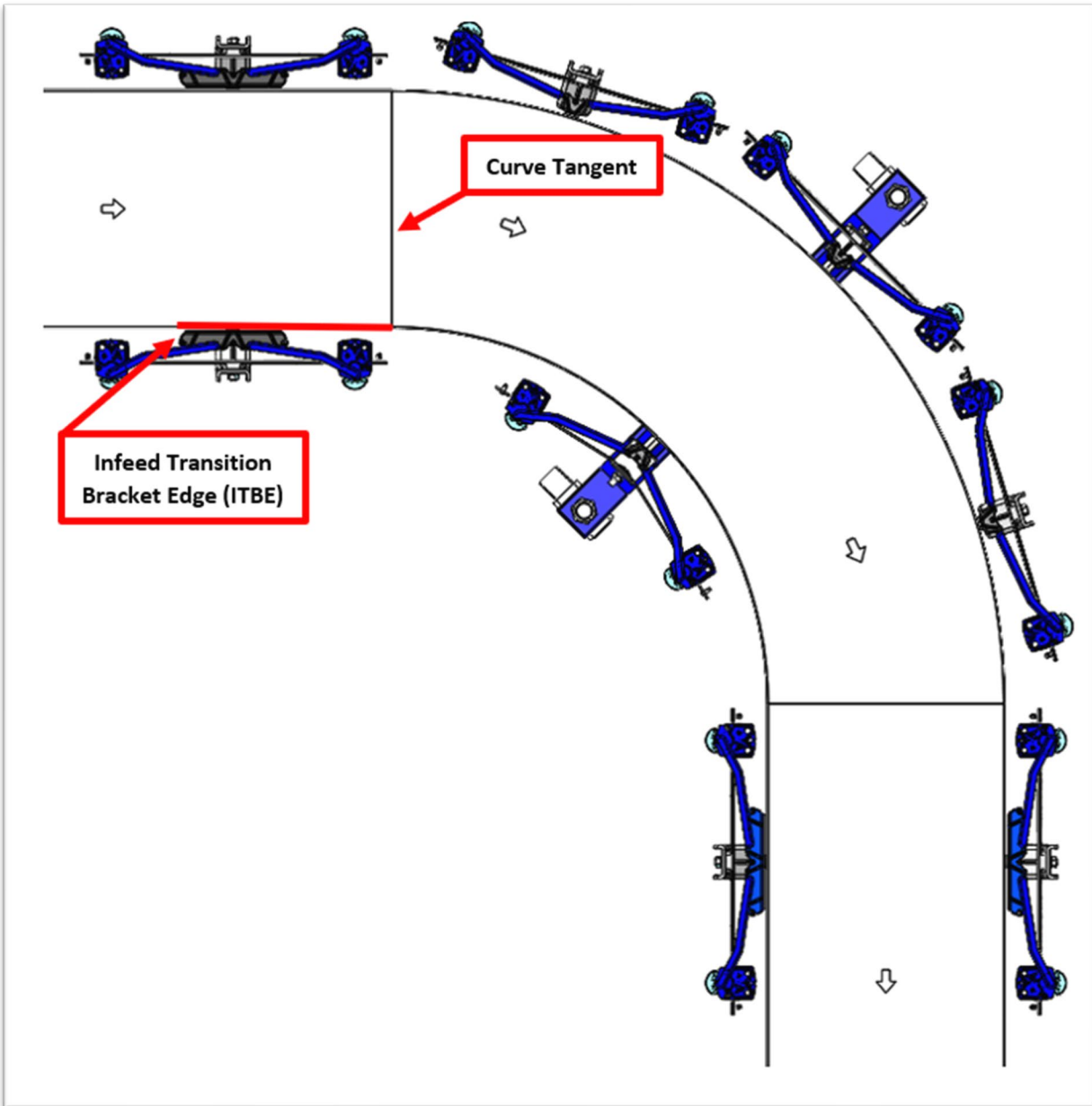
**Step 11**

Add 100mm (4in) to the **Outside Edge-to-Edge Measurement** to get the **Total Outside Rail Cut Length**. Cut the rail to length and use a file or emery cloth to take any burrs off the end of the guide rail.

**Outside Edge-to-Edge Measurement + 100mm (4in) = Total Outside Rail Cut Length**

**Step 12**

Use a tape measure to find the distance from the **ITBE** to the **Curve Tangent**, this is the **Infeed Tangent Measurement** and is illustrated by the red line in the picture below.



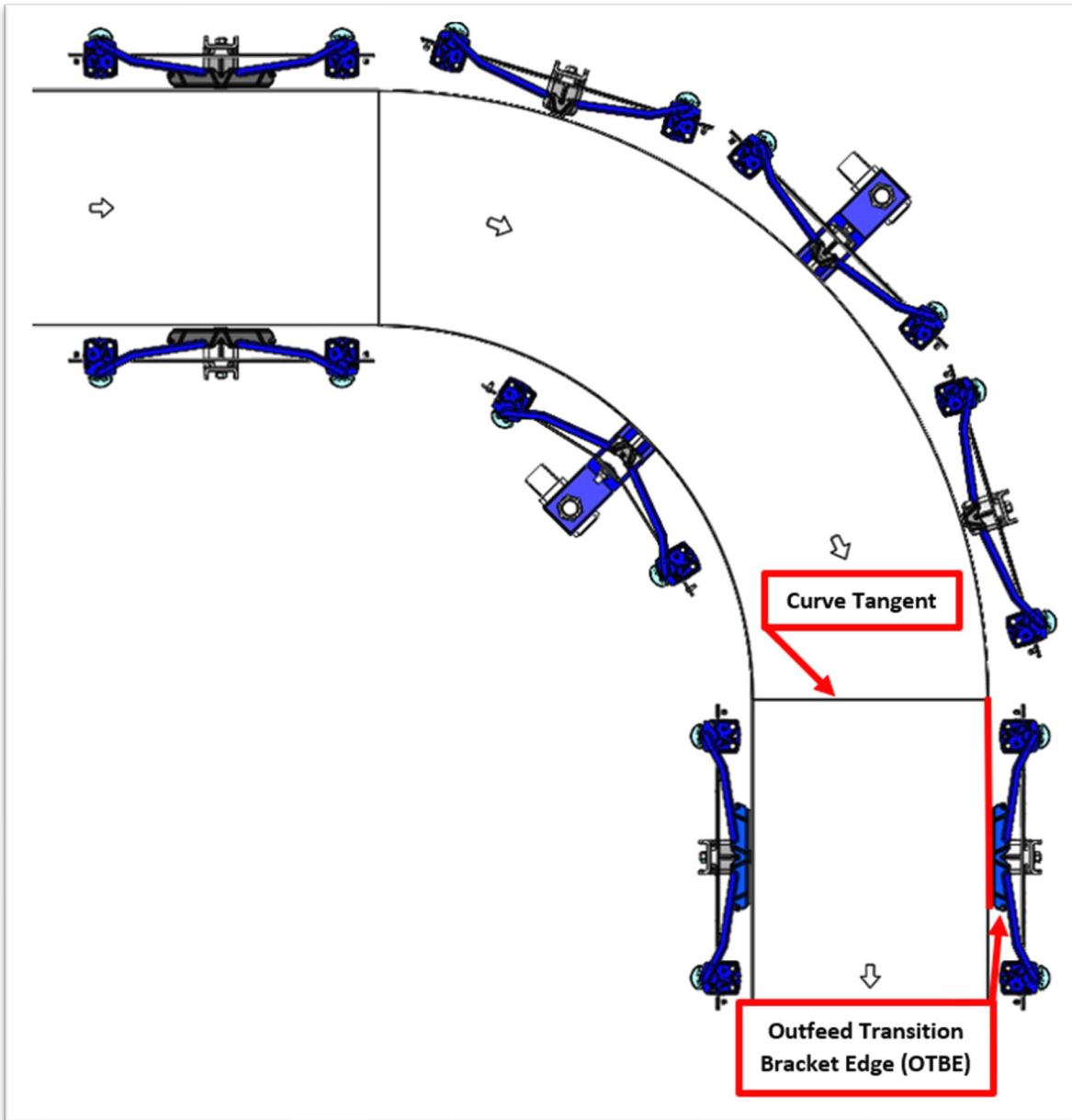
**Step 13**

Add 50mm (2in) to the **Infeed Tangent Measurement** to get the **Total Infeed Tangent**. Mark one end of the guide rail with the **Total Infeed Tangent** distance.

$$\text{Infeed Tangent Measurement} + 50\text{mm (2in)} = \text{Total Infeed Tangent}$$

**Step 14**

Use a tape measure to find the distance from the **Curve Tangent** to the **OTBE**, this is the **Outfeed Tangent Measurement** and is illustrated by the red line in the picture below.

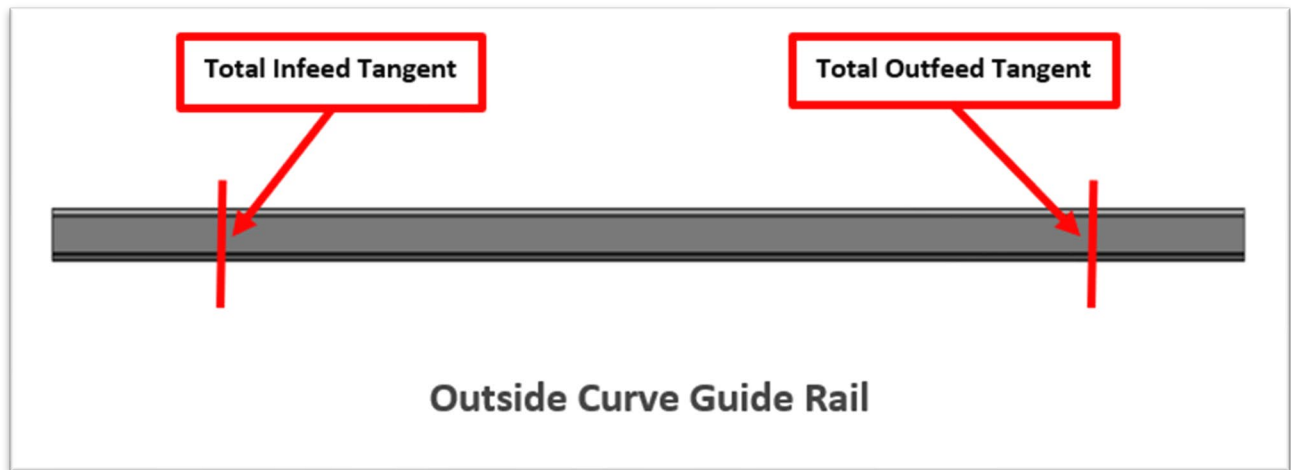


**Step 15**

Add 50mm (2in) to the **Outfeed Tangent Measurement** to get the **Total Outfeed Tangent**. Mark the other end of the guide rail with the **Total Outfeed Tangent** distance.

$$\text{Outfeed Tangent Measurement} + 50\text{mm (2in)} = \text{Total Outfeed Tangent}$$

With the infeed and outfeed tangents marked, the outside curve guide rail is now ready to bend to shape.



## **EZGUIDE™ Hand Bender Instructions**

### **Step 1**

Fix the bending tool in a benchtop vice, clamp, or similar device.



**Step 2**

Slide the rail through the bending tool through the appropriate opening. Stop when you reach one of the marks made for the Infeed Tangent Length or Outfeed Tangent Length.





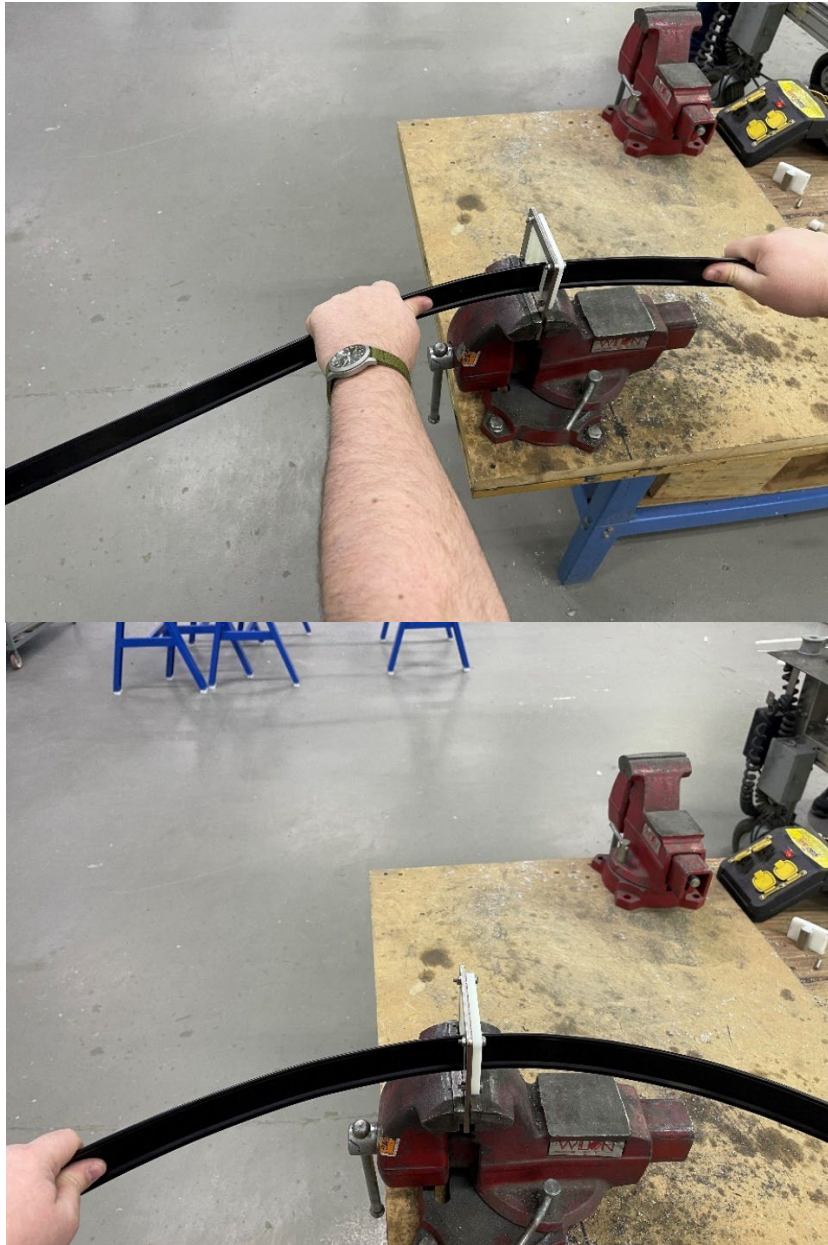
### **Step 3**

Make a series of very small bends in the rail in the section between the Infeed and Outfeed Tangent Lengths. The bends need to be very shallow and spaced about 19mm to 25mm ( $\frac{3}{4}$ in to 1in) apart.

When bending the rail, make sure to hold the rail as close to the bending tool as possible to “isolate” the bend.

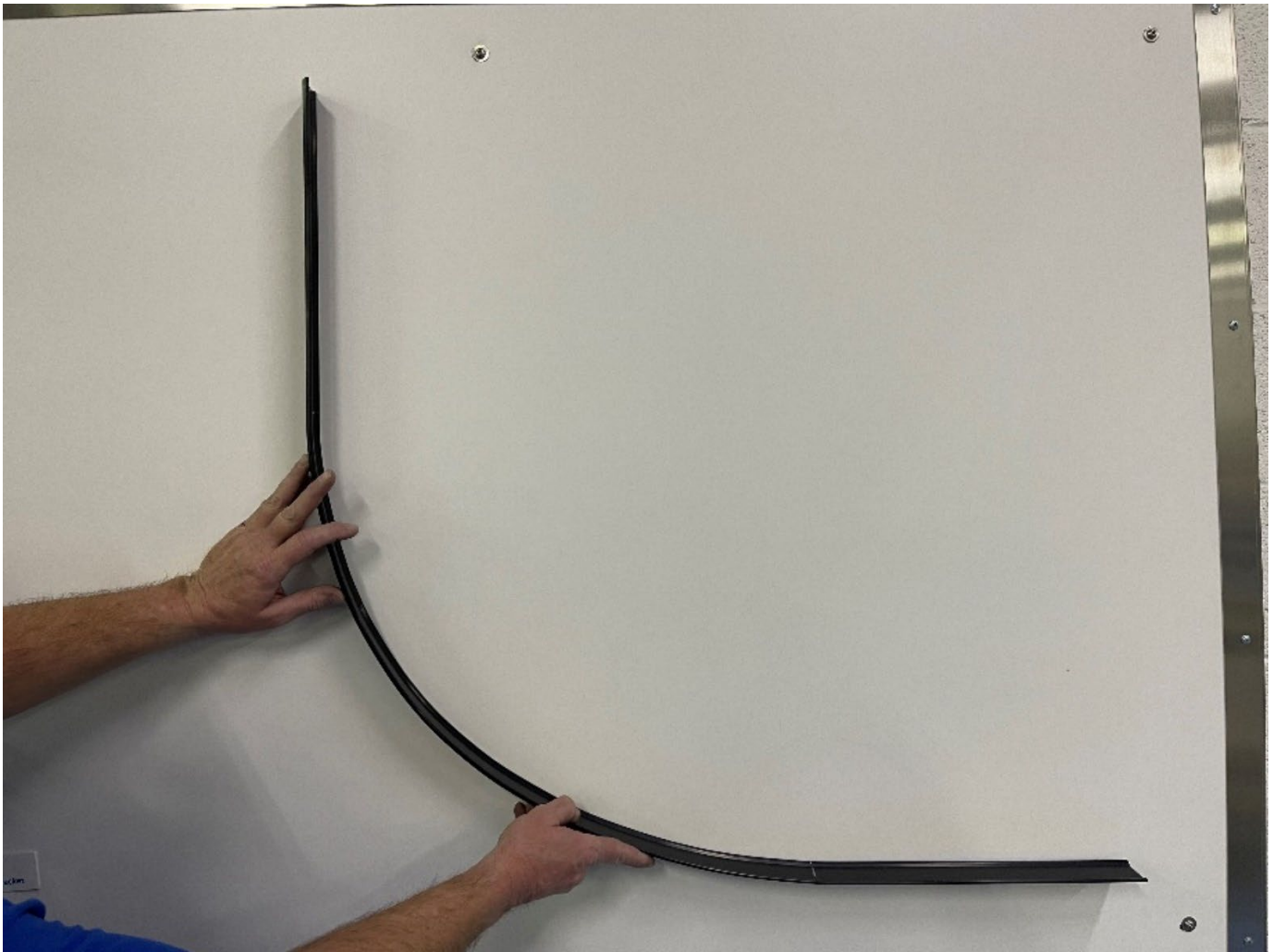
**Be very careful to not over bend the rail during this process! It is much better to “under bend” the rail than to bend it too much.**





**Step 4**

Take the rail out of the Hand Bender and check the bend. It is expected to be under-bent for the first few attempts. Continue the process of bending the rail until it reaches the desired angle. Once the rail reaches the desired angle it is ready for installation.



## **EZGUIDE™ Rail Roller Instructions**

### **Step 1**

When using the EZGUIDE™ Rail Roller it is important to select the correct set of rollers for the guide rail being used. Each roller set is shaped to a specific guide rail profile and the guide rail can be damaged if the wrong rollers are used. Guide rail roller sets contain (4) rollers, (2) white rollers with the profile of the guide rail face and (2) black rollers with the profile of the rear.



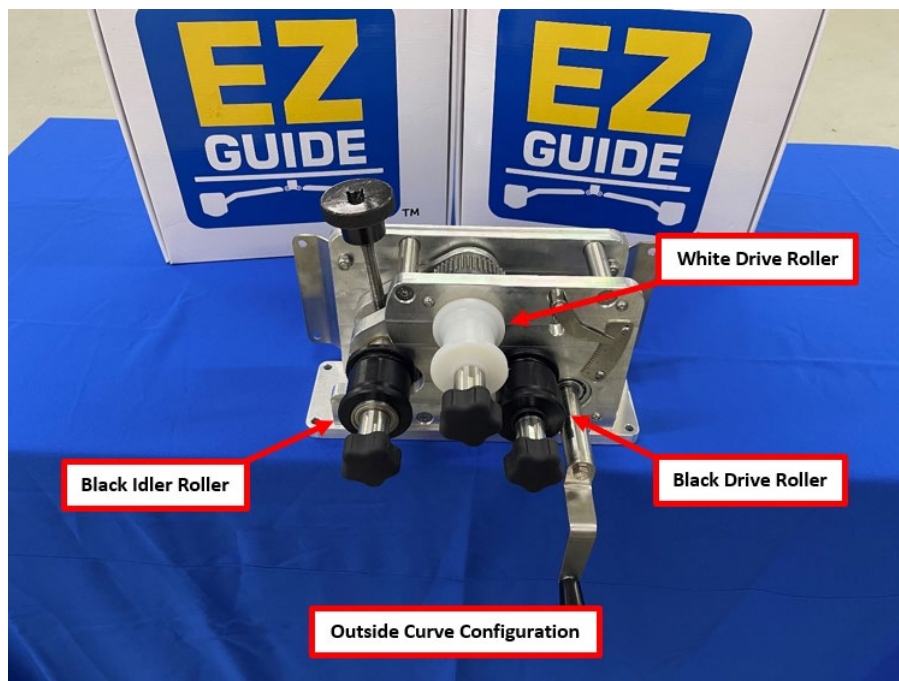
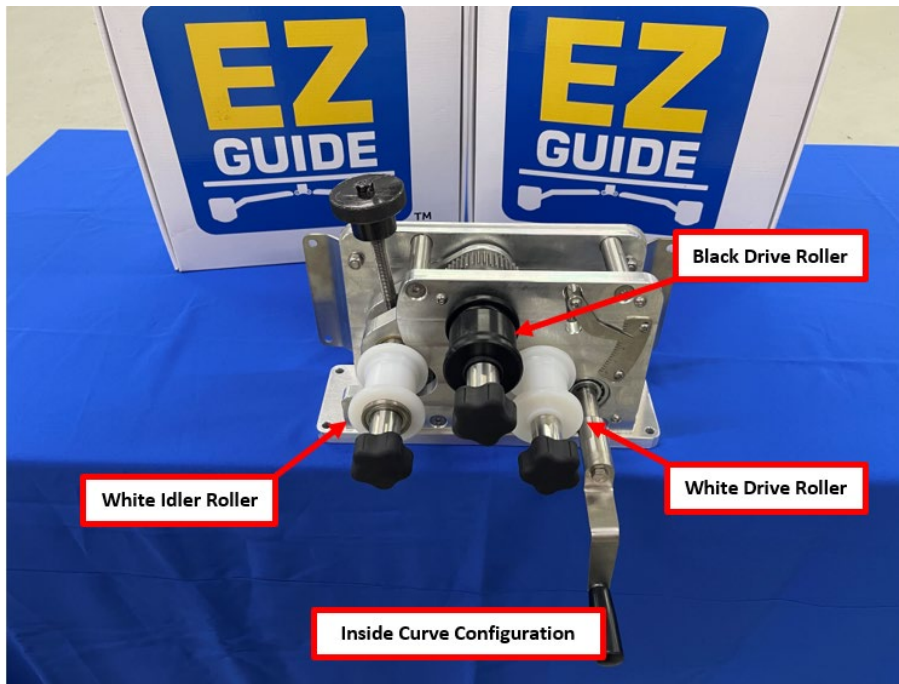
The rollers come in (2) styles, drive rollers which have a keyway cut into them and idler rollers which have bearings allowing them to roll on the idler shaft.



## **Step 2**

Place the rollers on the device in the intended configuration and tighten them down using the hand knobs. The Rail Roller has (2) different configurations, one for rolling inside curves and one for rolling outside curves. The inside curve configuration uses the white idler roller and has the black drive roller placed on top. The outside curve configuration has the white drive roller on top and uses the black idler roller.





**Step 3**

Insert the guide rail between the rollers in the correct orientation so that the rail is cradled by the rollers. Position the rail so the marked tangent point is centered with the top roller.



#### **Step 4**

Spin the knurled adjustment knob to begin bending the rail at the marked tangent point. To decrease the possibility of over bending the rail, use a series of small adjustments instead of one large one to get the desired angle.

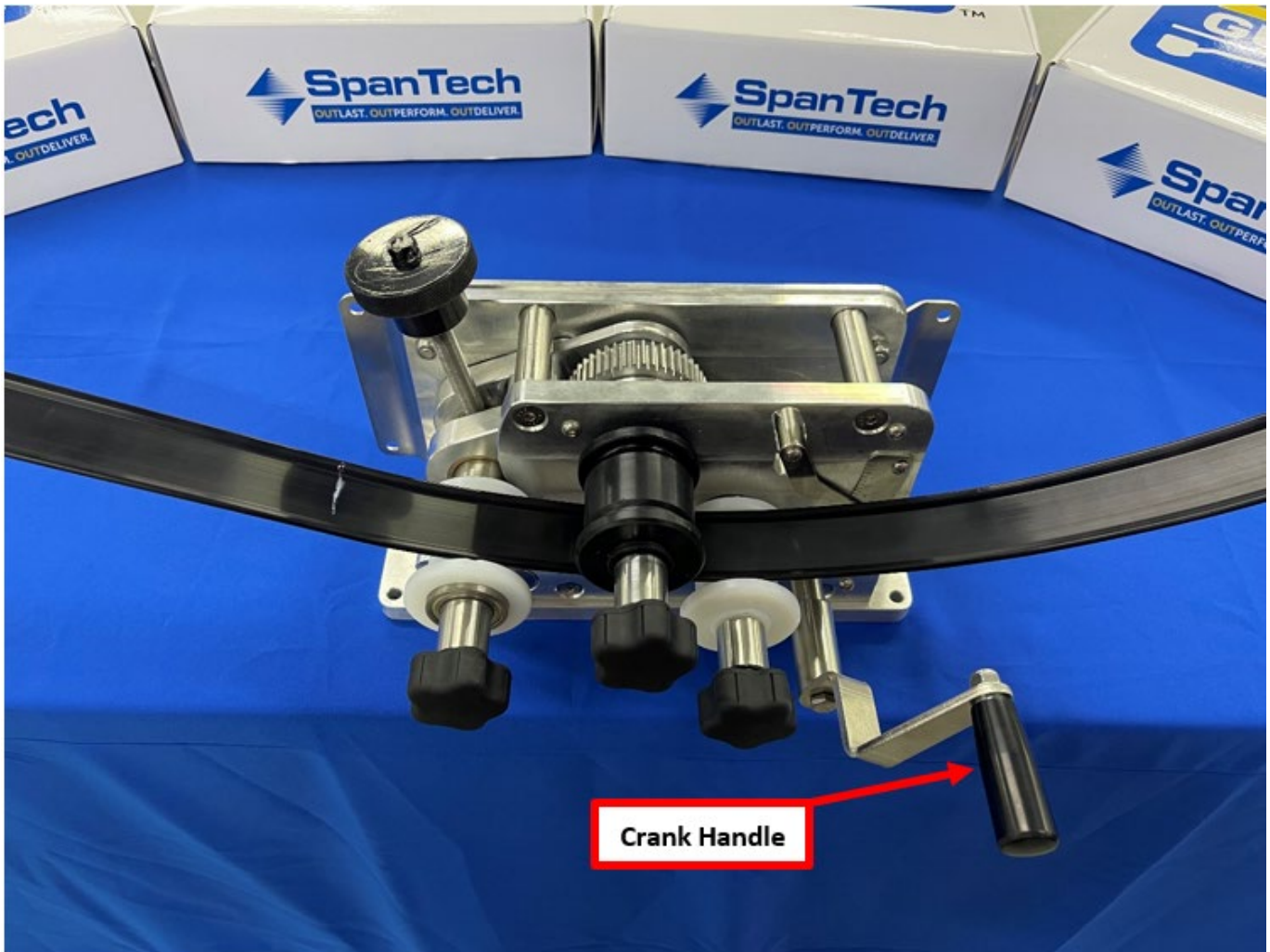


**Knurled Adjustment Knob**

**Step 5**

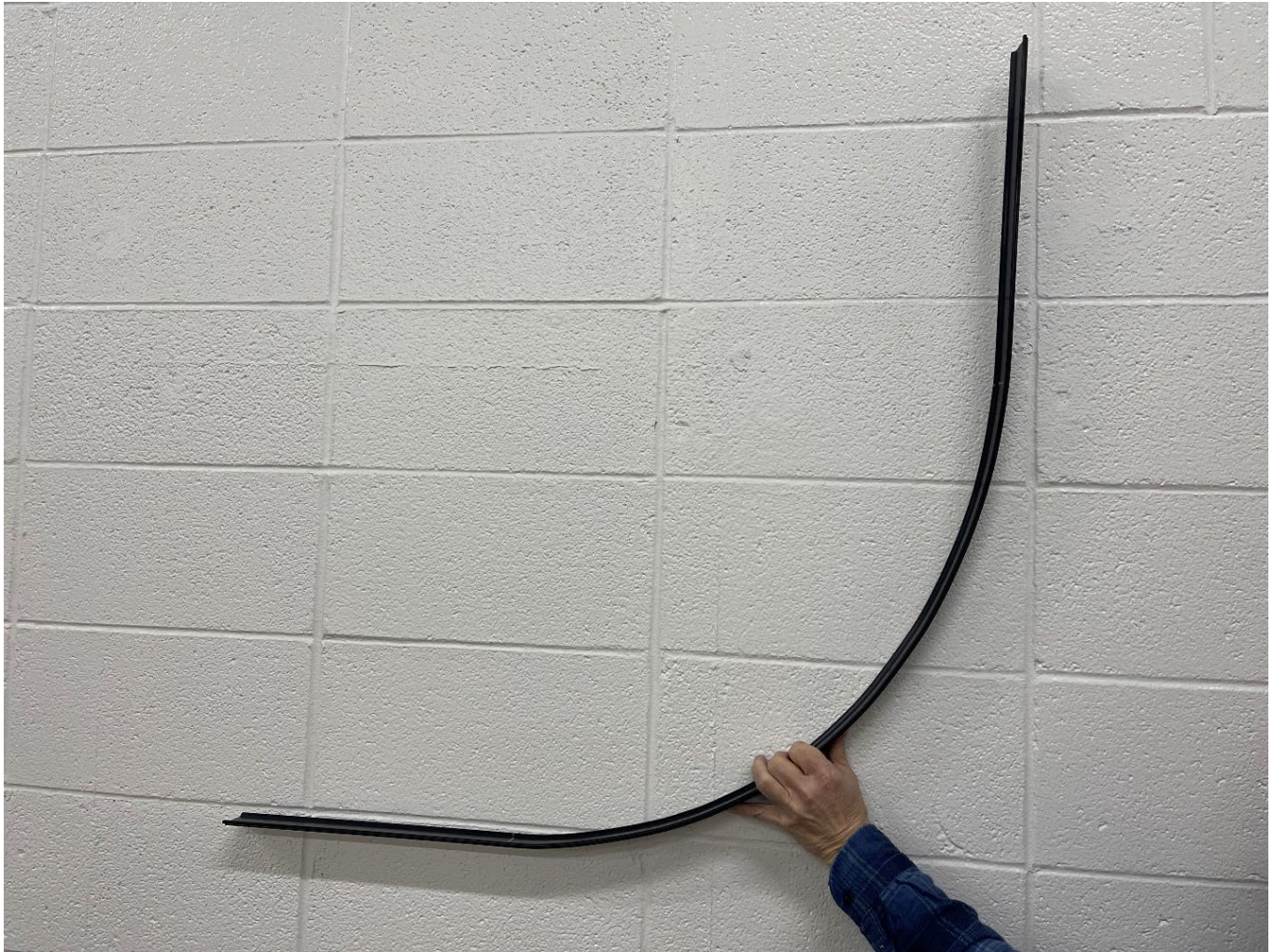
Turn the crank handle to roll the guide rail between the tangent marks. Note that the rail bend will relax when it is removed from the roller so slightly overbending the rail is preferred.





**Step 6**

Take the rail out of the Rail Roller and check the bend. If the rail is too under bent, reinsert the rail into the roller and roll it until it reaches the desired angle. Once the rail reaches the desired angle it is ready for installation.



## **Guide Rail Installation**

### **1) Measure and Cut Guide Rail**

Measure and cut the straight pieces of guide rail for the system, be sure to account for the ½ inch of extra length required when overlapping. Refer to the **Bending Guide Rail** (page 20) section to get the curved sections of guide rail.



## 2) Loosen Rail Clamps

To install the guide rail into the manual adjustment brackets, use a 2mm hex wrench to loosen the screw in the center of the guide rail clamp of each bracket. Be careful to avoid loosening the screw to the point where it no longer engages the elastic lock nut on the bottom – it could fall out and be lost easily.

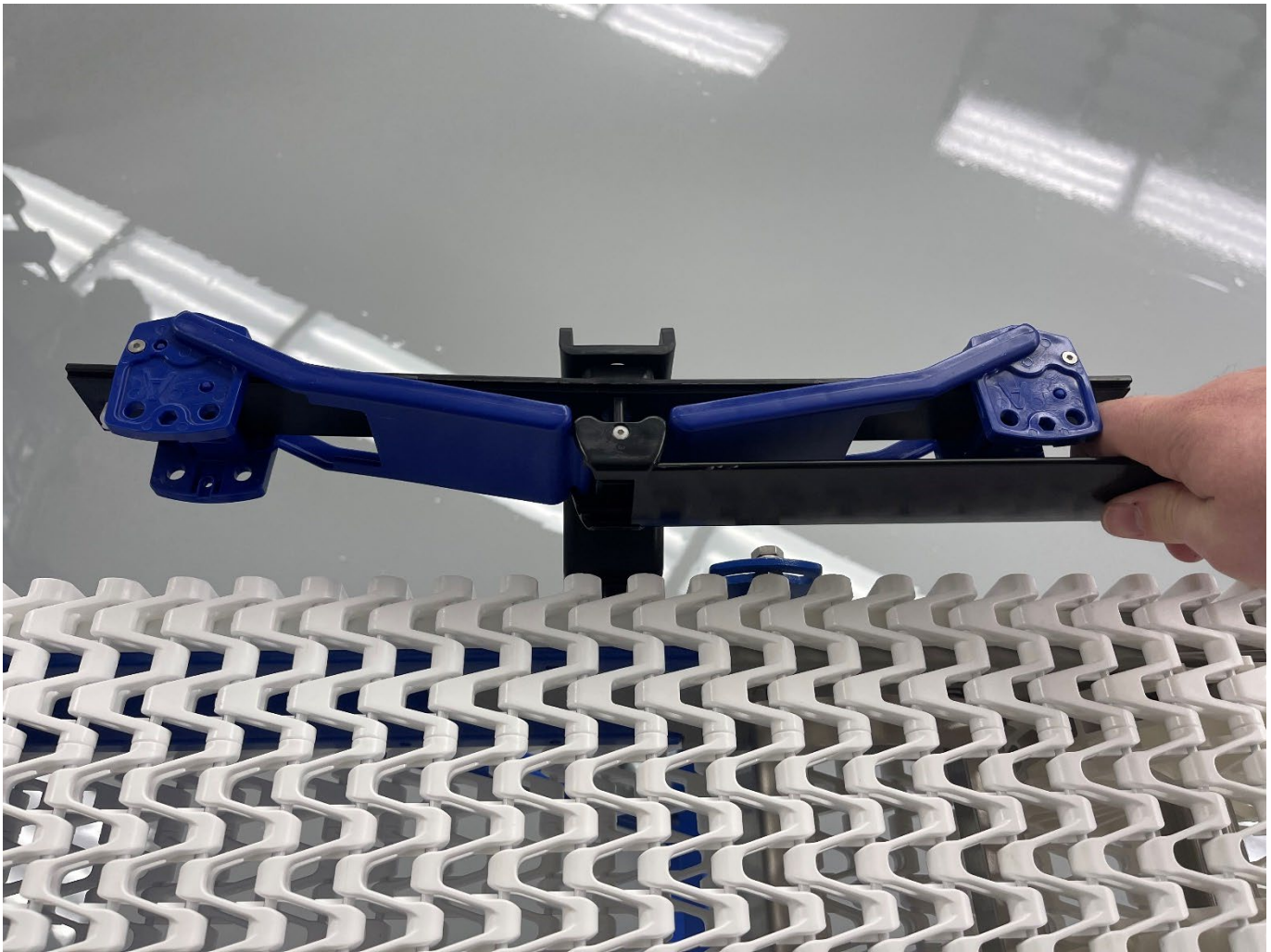


## 3) Insert Guide Rail

It is easiest to insert the guide rail when the brackets are unlocked and in the retracted position.

### a. **Mounting in Straight Conveyor Sections**

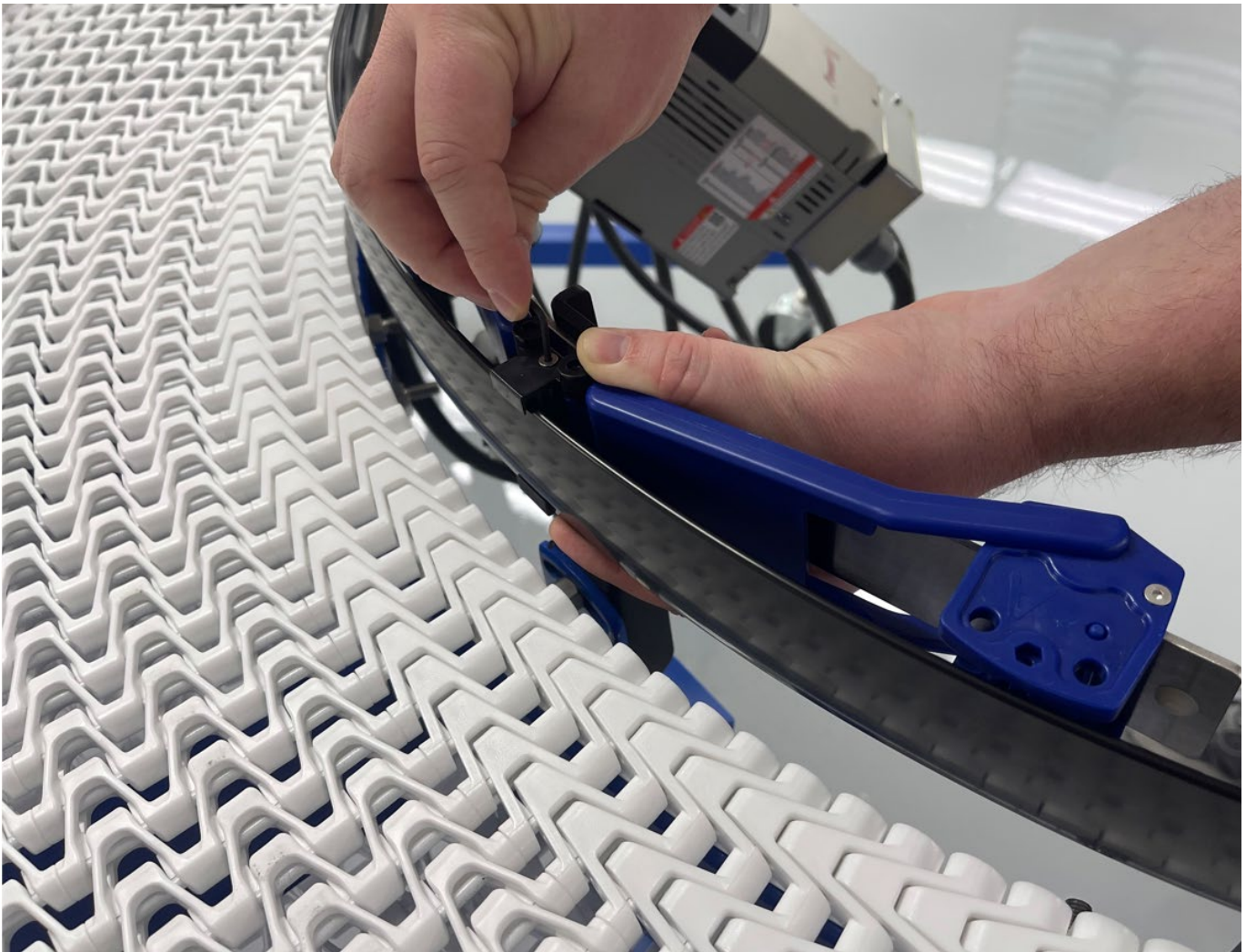
Slide guide rail into the clamp at the end of the conveyor and repeat the process for all the straight brackets on the system.



b. **Mounting in Curved Conveyor Sections**

For curved conveyor sections, start with the center bracket and work outwards. Insert the guide rail into the brackets using the same method as described in the previous section. If this is not possible, it will be necessary to disassemble the rail clamp, place the guide rail inside it, then reassemble the clamp. When disassembling the rail clamp, position a finger underneath the bottom clamp half to retain the M3 nylock nut.

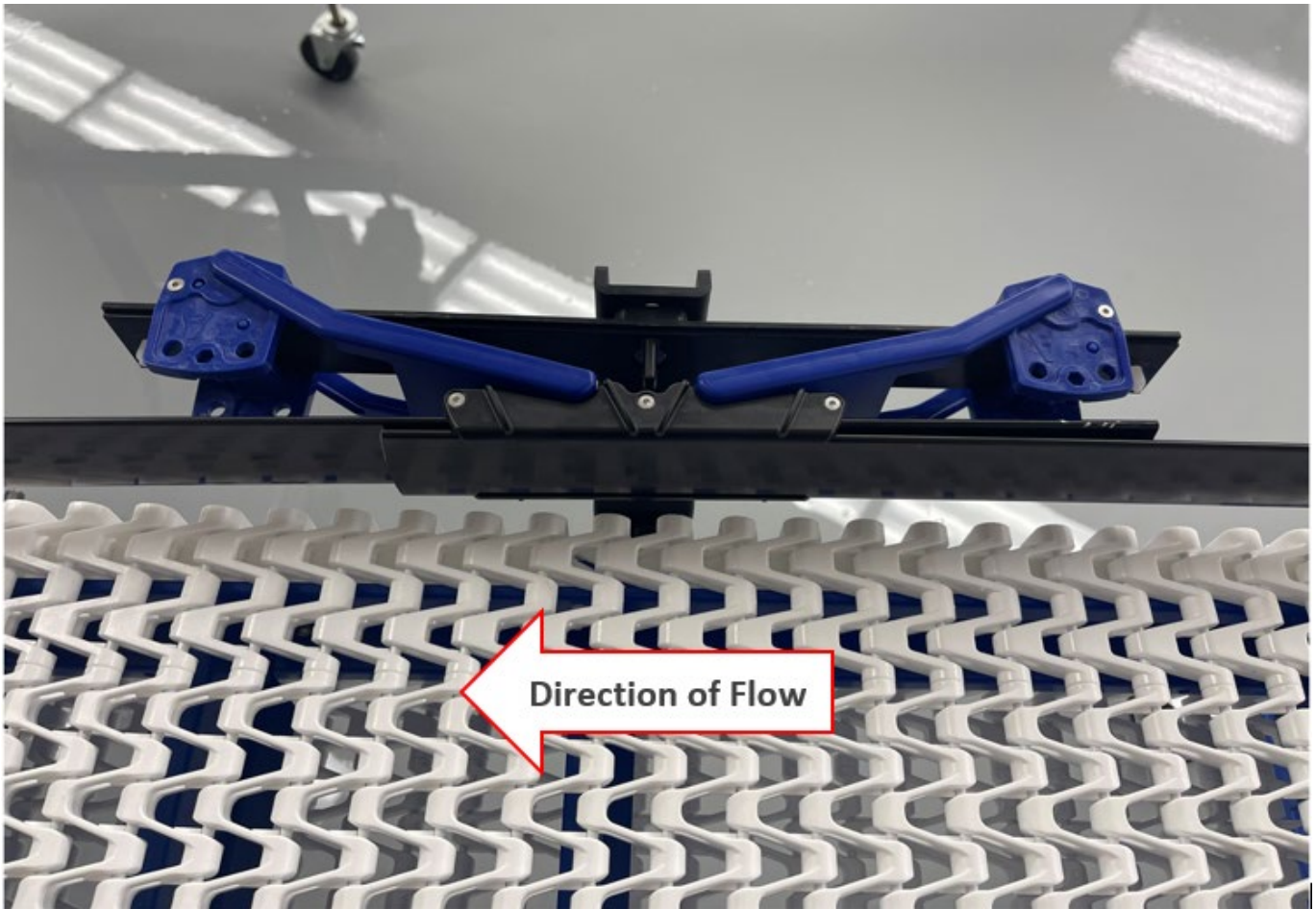




#### 4) **Overlap the Guide Rail in the Direction of Flow**

At locations where the guide rail will overlap, be aware of the direction of flow when sliding the guide rail into the transition brackets. The exposed end of the guide rail should be pointing towards the direction of flow (so that products do not impact it). Overlap Straight pieces of guide rail  $\frac{1}{2}$  inch past the clamp.

For overlaps at curve transitions, the straight pieces of guide rail should extend  $\frac{1}{2}$  inch past the clamp. The overlap of the curved piece of guide rail will be dependent on the stroke and bend angle.



##### 5) **Position Guide Rail**

With the guide rail installed in the system, make any positioning adjustments by sliding the guide rail through the clamps while they are all loose. The guide rail should extend 12.5in from the Drive/Idler ears for conveyors without transfers and 10.5in for conveyors with transfers on Span Tech conveyors.





**6) Tighten Rail Clamps**

Once the guide rail is positioned properly, finish tightening the clamp screws on any standard or transition brackets in the straights to lock the rail in place. Curve bracket clamps can be tightened slightly, but the rail must be allowed to slide through the clamp unrestricted.



## 7) Vertical Adjustments

With the rail locked in place vertical adjustments to the system can be made.



When making vertical adjustments to the guide rail, make sure there is clearance between the bottom of the guide rail bracket and the top of the chain.

