



EZGUIDE™ Fixed Guide Rail Owner's Manual



Before installing or operating EZGUIDE™ Fixed 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™ Fixed Guide Rail, ensure the guide rail clears the top of the conveyor before operation. Inadequate clearance can cause damage to both the conveyor and EZGUIDE™.

Prohibited Environments

EZGUIDE™ Fixed Guide 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™ Fixed Guide 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



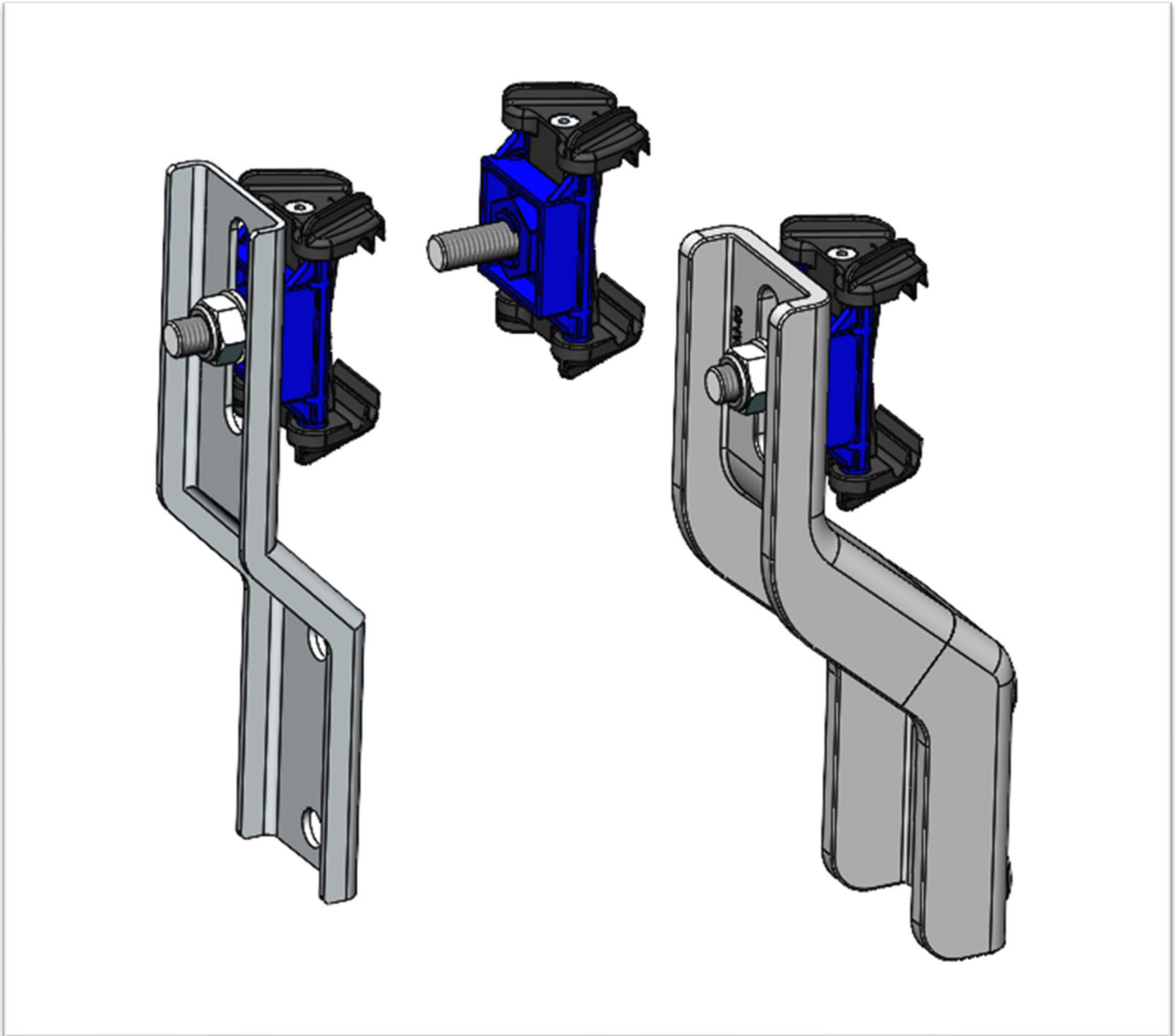
The acetal material of the conveyor chain burns with a very hot, very faint flame. In case of fire, use Water, Foam, CO2, or Dry Chemical extinguishers only. Use of other material will not extinguish the fire and could result in serious injury, death, or significant property damage.

If an EZGUIDE™ Fixed 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

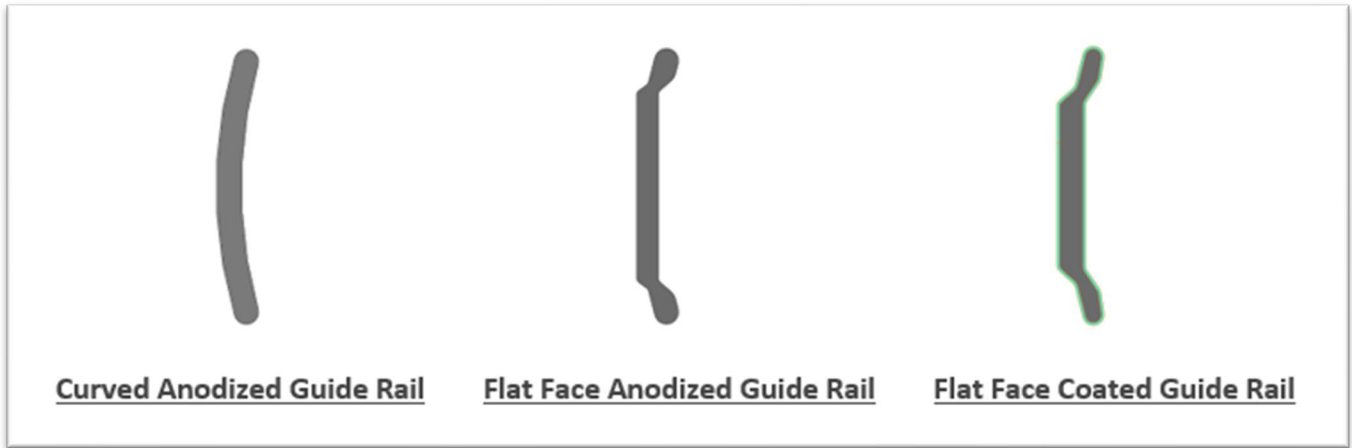
EZGUIDE™ Fixed Rail is a non-adjustable guidance system designed for product retention on a conveyor. The EZGUIDE™ Fixed Rail is designed to be an economical replacement for other fixed guide rail systems for both straight and curved conveyors. Several different sheet metal or molded channel bracket options are available, allowing for multiple conveyor offsets. EZGUIDE™ Fixed Rail can act as a stand-alone guide rail system or be paired with the other EZGUIDE™ configurations to allow for adjustability.



Guide Rails

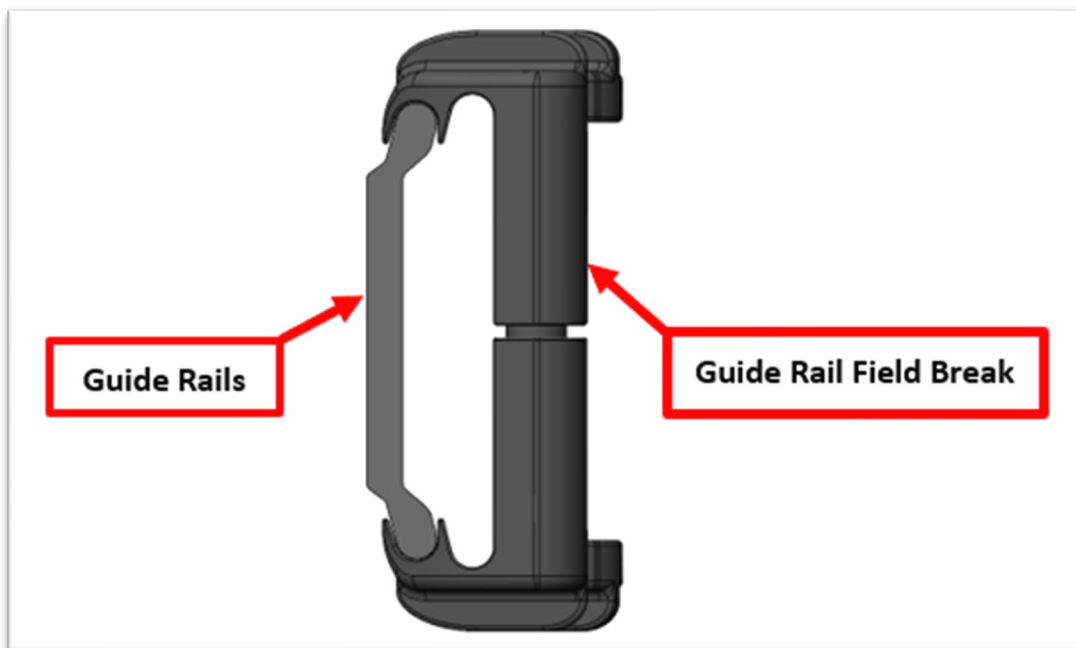
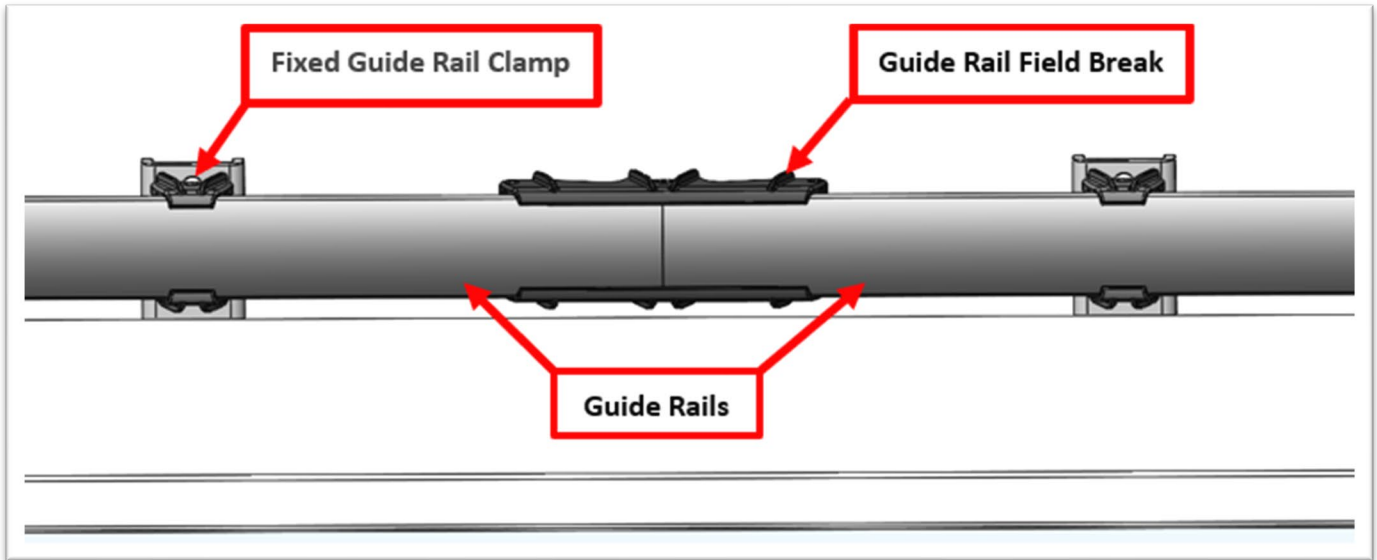
The rails used in the EZGUIDE™ system are provided in 4.87m (16ft) standard lengths. They are all 45mm (1.77in) tall and have (3) profiles:

- **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.



Extended Distances

While manufacturing limitations keep the guide rail length at 4.87m (16ft), the EZGUIDE™ Fixed Rail system can be made to fit any length conveyor. To extend a Fixed Rail system beyond the length of a single rail, simply assemble (2) **Guide Rails** together end to end and use a **Guide Rail Field Break** to hold the (2) rails together.

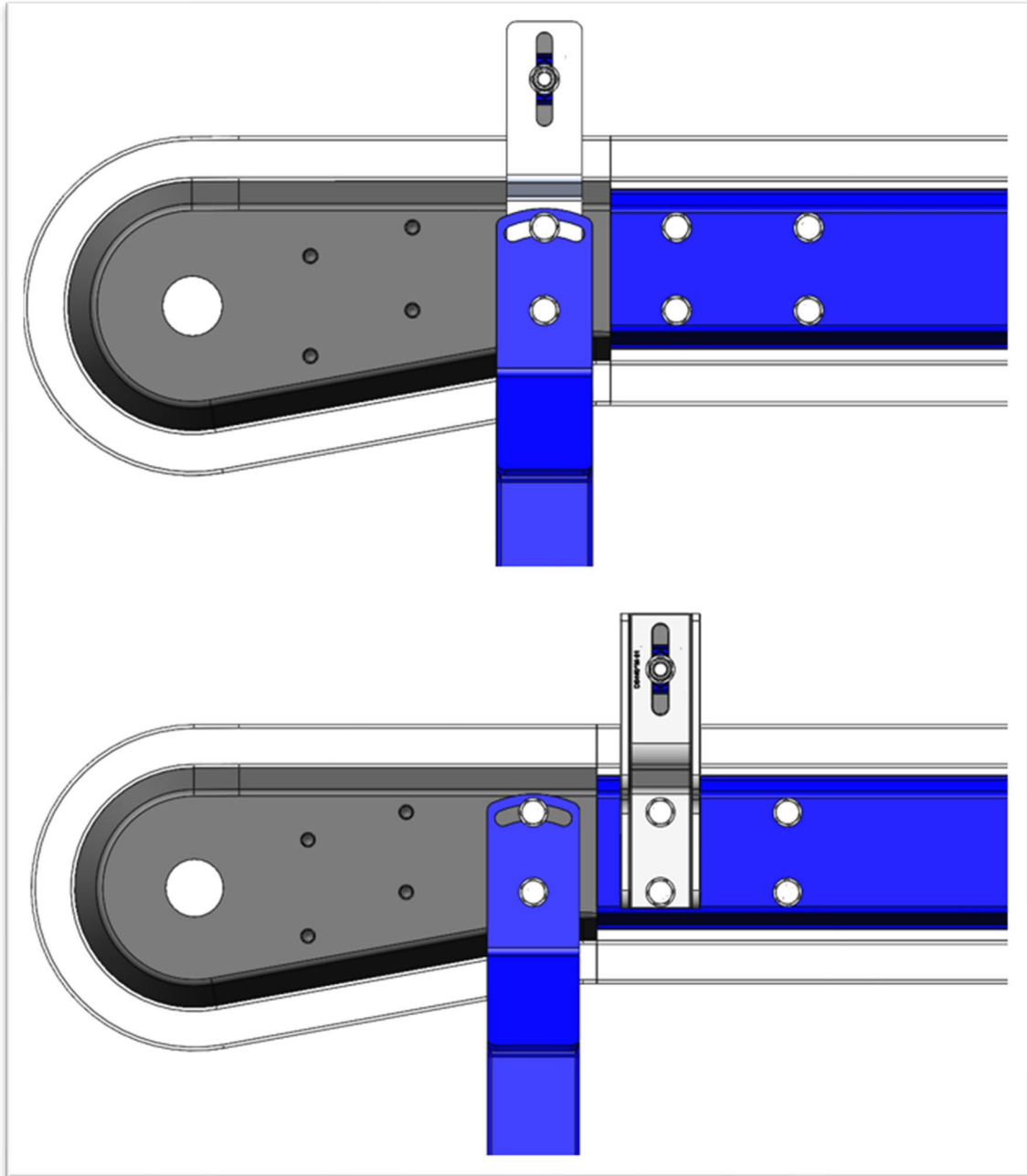


Bracket Installation Guide

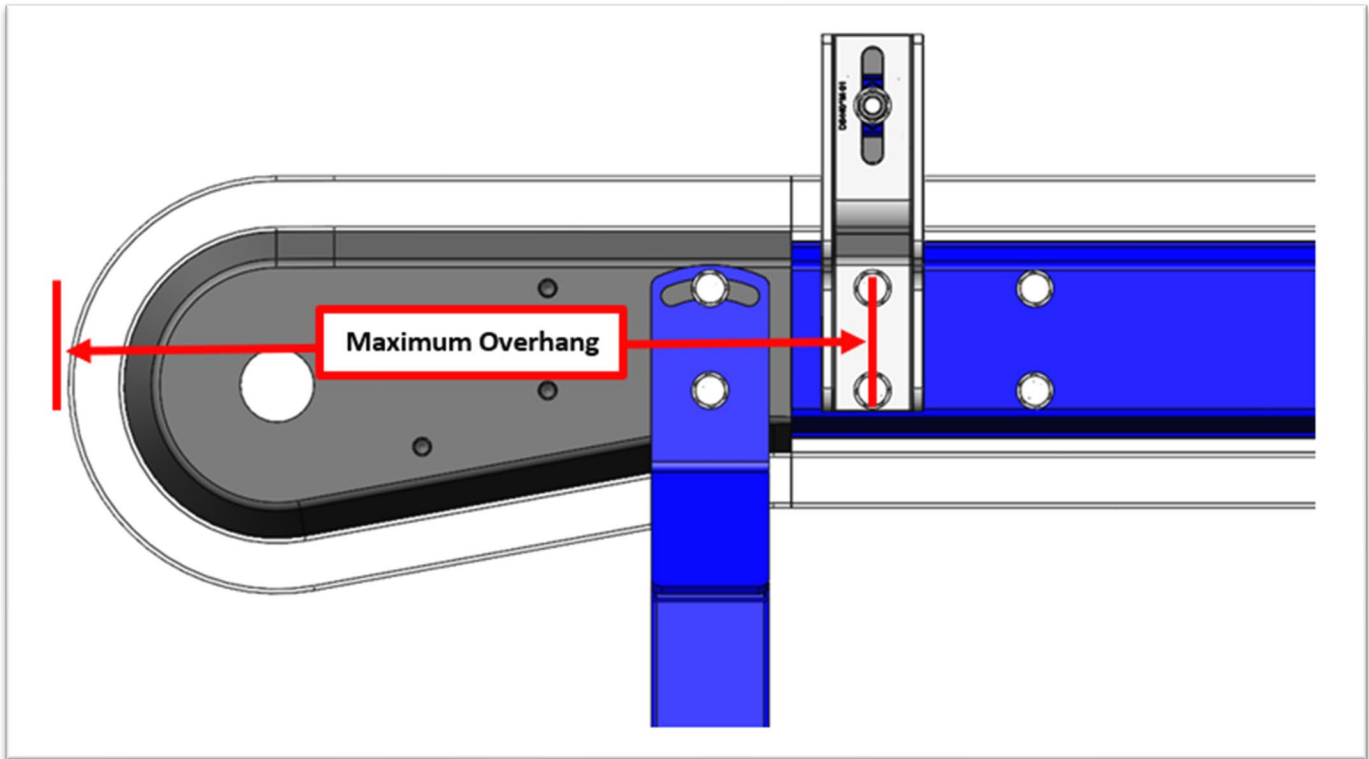
Straight Conveyers

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 **Maximum Overhang** greater than **347mm (13.6in)**.



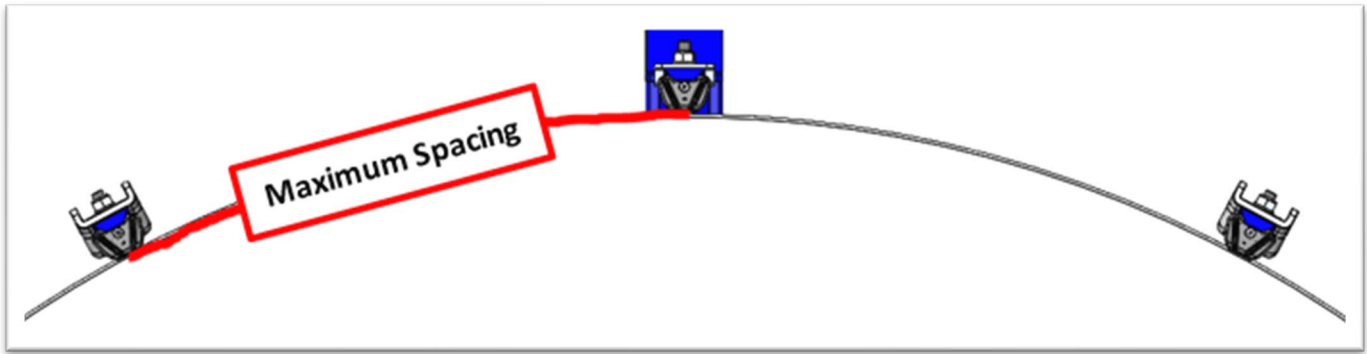
3. Place the EZGUIDE™ Fixed Guide Rail Brackets along the conveyor between the end brackets using a **Maximum Spacing** between bracket assemblies of **610mm (24in)**.



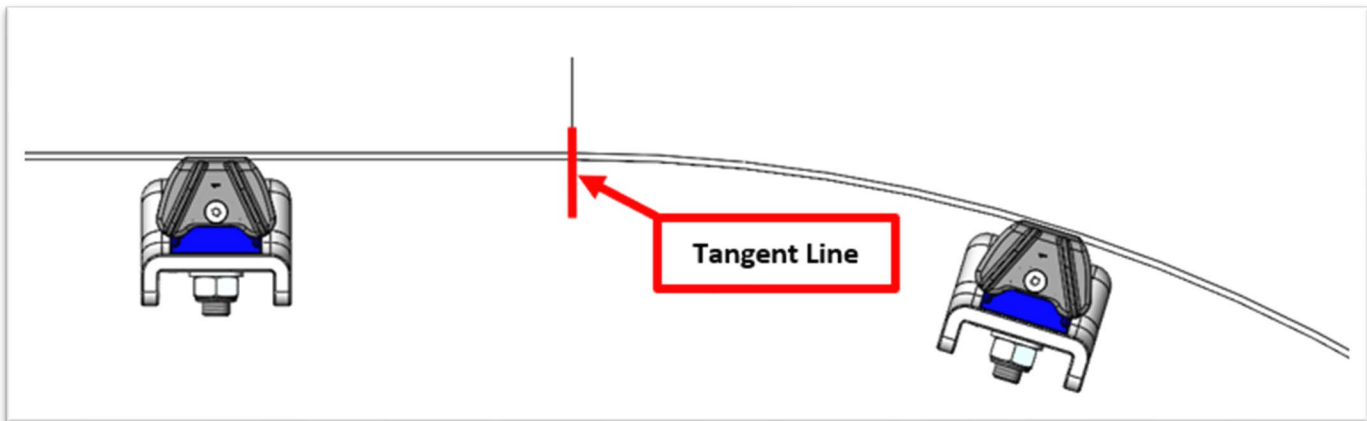
Curved Conveyors

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

1. Begin by placing brackets in the conveyor curve(s).
 - a. Place a bracket at the apex (midpoint) of the curve.
 - b. Space other brackets evenly through the curve without exceeding the **Maximum Spacing** of **610mm (24in)** between brackets.



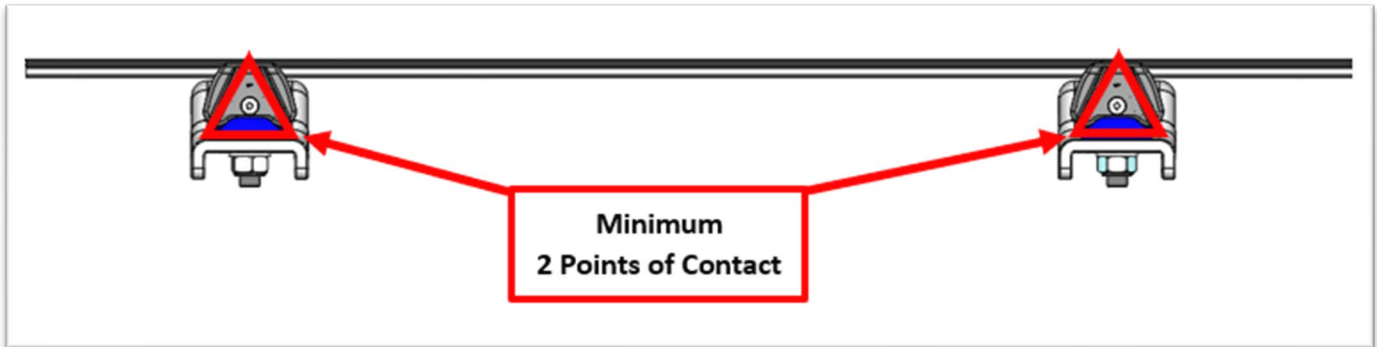
2. There must be at least one bracket on the straight section after the **Tangent Line** to keep the curved rail ends in place.



3. Finally mount brackets on the straight sections of the conveyor as evenly as possible without exceeding **610mm (24in)** between brackets.

Additional Rules

1. Guiderail sections must maintain at least two points of contact - i.e., a section of guiderail must be supported by two clamps.

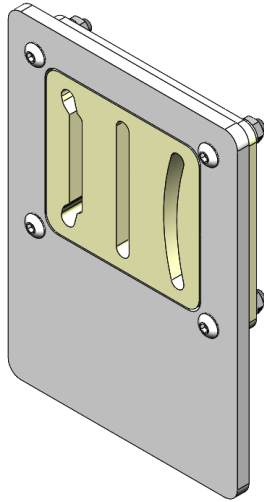


Bending Guide Rail

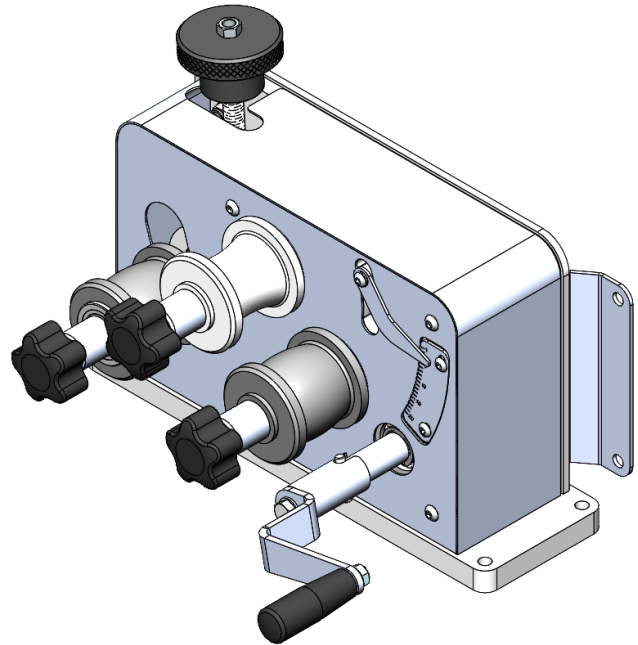
Introduction

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 held with a table vice while you bend the guide

rail by hand. 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

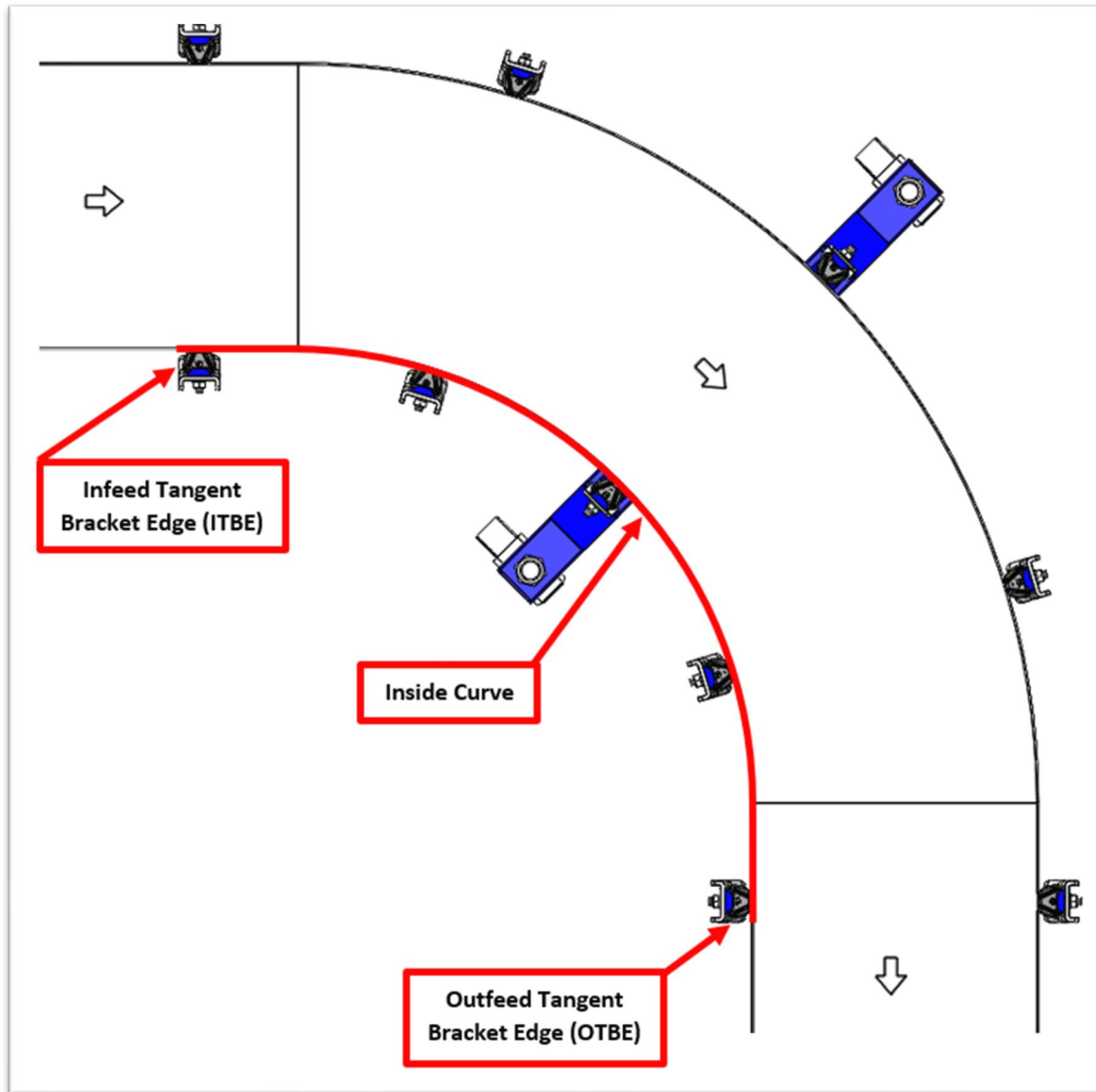
Preparation

Step 1

Run a tape measure along the **Inside Curve** of the conveyor, between the **Infeed Tangent Bracket Edge** and the **Outfeed Tangent 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 Tangent Bracket Edge (ITBE)** – the edge of the last bracket before the curve.
- **Outfeed Tangent Bracket Edge (OTBE)** – the edge of the first bracket after the curve.

- **Inside Edge-to-Edge Measurement** – the distance measured between the ITBE and the OTBE on the Inside Curve.



Step 2

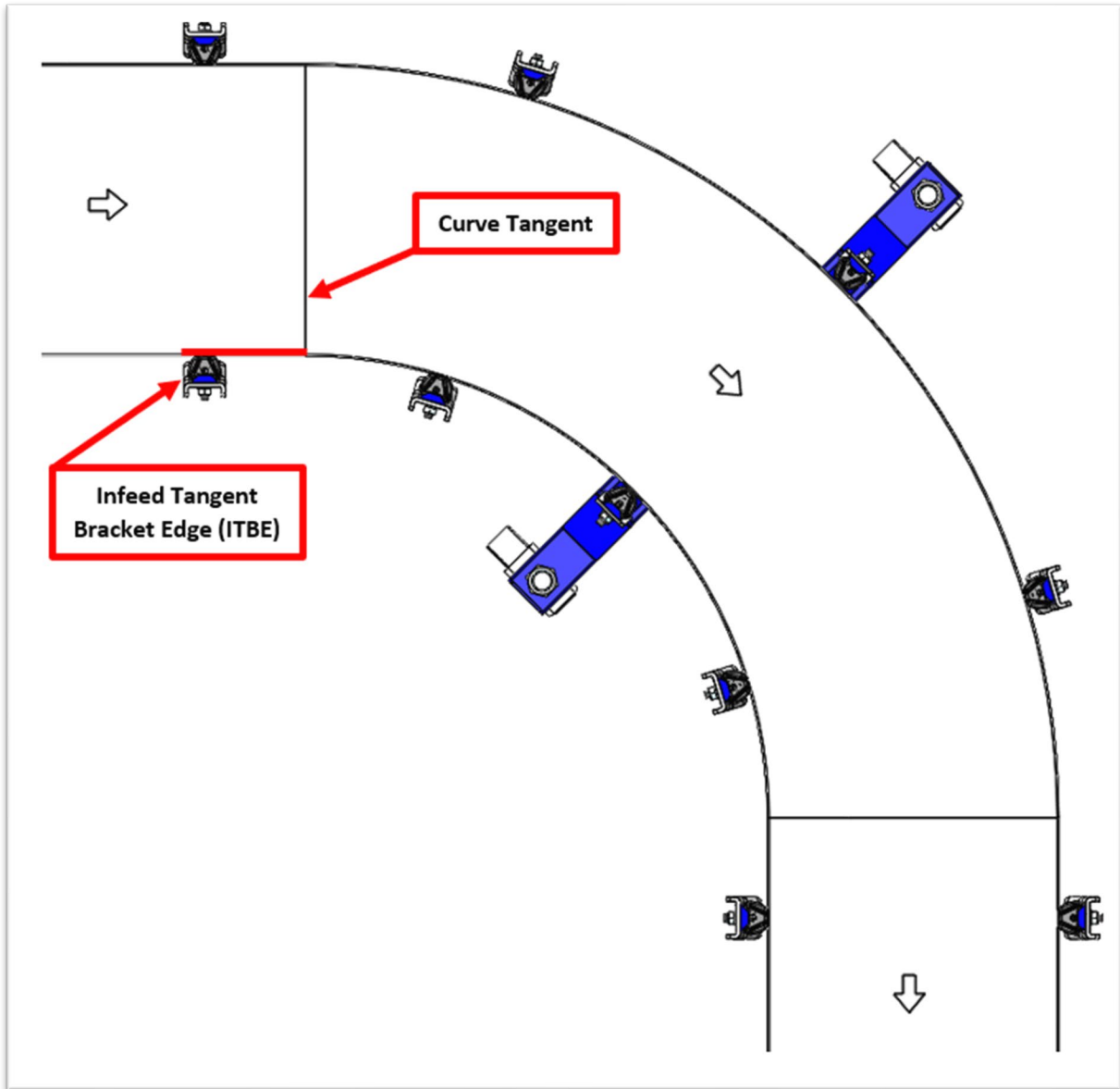
Add 100mm (4in) to the **Inside Edge-to-Edge Measurement** to get the **Total Inside Rail Cut Length**. Cut the rail to length and use a file or emery cloth to take any burrs off the end of the guide rail.

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

Step 3

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 4

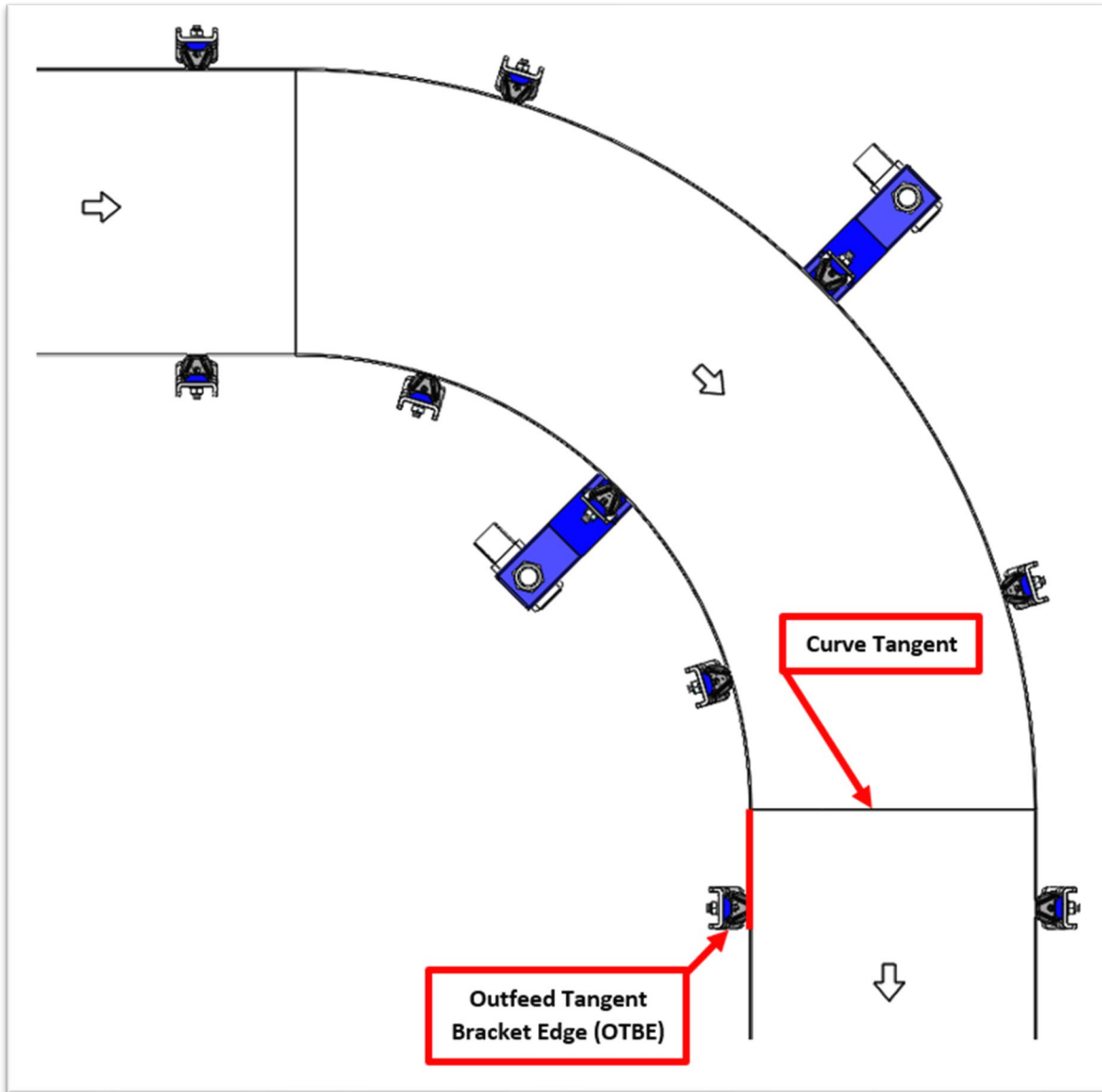
Add 50mm (2in) to the **Infeed Tangent Measurement** to get the **Total Infeed Tangent**. Mark one end of the guide rail with the **Total Infeed Tangent** distance.

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

Step 5

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.

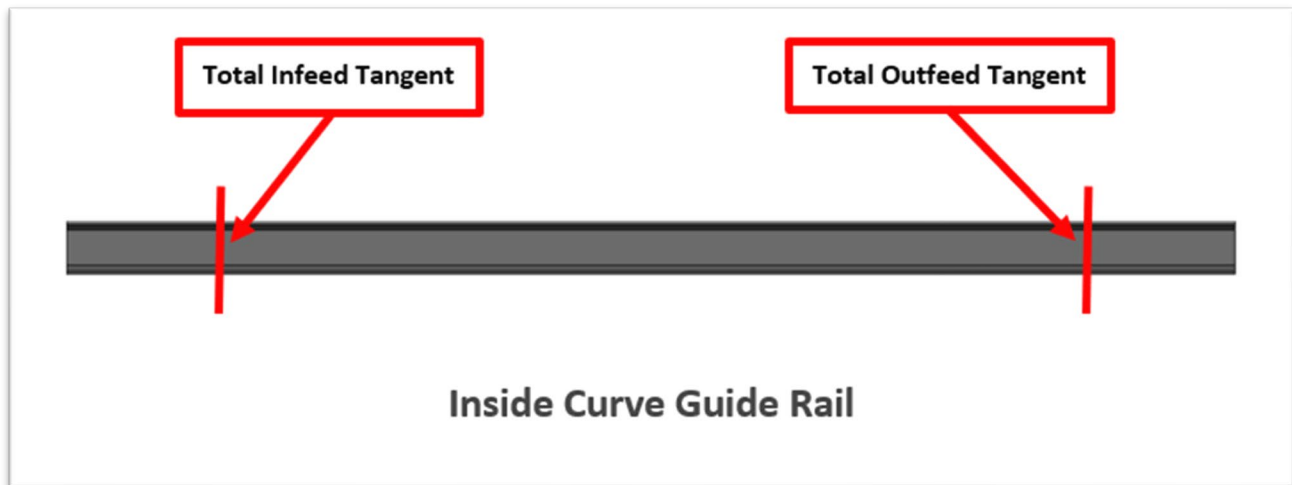


Step 6

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.

Outfeed Tangent Measurement + 50mm (2in) = Total Outfeed Tangent

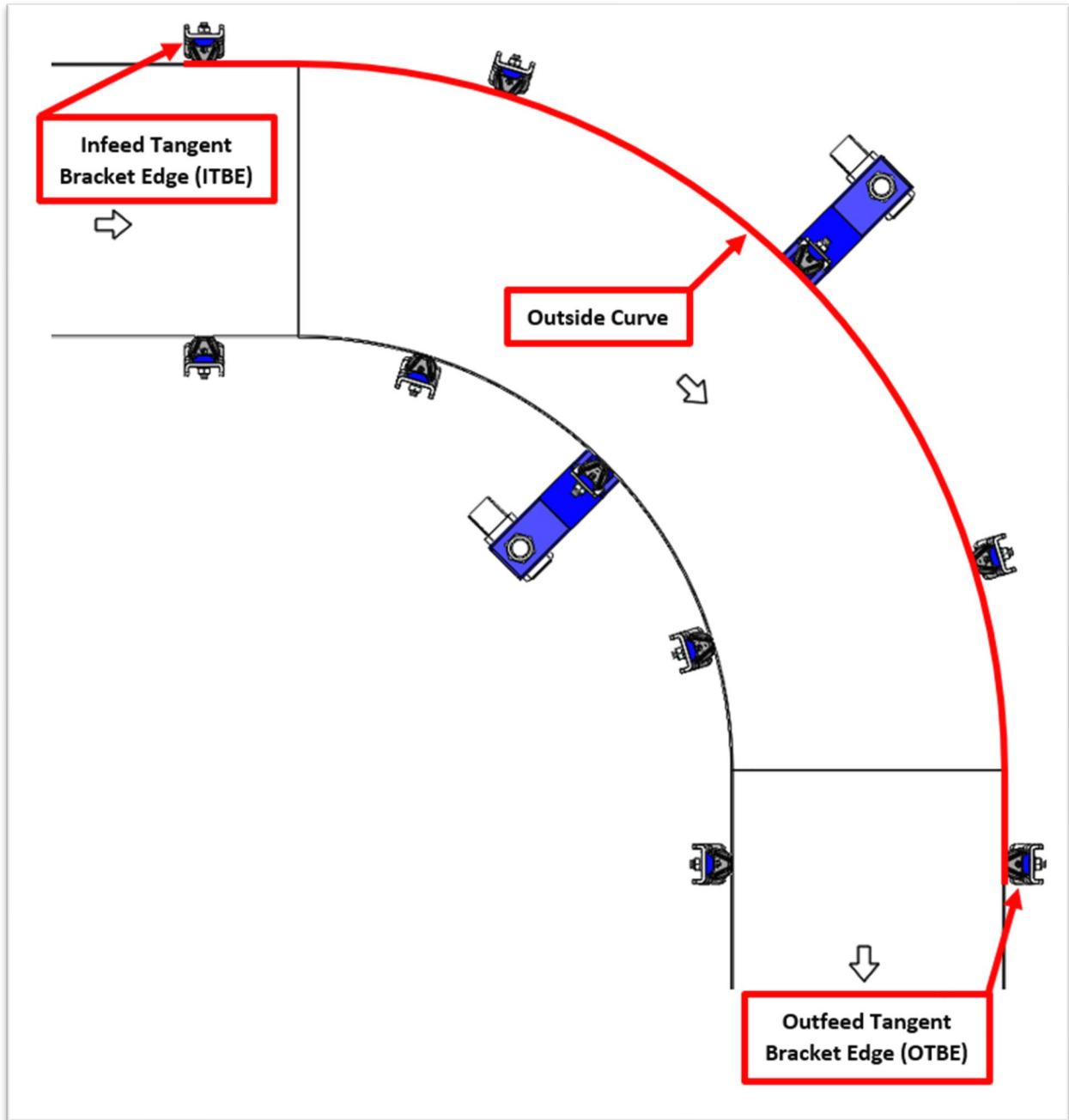
With the infeed and outfeed tangents marked, the inside curve guide rail is now ready to bend to shape.



Step 7

Run a tape measure along the **Outside Curve** of the conveyor, between the **Infeed Tangent Bracket Edge** and the **Outfeed Tangent 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.



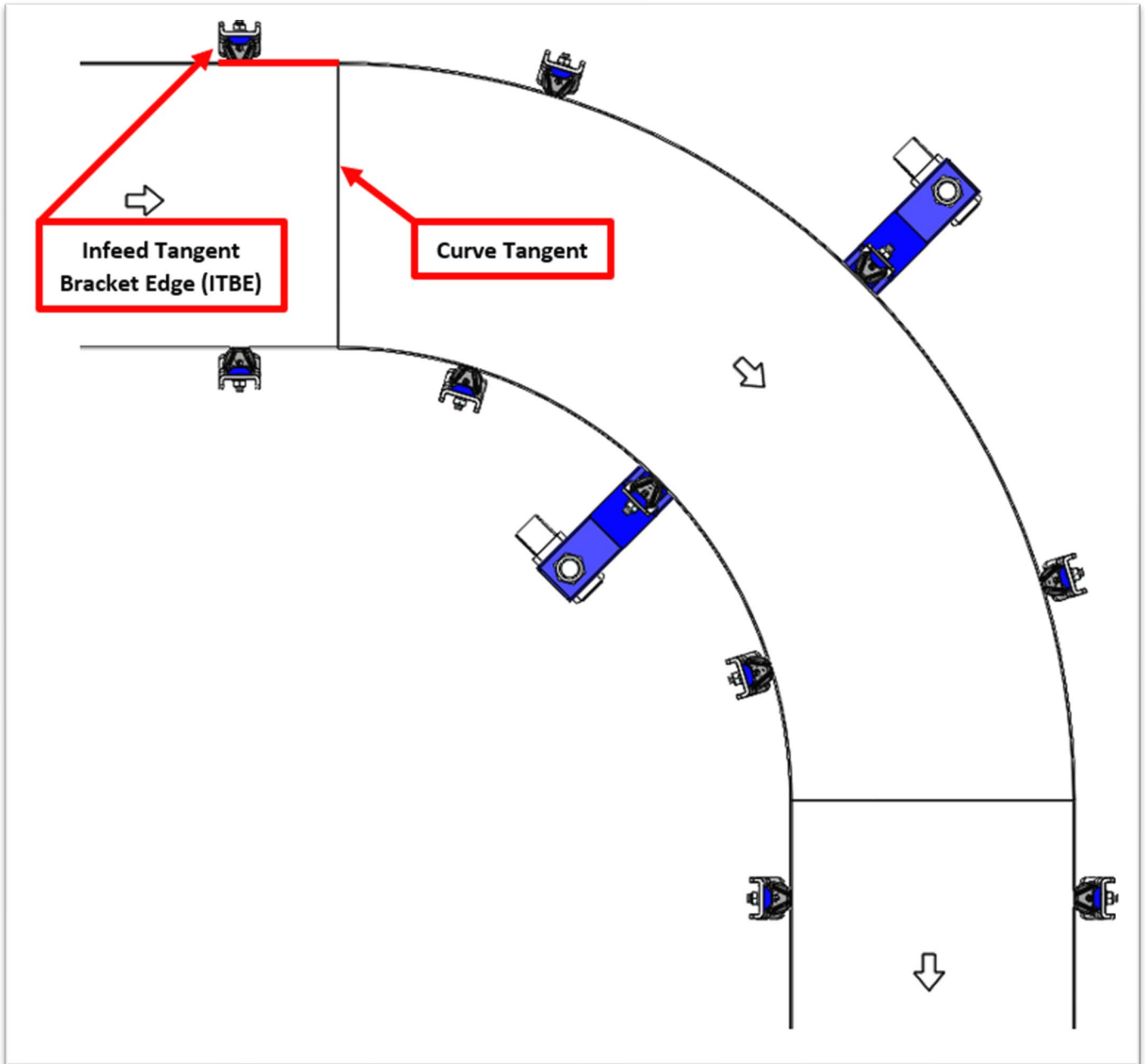
Step 8

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 9

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.



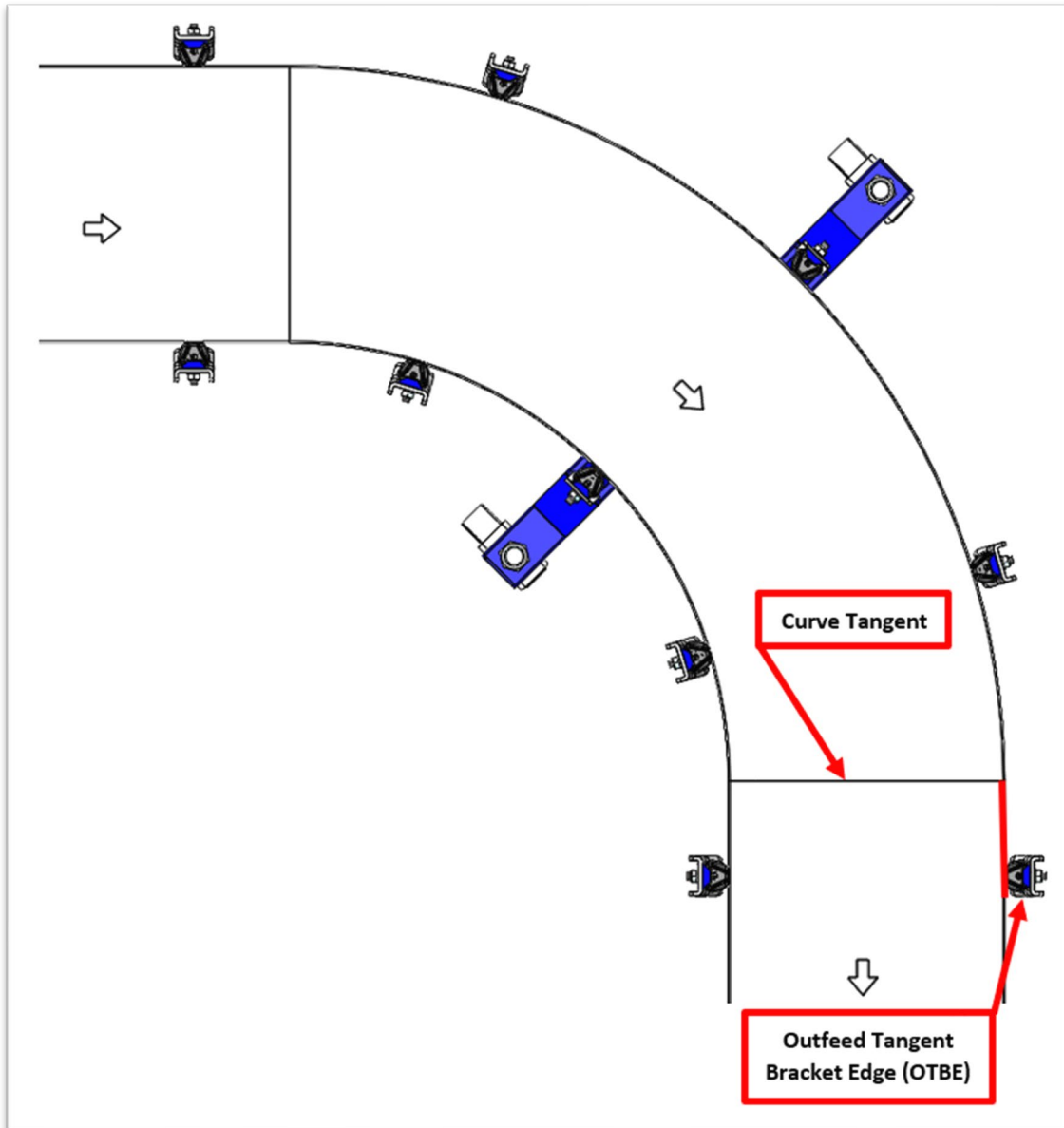
Step 10

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 11

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.

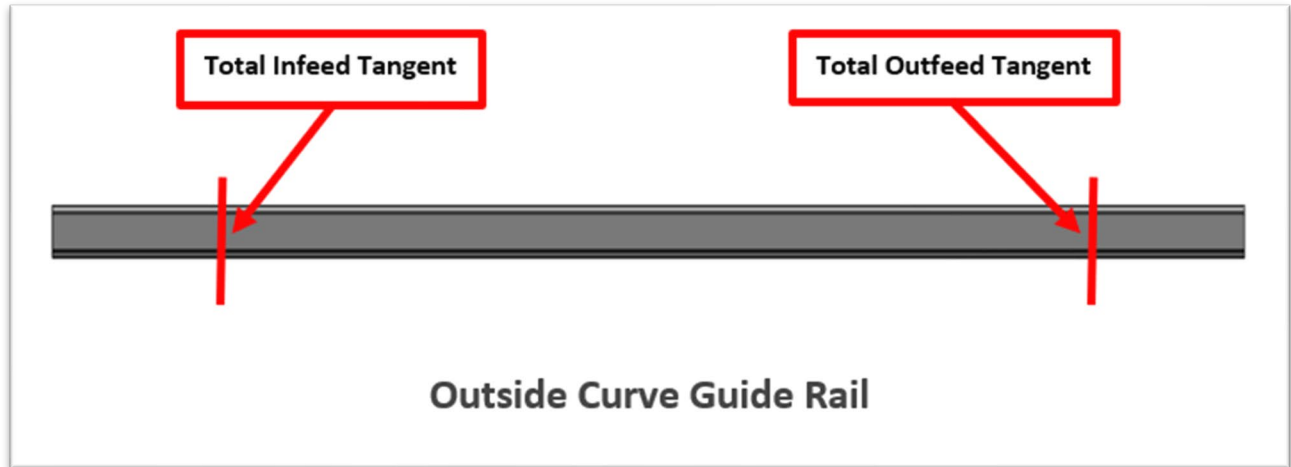


Step 12

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.

Outfeed Tangent Measurement + 50mm (2in) = 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.

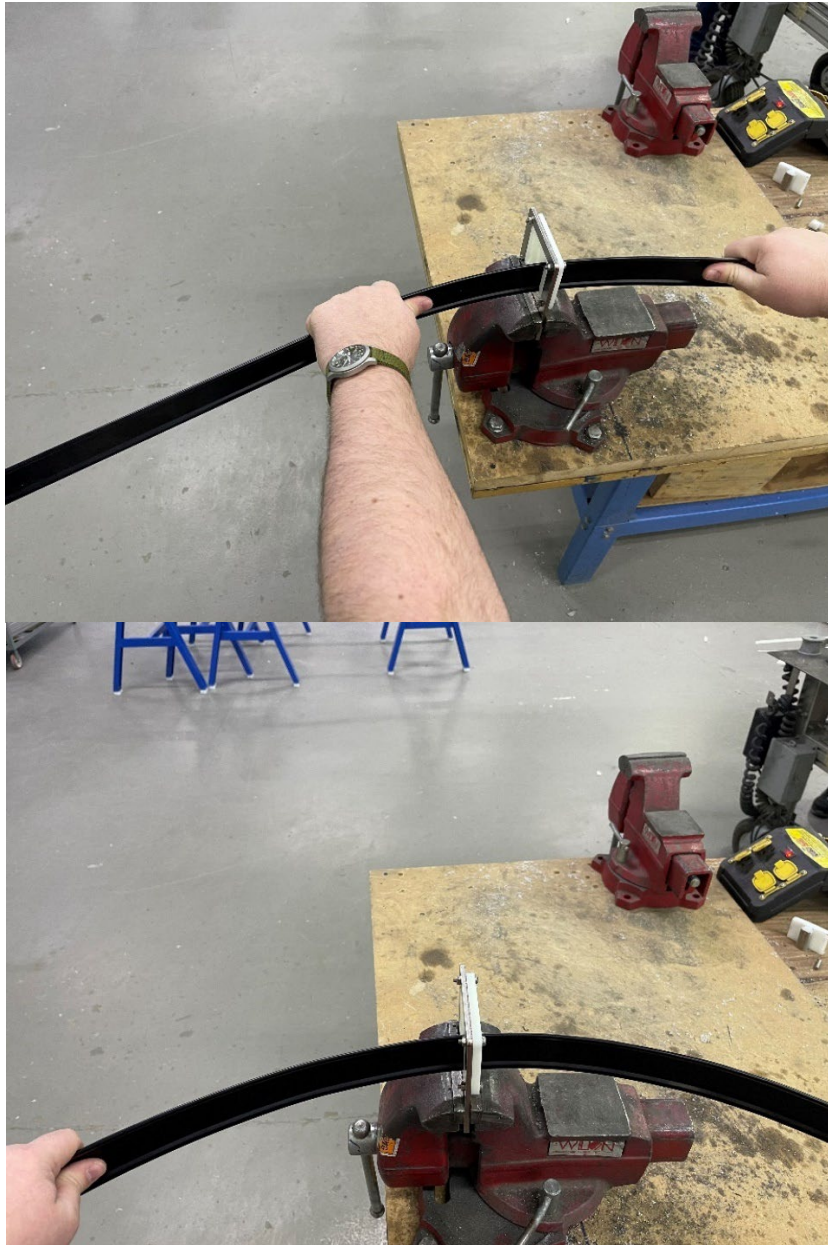


Step 3

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.

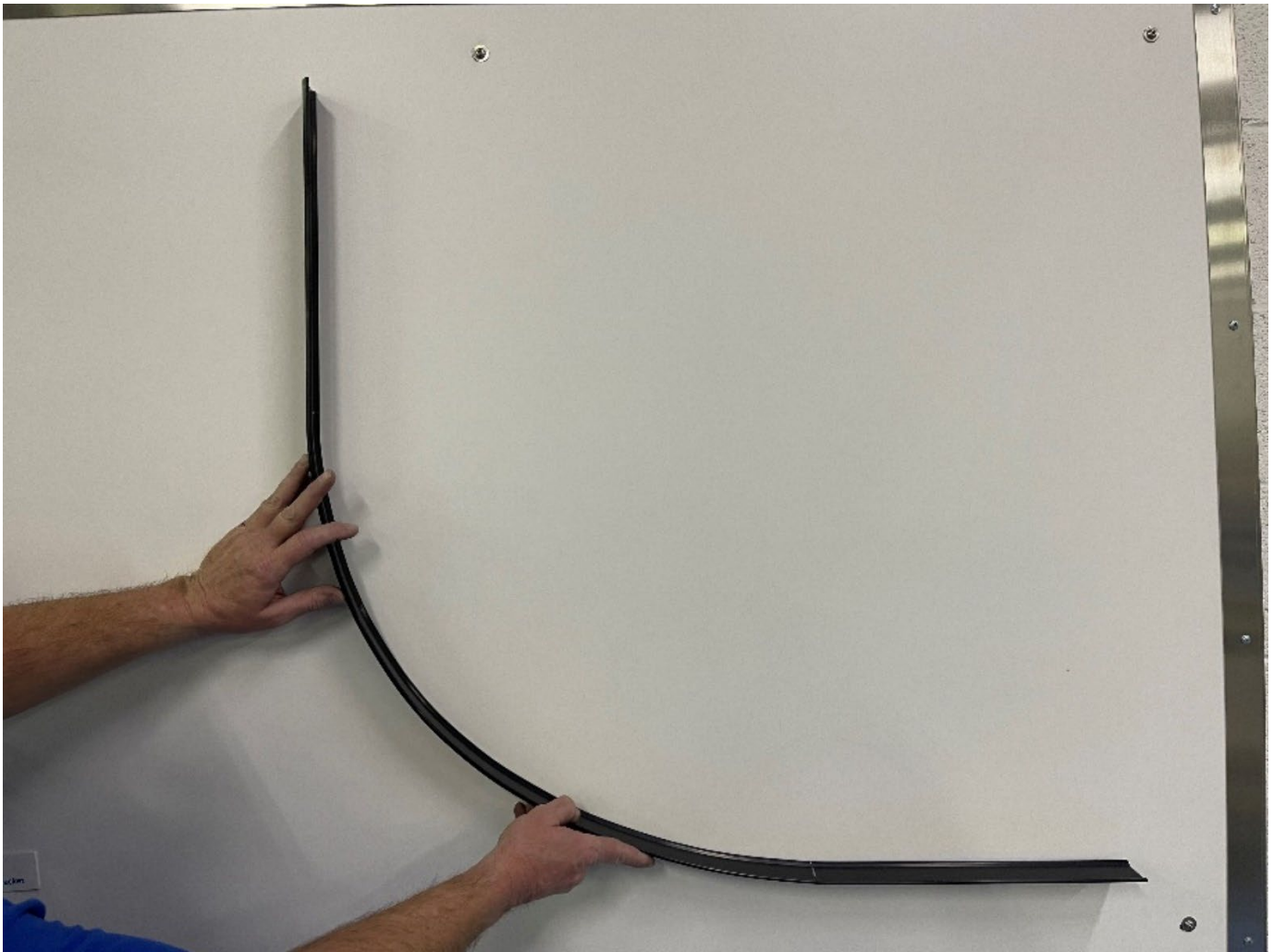
When bending the rail, make sure to hold the rail as close to the bending tool as possible to “isolate” the bend.

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.

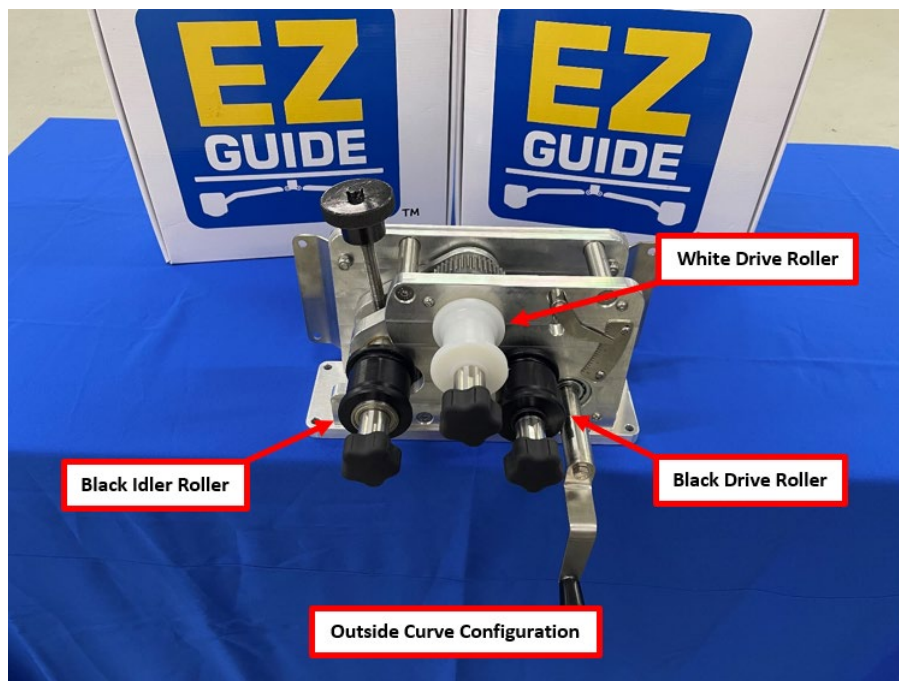
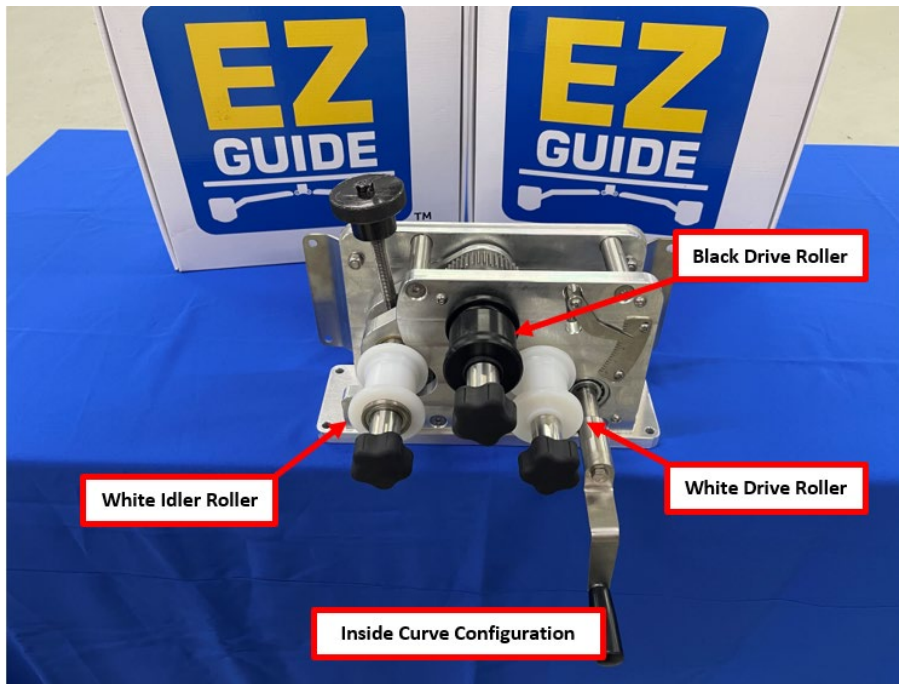


The rollers come in (2) styles, drive rollers which have a keyway cut into them and idler rollers which have bearings allowing them to roll on the idler shaft.



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.



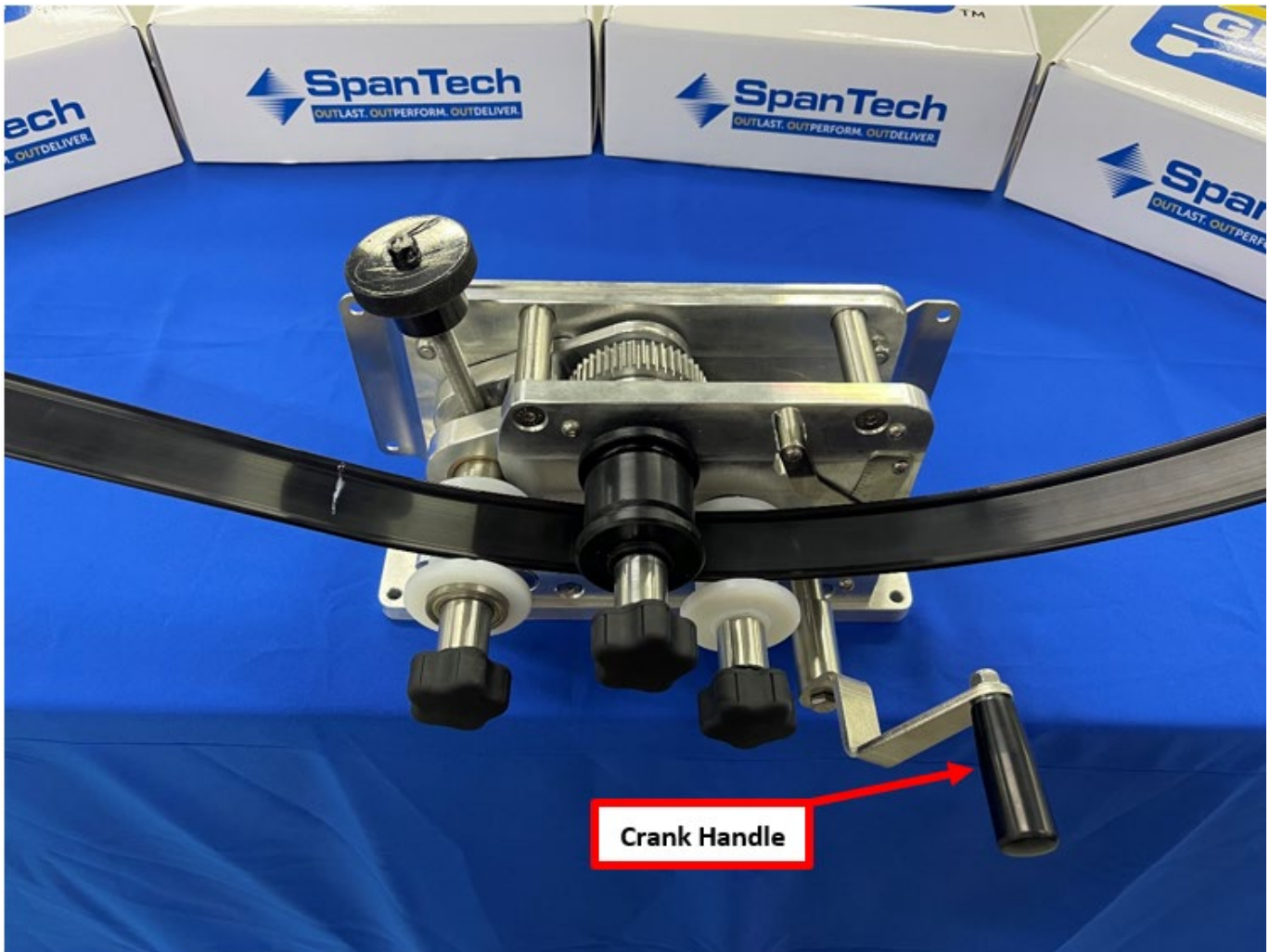
Step 4

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.



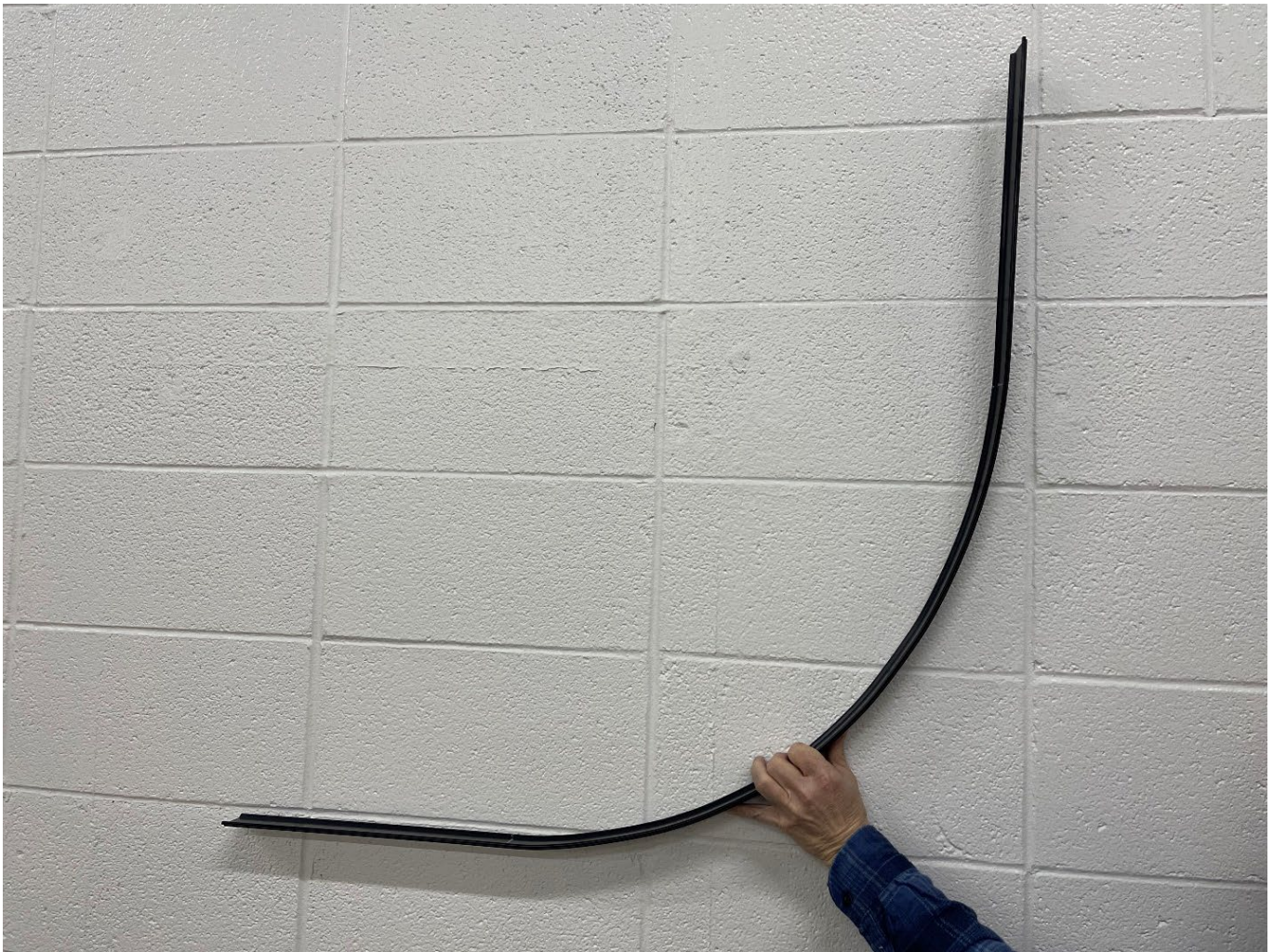
Step 5

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.



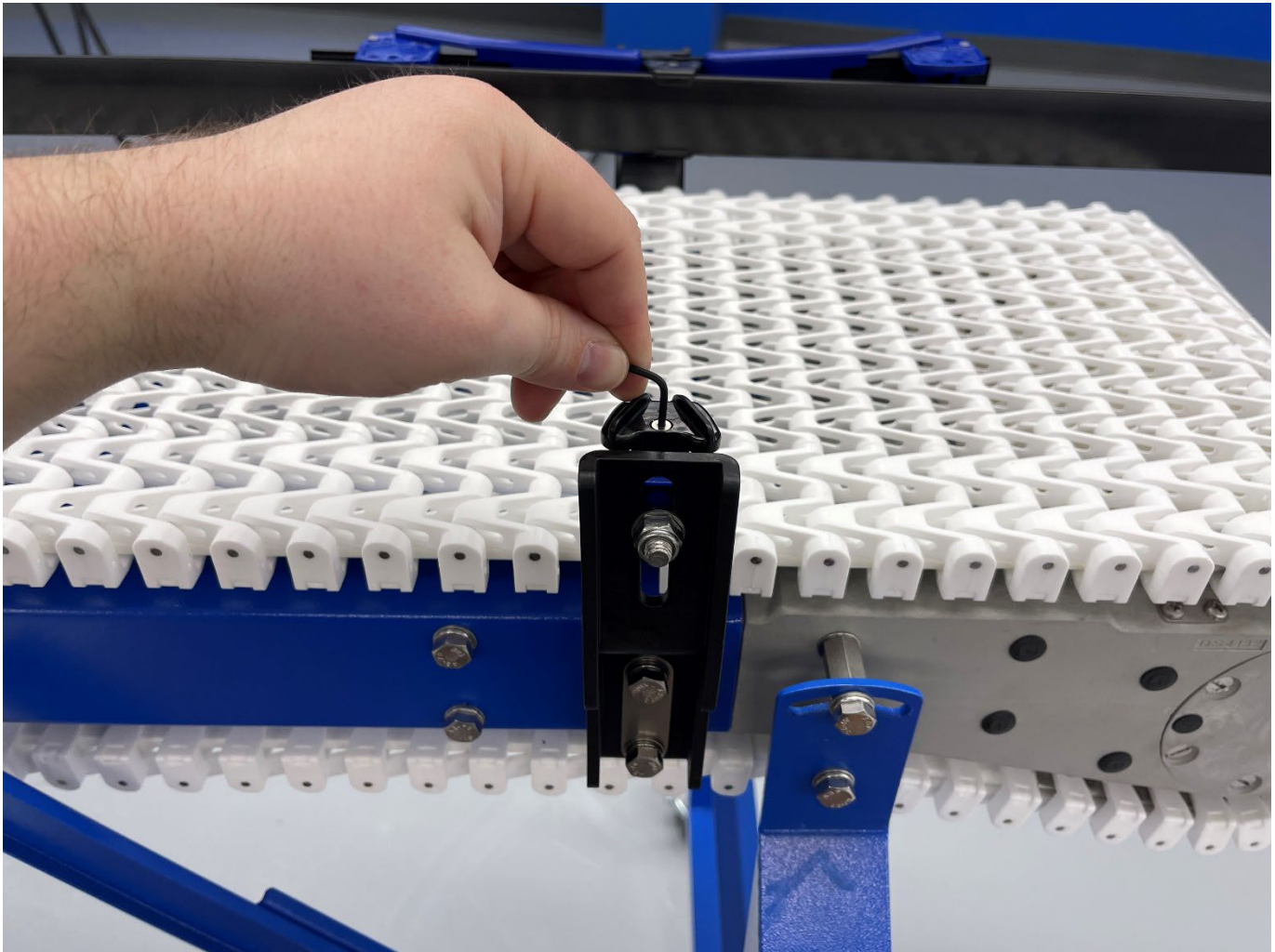
Guide Rail Installation

1) Measure and Cut Guide Rail

Measure and cut the straight pieces of guide rail for the system. Refer to the **Bending Guide Rail** (page 12) section to get the curved sections of guide rail.

2) Loosen Rail Clamps

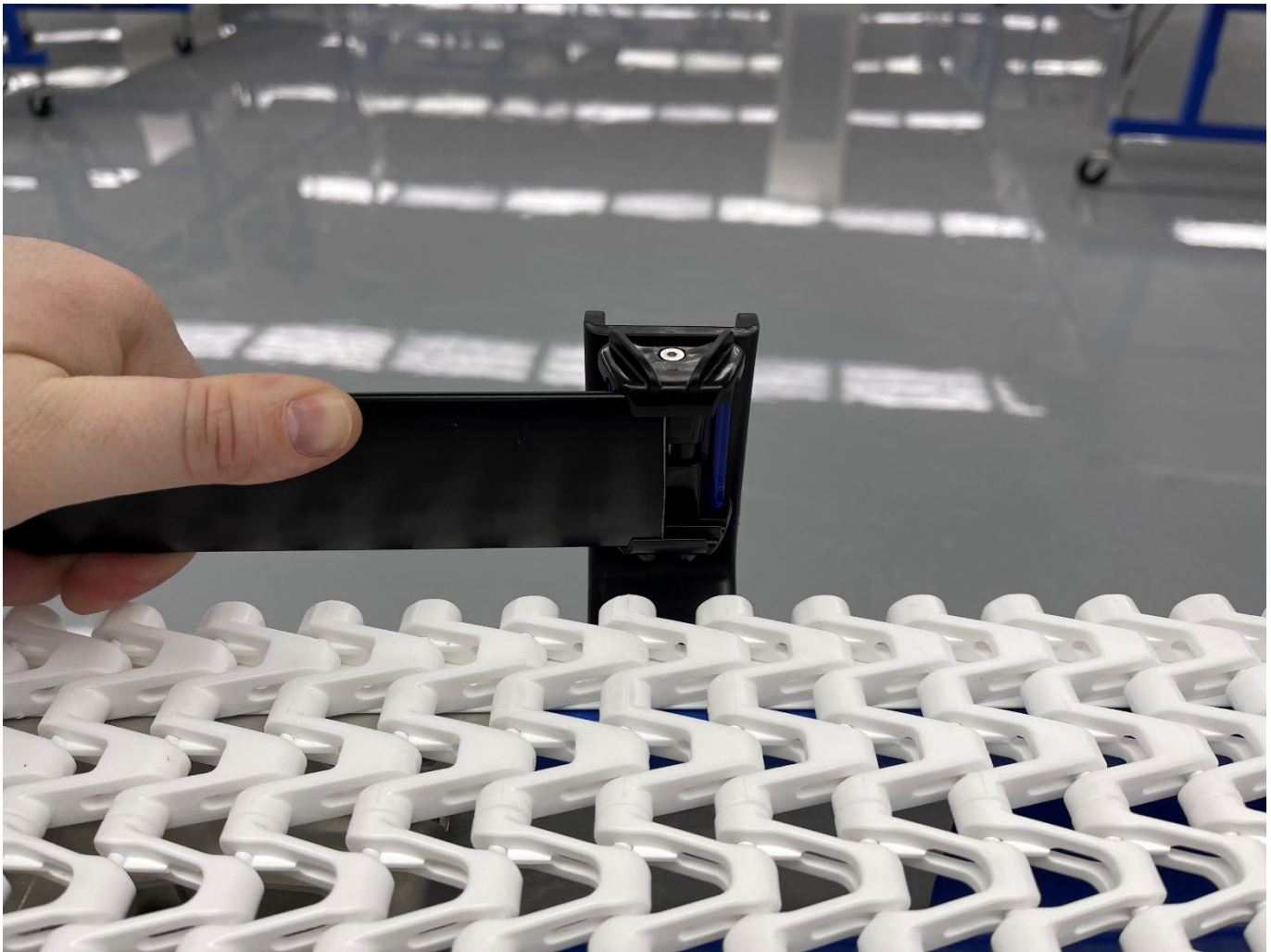
To install the guide rail into the Fixed Guide Rail brackets, use a 2mm hex wrench to loosen the screw in the center of the guide rail clamp of each bracket. Be careful to avoid loosening the screw to the point where it no longer engages the elastic lock nut on the bottom – it could fall out and be lost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



3) Insert Guide Rail

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 brackets in the straights on the system.



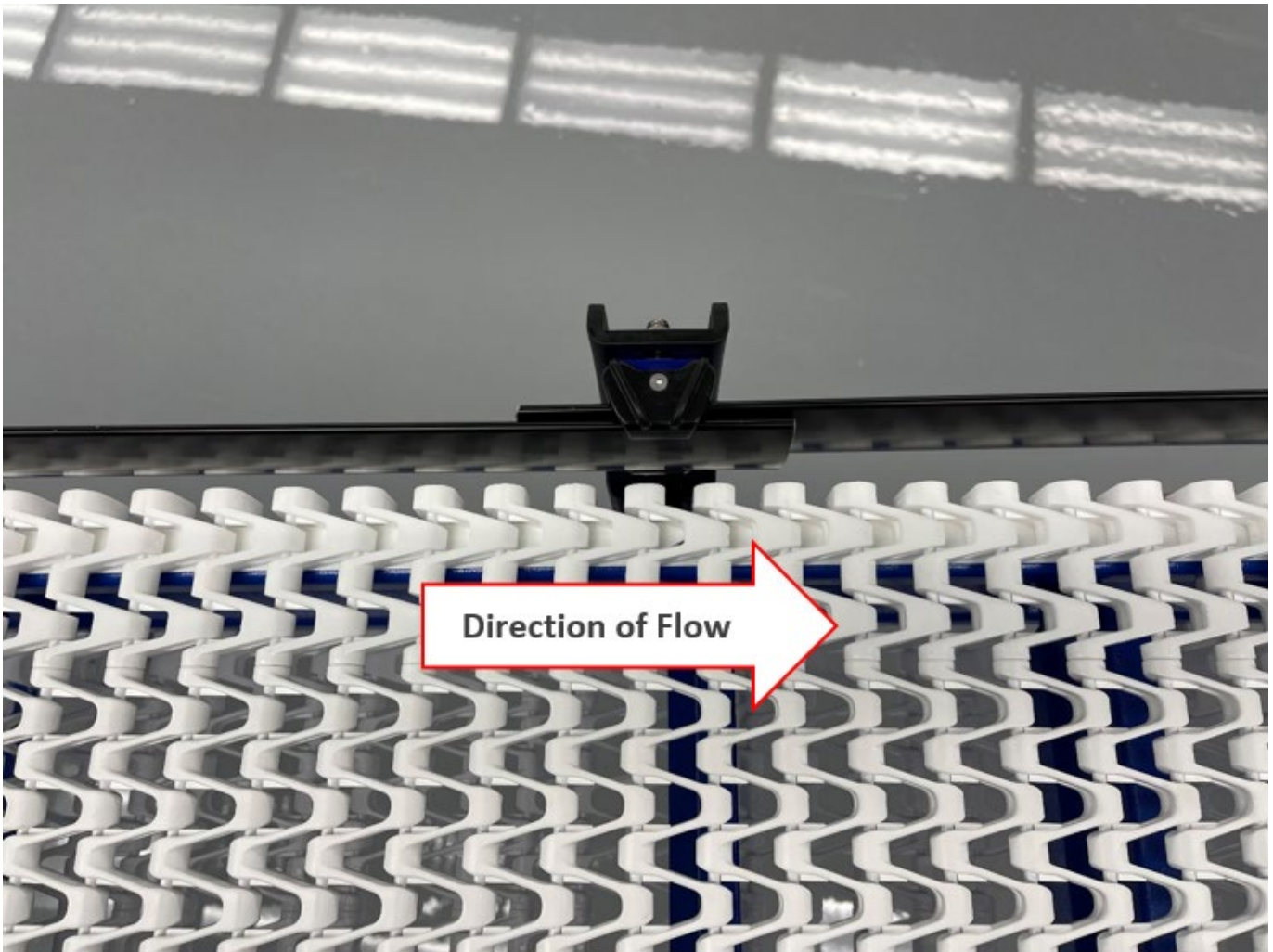
b. **Mounting in Curved Conveyor Sections**

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.



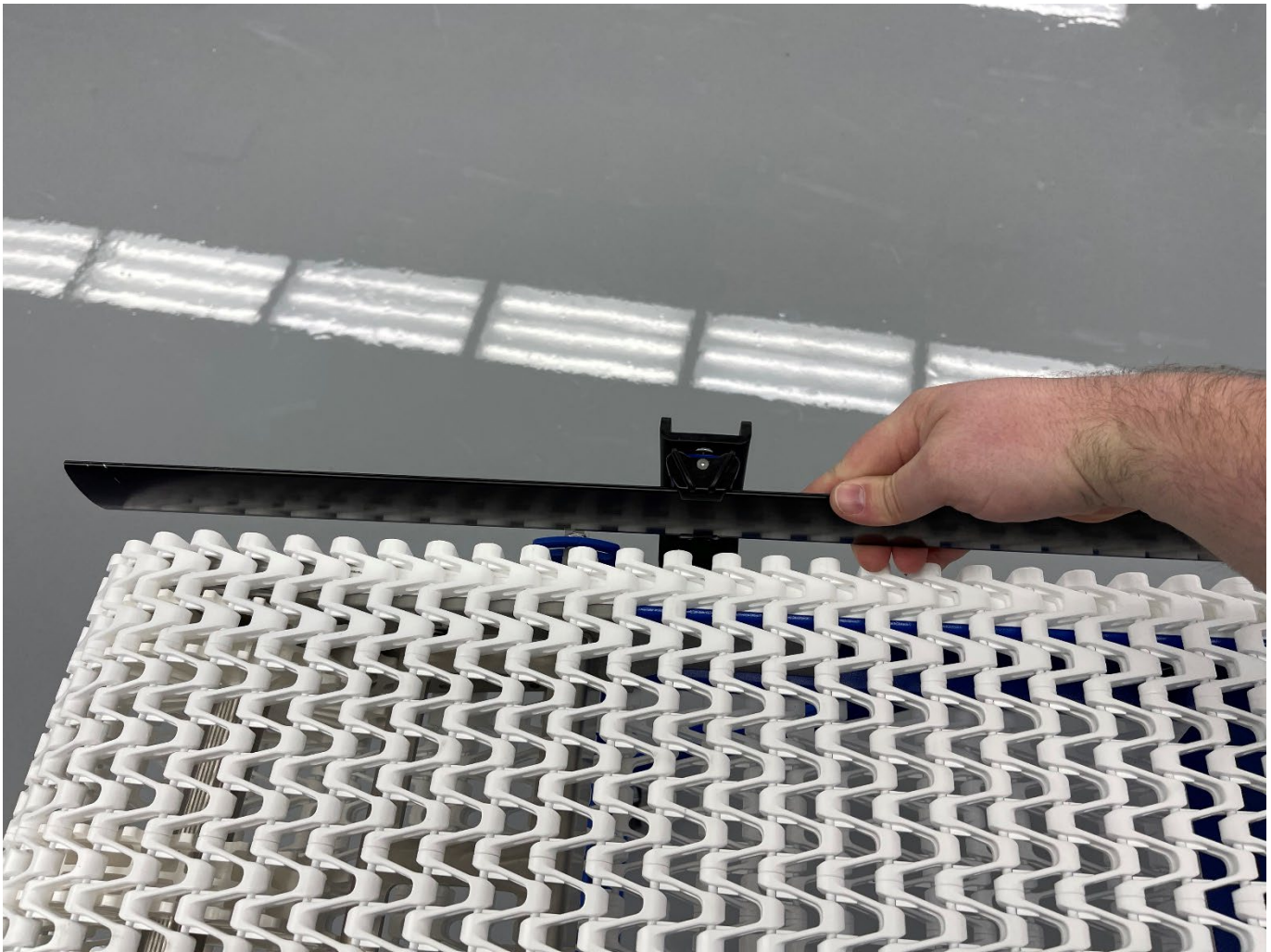
4) Overlap the Guide Rail in the Direction of Flow

At locations where the guide rail will overlap, the infeed and outfeed of curves, 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 25mm (1in) past the clamp.



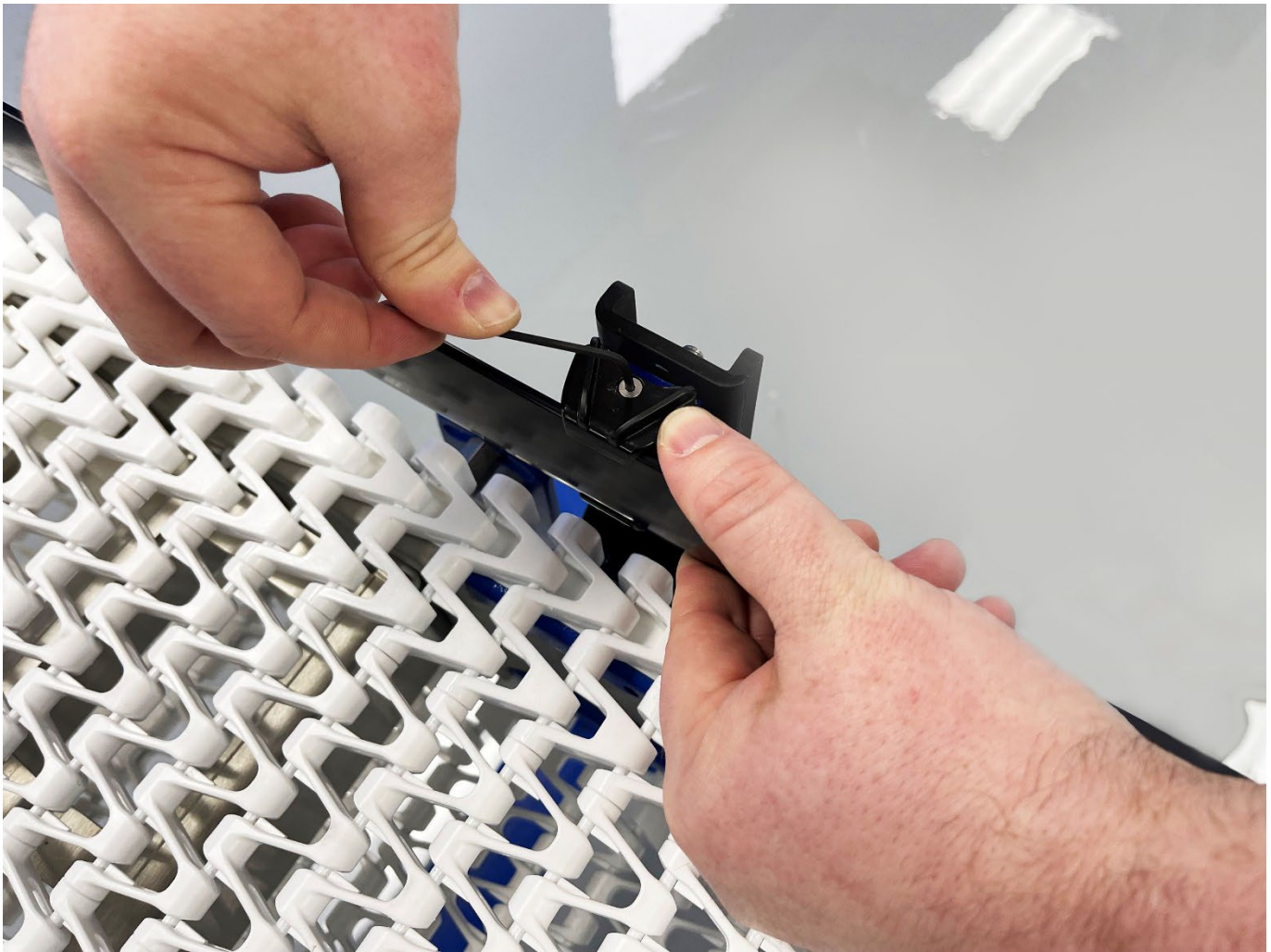
5) Position Guide Rail

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.

