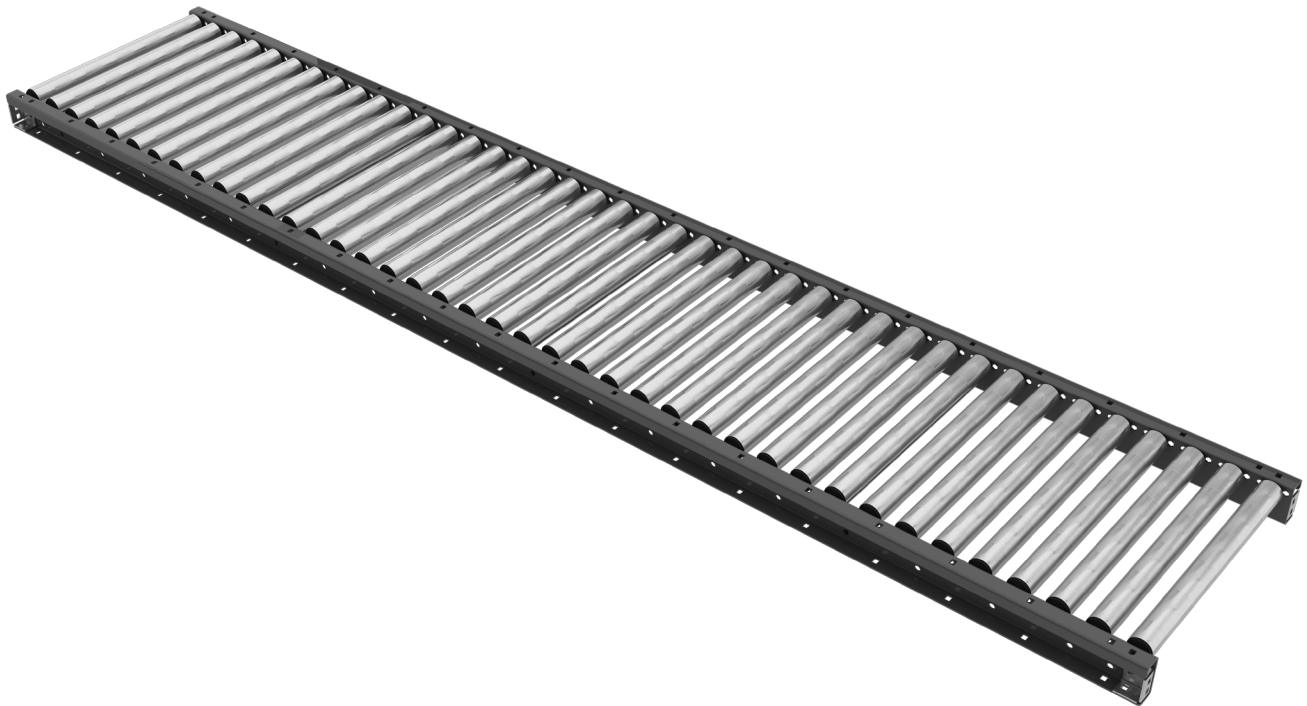


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TREW

INSTALLATION & MAINTENANCE MANUAL



SERIES 1500

GRAVITY ROLLER
INTERMEDIATE STRAIGHT SECTION

TABLE OF CONTENTS

1 - OVERVIEW

Roller Conveyor Overview	1.1
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2 - TYPES OF GRAVITY CONVEYOR

Skatewheel & Flow Rail	2.1
Ball Transfer Tables	2.5

3 - ACCESSORIES, FRAME OPTIONS & COMMON TERMS

Accessories	3.1
Frame Options	3.4
Common Terms	3.7

3 - TROUBLESHOOTING

Troubleshooting Help	4.1
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OVERVIEW

Roller Conveyor Overview



Based on their almost limitless configurations and versatility, rollers are the most commonly used rolling unit in gravity conveyor. Roller conveyor generally come as straight, curve or spur sections. Based on the object being conveyed, the roller can be sized and modified to best suit the application. Rollers commonly range from 1" to 8" diameter.

Common Gravity Roller Options

Bearings

- Oiled
- Greased
- Sealed
- ABEC-1 Rated

Axles

- Round
- Hex

Retention

- Cotter Pin
- Spring

Bearings

- Mild Steel
- Galvanized
- Aluminum
- PVC
- Stainless Steel
- Tapered Tubes
- Coatings & Platings



COMPONENTS

Skatewheel & Flow Rail



Skatewheel conveyor sections are mainly used in light duty applications and can be used in both permanent and portable applications. Skatewheel conveyor generally come as straight, curve or spur sections. When multiple skatewheels are mounted into a conveyor, the independent rotation of each wheel allows the product being conveyed to hold its' orientation around curves. Based on the product being conveyed, the skatewheel pattern can be modified to best suit the application.

Flow rail sections are mainly used in light duty permanent racking applications. Multiple sections will be mounted in the same direction to support and convey the product.

Common Skatewheel Options

- Galvanized
- 1-15/16" Diameter
- For 1/4" Diameter Axle
- Oiled

Wheel Types

- Multi-Directional
- Small & large diameters
- High capacity

Covers

- Urethane
- Neoprene

Wheel Materials

- Galvanized
- Aluminum
- Nylon
- Stainless Steel

Lubrication

- Oiled
- Greased
- Dry



Ball Transfer Tables



Ball transfer tables are mainly used as workstations or transition points where multi-directional movement is necessary. Based on the product being conveyed, ball tables and their ball pattern can be designed to handle light to heavy duty applications. As with all other gravity conveyors, ball transfer tables can come in both bolted or welded construction, depending on the application.

Common Ball Transfer Options

- 1" Dia. Steel Main Ball
- Zinc Plated Housing
- Stud Mounted

Ball Transfer Types

- Drop-In Mount
- Flange Mount
- Small & Large Diameters
- 50–1325 lb. Capacity

Ball Housing Material

- Zinc Plated
- Stainless Steel
- Black Oxide Finish

Main Ball Materials

- Carbon Steel
- Nylon
- Stainless Steel

Lubrication

- Sealed & Oiled
- Dry

ACCESSORIES

Supports

Tripod Stands

Used as a portable conveyor support mainly for skatewheel and light roller conveyor

Leg Supports

Used as permanently attached conveyor support

- Welded or bolted construction
- “H”-Style or Independent

Knee Braces

Used with leg supports to stabilize support structure

Portable Castered Legs

Permanently attached leg support for a portable conveyor

Multi-Tier Supports

Permanent leg support for multiple conveyor levels

Ceiling Hangers

Used as a permanent conveyor support for high elevations



Tripod Stand



Portable Castered
Legs w/ Knee Braces



H-Style Leg Supports

Flow Control

Fixed End Stops

Permanent mounted product stop.

Blade Stops

Blade can rise and lower between rollers to stop and release product.

- Manual Operated
- Pneumatic Operated

Roller Stops

Roller can rise above rest of the rollers to stop and release product.

- Manual Operated
- Pneumatic Operated

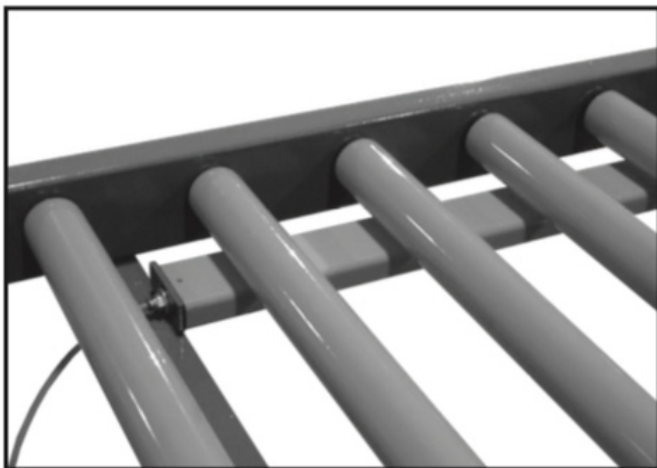
Roller Brakes

Mounted below rollers to raise and lock roller movement. Used to stop and release product.

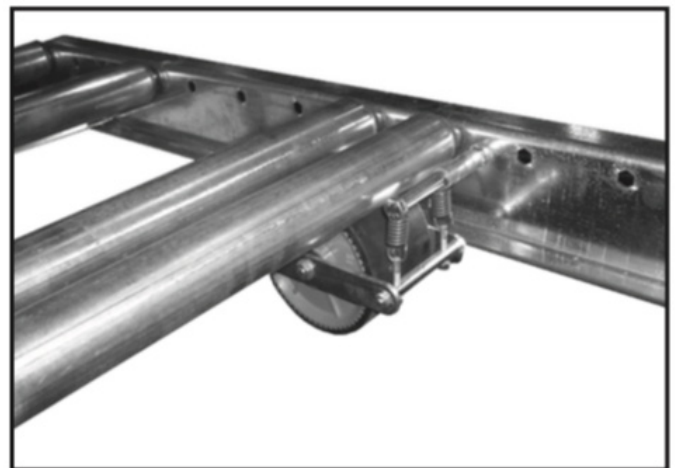
- Manual Operated
- Pneumatic Operated

Brake Rollers

Speed controlling device mounted below rollers to limit product speed.



Roller Brake



Brake Rollers

Other Accessories

Side Guides

Mounted to conveyor side frames to guide product.

- Fixed
- Adjustable

Conveyor Gates

Used to provide passageway through conveyor runs.

- Manual Lift
- Spring-Assisted Lift
- Gas Spring-Assisted Lift



Gas Spring-Assisted Gate



Spring-Assisted Gate



Adjustable Channel Side Guides

Side Frame Styles

Structural Channel

- Channel heights available from 3x4.1# to 12x20.7#
- Available in Mild Steel

Formed Channel

- Channel heights and flanges built to specification
- Common thicknesses range from 12 ga. to 1/4", others available
- Most common size is 3-1/2 x 1-1/2 x 10 ga.
- Available in Mild Steel, Galvanized Steel, Aluminum, Stainless Steel

Structural Angle

- Angle heights available up to 9"
- Thicknesses range from 1/8" to 1/2"
- Available in Mild Steel

Formed Angle

- Angle heights and flange built to specification
- Common thicknesses range from 12 ga. to 1/4", others available
- Available in Mild Steel, Galvanized Steel, Aluminum, Stainless Steel



**Structural
Channel**



**Formed
Channel**



**Structural
Angle**



**Formed
Angle**

Construction Types

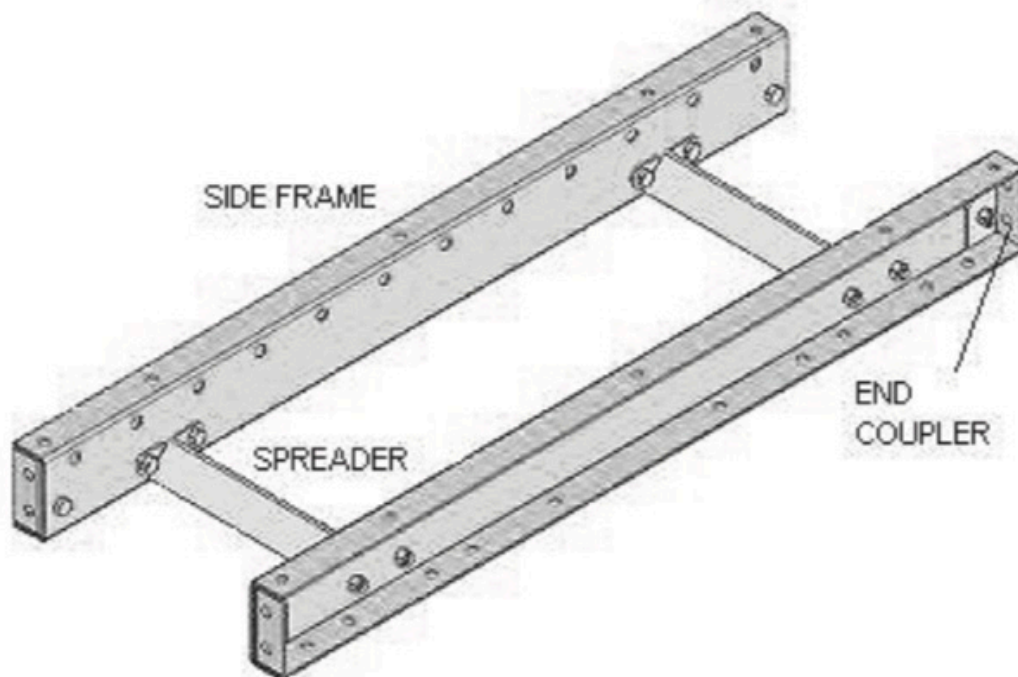
There are two types of construction for a gravity conveyor

“Bolt Together” or Bolted Construction (shown below)

- Refers to the spreaders and end couplers (see below) being bolted to the side frames
- Used mainly for light to medium duty applications

Welded Construction

- Refers to the spreaders and end couplers being welded to the side frames
- Used mainly for heavy duty applications and in abusive environments



“Bolt Together” Coupler Styles

Hook & Rod

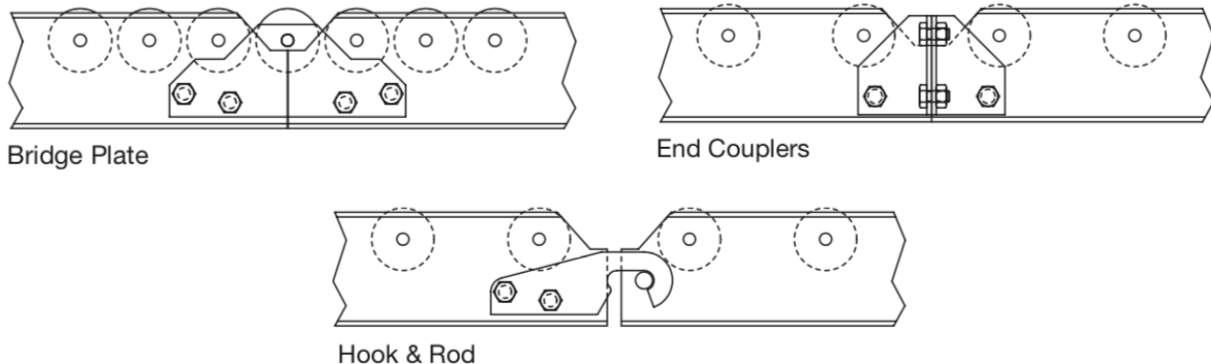
- For portable, quick disconnect applications

End Couplers

- For permanent installation applications

Bridge Plate

- For permanent installation applications



Aesthetic Options

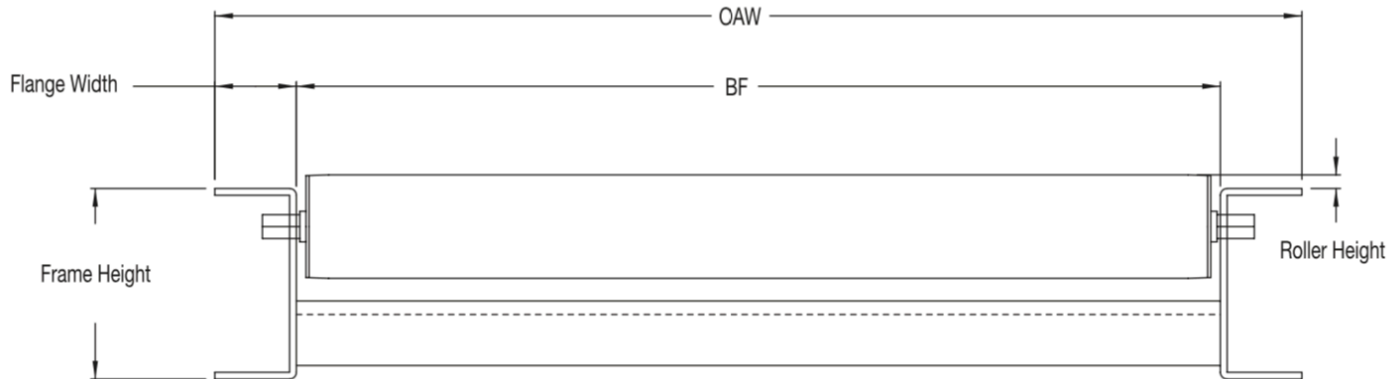
Gravity conveyor frames are available in a wide variety of material and finish options:

Materials

- Galvanized
- Mild Steel
- Aluminum
- Stainless Steel
 - Multiple grades and polishes available

Finishes

- Wet Spray Paint
 - Choose from standard paint colors, choose a RAL number, or have any color matched in an enamel paint
 - Any color is available in an industrial enamel for quick delivery
 - Hi-Temp, Epoxies, and other specialty coating available
- Powder Coat
 - Choose from standard colors, choose a RAL number, or have any color matched in a powder coat
 - Color matches may require extra delivery time
- Galvanealed
- Chrome Plated
- Unfinished
 - Can be shipped raw or primed only



BF (Between Frame)

The distance between the side frames of a conveyor

- Commonly used for bolted roller conveyor with 1.9" dia. rollers or greater, welded roller conveyor, and ball transfer tables are sized by BF, a.k.a. BF Critical

OAW (Over All Width)

The total width of a conveyor

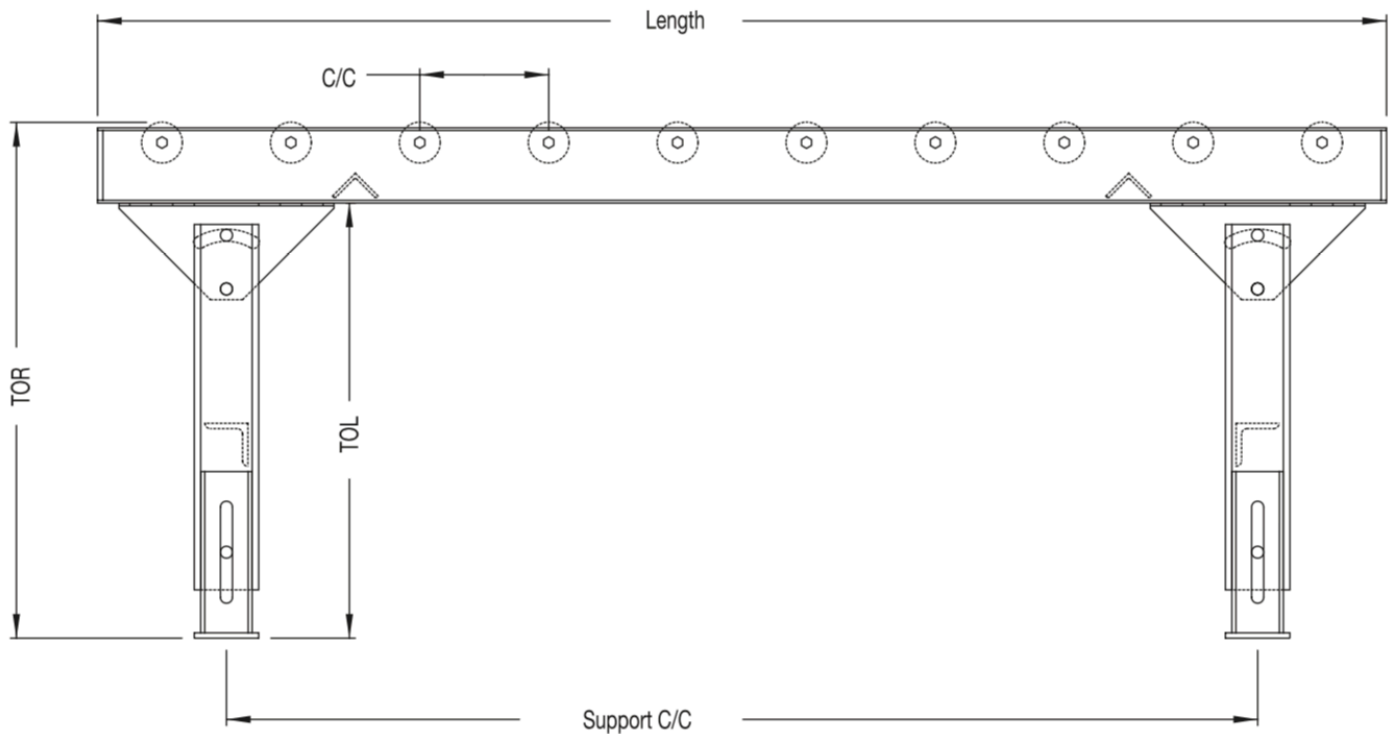
- $OAW = BF + 2 \times \text{FLANGE WIDTH}$
- Commonly used for bolted roller conveyor with 1-3/8" dia. rollers and skatewheel conveyors are sized by OAW, a.k.a. OAW Critical

Roller Height

The height the top of a roller is above or below the side frame

Frame Height

Height of the side frame



Length

The length of a conveyor from end of frame to end of frame

C/C

The center-to-center distance between rollers

TOR (Top Of Roller)

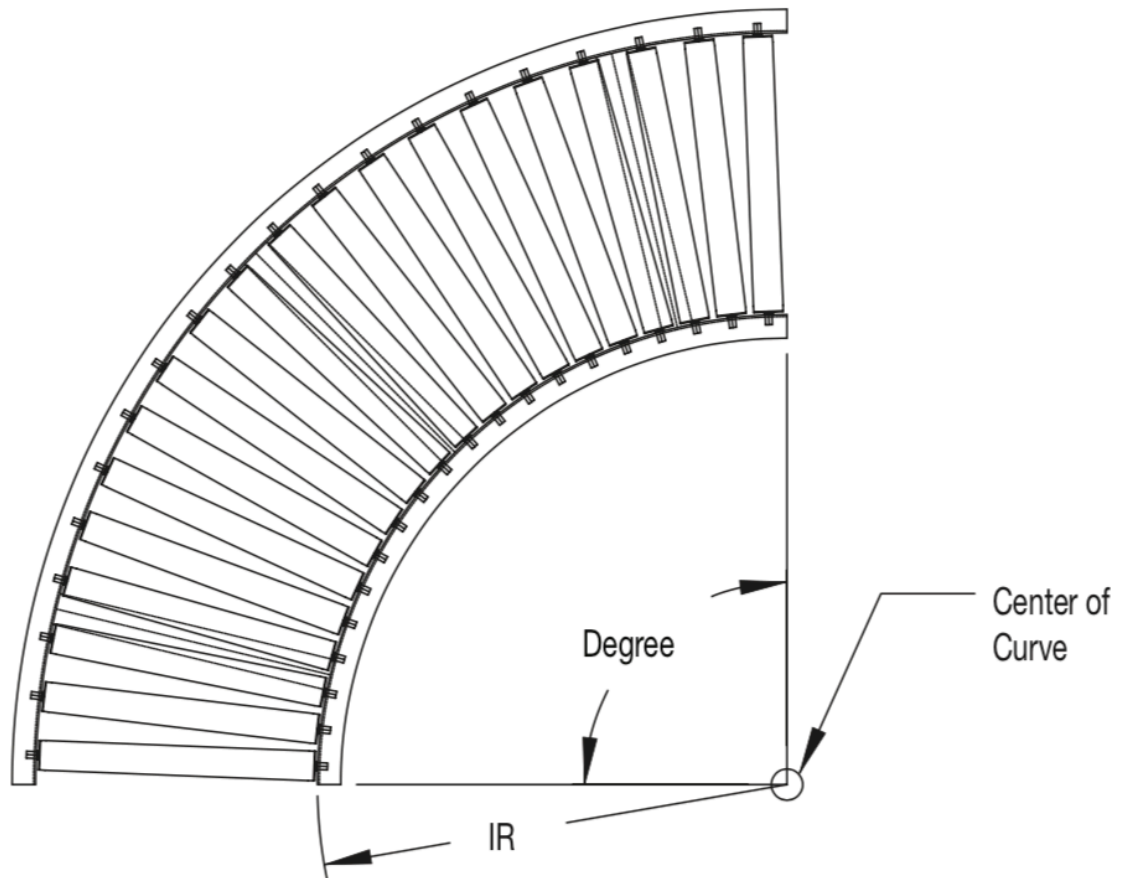
The height of the rollers above the floor, usually with some +/- adjustment

TOL (Top Of Leg)

The height of leg support, usually with some +/- adjustment

Support C/C

The center-to-center distance between supports



Degree

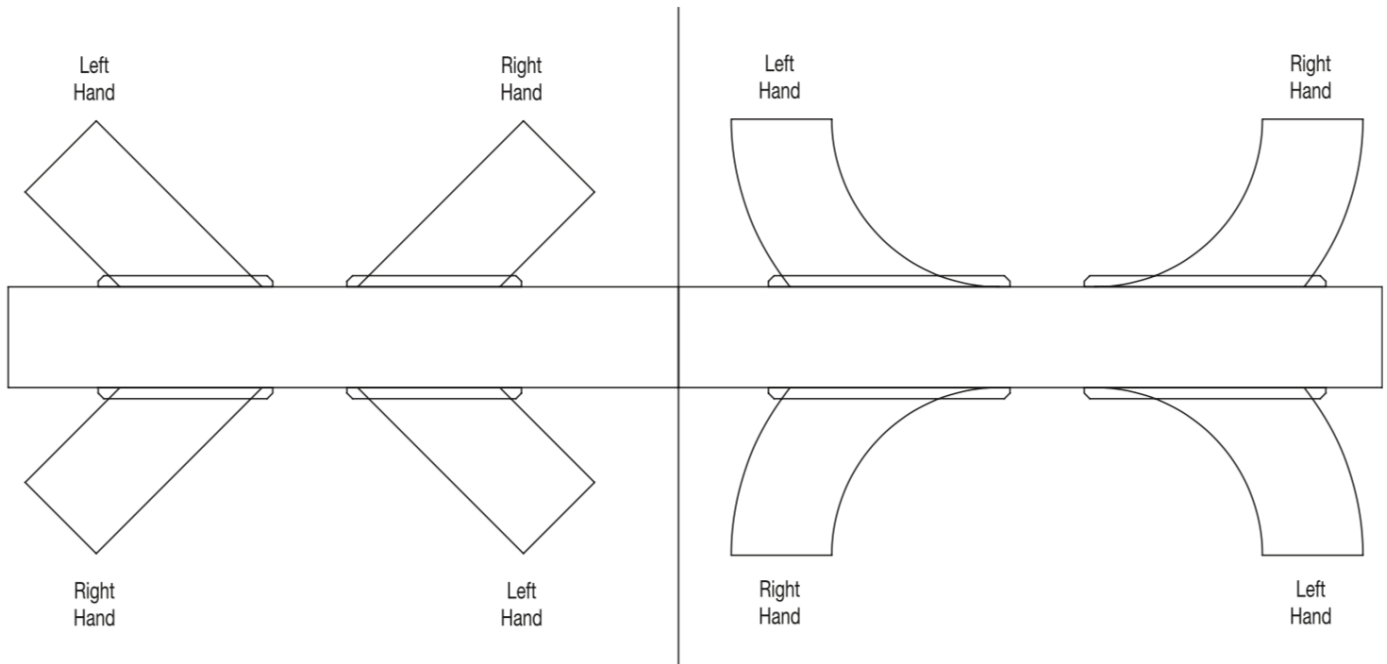
The amount of curve a conveyor covers

IR (Inside Radius)

- BF Critical Conveyors
 - The distance from the center of the curve to the BF of the inside rail (as shown)
- OAW Critical Conveyors
 - The distance from the center of the curve to the flange of the inside rail

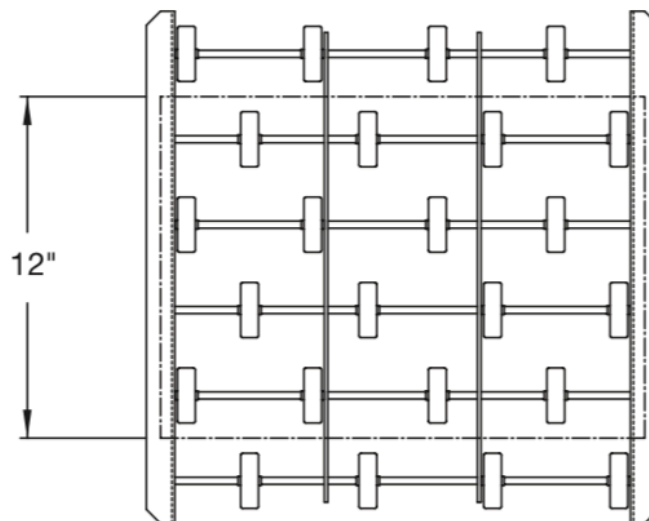
Spur Hand

The orientation of the spur in relation to the main line regardless of product flow.
Either left or right hand.



WPF (Wheels Per Foot)

The number of wheels per foot of a skatewheel conveyor.



SUPPORT

Support

If you need further assistance:

Website:

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Email:

info@trewautomation.com

Phone:

1.800.571.8739

Monday - Friday, 8:00am - 5:00pm CT