

Metzgar Conveyor Co. Catalog v8.10

**Metzgar Conveyor Company
901 Metzgar Drive N.W.
Comstock Park, MI 49321-9758
Phone (616) 784-0930
Fax (616) 784-4100
www.metzgarconveyors.com**

Gravity	1
Lineshaft	2
Belt	3
Belt Driven Live Roller	4
Chain Driven Live Roller	5
Accessories	6
Controls	7
Forms / Miscellaneous	8

Minimum Billing Charge

Minimum Billing Charge Is \$75.00 Net. When Orders Are Received Totaling Less Than This Net Amount, Metzgar Will:

1. Process The Order At The Minimum Charge.
2. Increase The Quantity Of Items Ordered To Equal The Minimum Charge.
3. Ship Items UPS - C.O.D.
4. Cash With Order Is Acceptable.
5. Bill One Of The Following Credit Cards - Visa, MasterCard, American Express, or Discover.

Change Orders

Orders That Are Changed After The Order Has Started Being Processed Will Be Charged:

- ◆ \$50.00 Handling Charge.
- ◆ Price Adjustment For The Increase Or Decrease In Equipment Ordered.
- ◆ Engineering Time Incurred At Current Hourly Rate.

Cancellation Charge

Minimum Cancellation Charge Is \$75.00 Net For Orders Canceled Prior To Material Purchased Or Labor Incurred. Orders Canceled Prior To Shipment Will Be Charged:

- ◆ \$75.00 Handling Charge.
- ◆ Re-Stockable Material At 50% Of Net Price.
- ◆ Non-Stockable Material At Full Value At Time Of Cancellation.
- ◆ Engineering And Labor Cost Incurred At The Current Rate At Time Of Cancellation.

Special Paint Charge

\$200.00 Net Plus 2% Of Mechanical Equipment Net Price Must Be Added For A Special Color Of Our Standard Type Paint, Independent Of Who Supplies The Paint. Cost Of Paint Extra. A Special Paint Request Will Be Priced At Time Of Quotation Request. Color Sample MUST Be Provided At Time Of Order. Colors By Name Or Mixtures Will NOT Be Acceptable.

Returned Merchandise

Returned Materials Will Only Be Accepted If Prior Written Authorization Has Been Obtained From The Factory. Credit Will Be Issued For The Returned Merchandise From One Of The Two Following Categories. Percentage Is Based On Merchandise Received In A Saleable Condition. Merchandise Received In Damaged Condition Will Be Charged The Appropriate Percentage, Plus Our Cost To Restore Merchandise To Saleable Condition. Materials Purchased That We Are Able To Return To Our Suppliers Will Be Returned And Restocking Charges Will Be Passed On. Non-Returnable Items Will Be Charged At Full Value. All Equipment Must Be Freight Prepaid Or This Equipment Will Be Rejected.

- ◆ Standard Equipment: Supports, Rollers, Gravity Sections, Etc., 20% Restocking Charge Of The Net Price.
- ◆ Others: 75% Restocking Charge Of The Net Price.

Design And Application Responsibility

The Metzgar Conveyor Company Will Take Responsibility For The Design And Application Of The Equipment When:

- ◆ The Information Submitted By The Distributor Is Accurate, Current, And Complete.
- ◆ An Accurate Description Of Operations Provided.
- ◆ The Equipment Is Installed In Accordance To The Layout Drawing And According To Metzgar Installation And Maintenance Standards And The Equipment Is Utilized In A Manner That Is Consistent With What Was Quoted Or Ordered.
- ◆ The Equipment Is Utilized In An Operation Such As Provided In The Description.
- ◆ We Have Acknowledged This Responsibility In Our Proposal.

Discontinued Lines And Revisions

The Metzgar Conveyor Company Reserves The Right, At Any Time, To Discontinue The Manufacture Of Or Sale Of, Or To Revise, Or Modify Any Product Or Price Or Part Thereof Without Notice Or Without Incurring Any Liability Whatsoever.

Sales Literature

Sales Literature is available for download from the Metzgar Conveyor Website.

www.metzgarconveyors.com

Printed copies are available by request.

Terms Of Payment

Our Standard Terms For Current Distributors With Clear Accounts Are Net 30 Days From Invoice Date. We Will Charge A Carrying Charge Of 1-½ % Of The Outstanding Balance Per Month (Or Any Portion Thereof) On Any Past Due Accounts. Orders For Equipment From Past Due Accounts Will Be Held Until Payment Arrangements Have Been Made. We May Occasionally Request A Down Payment On Systems, Or Sizable Orders.

Metzgar Conveyor Company

Conditions Of Sale:

1. No Sales. Use. Excise, Occupational Tax or other state or municipal tax has been included in the contract price unless separately shown, and the Purchaser hereby assumes and agrees to pay and/or reimburse the Seller for any of the above taxes attaching to or arising out of this transaction. The Purchaser, if any, shall pay duty.
2. The Seller shall not be required to furnish any safety devices except those specified herein, whether specified by law or otherwise. Transmission guards are three-sided unless otherwise stated.
3. The Seller warrants the material and workmanship entering into the construction of the within specified equipment to be suitable for the purpose stated herein and any parts proving defective in workmanship or material within twelve (12) months from date of shipment will be duplicated without charge f.o.b. factory by the Seller to be installed at the expense of the Purchaser, provided the Purchaser gives immediate notice in writing and the examination proves the claim and the parties expressly agree that no other claim for labor or damages will be made.
4. There are no warranties whether oral, written, expressed or implied, except as stated herein. The liability of Seller arising out of the supplying of the within specified equipment or its use, whether on warranties or otherwise, shall not in any case exceed the cost of replacing defective parts in the equipment, and at the expiration of twelve (12) months from the date of shipment all such liability shall be terminated. The Seller shall not in any event be liable for indirect or consequential damages, nor for broken or damaged merchandise. Warranty claims for motor controls, couplers, varispeed drive assemblies, reduction units, chains, sprockets, bearings, cylinders, valves and electrical equipment must be made directly to the respective representative or distributor in the area into which Metzgar products are sold.
5. The Seller shall not be held responsible for work done, material furnished or repairs made by others unless agreed to in writing. The Seller reserves the right of performing or superintending any necessary repair work incident to putting the machinery in operation.
6. It is understood and agreed that materials, packages or containers as specified are to be in a condition which will permit of their being properly handled on the conveyor system.
7. To assure a long and trouble free life of each piece of equipment, proper maintenance is necessary. The frequency of required inspection and maintenance is dependent upon the actual hours of operation rather than the age of the equipment. Buyer and its assigns assume full responsibility for maintenance of the equipment which is the subject hereof and Seller not be responsible for damage resulting from abuse of equipment or from lack of preventive or general maintenance.
8. The Seller will not be liable for any loss, damages, or delays due to transportation or any loss, damage, detention or delays caused by fire, strike, civil, or military authority, insurrection, riot or any other causes beyond its reasonable control, and Purchaser agrees to accept shipment, provided said delay does not extend sixty (60) days.
9. The Seller reserves the right under this contract to consign the material and equipment covered by it either to the Purchaser direct or to the order of the Metzgar Conveyor Company in care of the Purchaser.
10. Conditions herein constitute the sole agreement between the parties and no verbal or written communications other than those contained herein shall be binding upon the parties herein.
11. The Purchaser shall provide any pay for all necessary public inspection, license and building permits, and assume full responsibility for compliance with all codes.
12. This quotation, when signed by Purchaser and accepted by the Seller, constitutes, a binding contract of sale, not subject to cancellation except by the Seller, when unable to obtain material for manufacture of equipment sold.
13. Order resulting from this quotation is subject to credit approval by Metzgar Conveyor Company. If at any time in Seller's judgment Buyer's credit standing has been impaired, Seller may withhold delivery of any material called for hereunder, until satisfactory case or credit arrangements have been established.
14. The Seller's responsibility ceases with the delivery of merchandise in good order to transportation companies. The Purchaser must make claims for shortage or damage on shipments against the carrier. The time of delivery is the date of shipment from the factory or warehouse, and in the event of any delay in delivery caused by conditions beyond our control, we will not accept any liability nor will we be able to accept cancellation unless a settlement has been agreed upon between the Seller and Purchaser.
15. Material may not be returned to the Manufacturer without the written consent of the Manufacturer. A restocking charge will be made whenever the responsibility for returned goods lies with the Purchaser.

Metzgar Conveyor Company

Equipment Warranty:

The Metzgar Conveyor Company warrants that the equipment shall be free from defects in material and workmanship and that the equipment is of good quality and will be furnished in accordance with the specifications stated.

Metzgar's obligation under this warranty is limited to repairing or replacing any part F.O.B. Comstock Park, Michigan, or correcting any workmanship which shall be demonstrated to have been defective within one year from date of shipment or prior to 2080 hours of use, whichever occurs first, provided the purchaser gives Metzgar immediate notice in writing and examination proves the claim that such materials or parts were defective when originally furnished. Unless otherwise expressly agreed to by Metzgar, purchaser shall bear the expenses of installation of such parts.

Use of equipment with corrosive or abrasive materials or chemicals, or operating equipment in extraordinary dampness or temperatures, shall not be deemed attributed to defectiveness of materials or workmanship.

Metzgar neither assumes nor authorizes any other person to assume for them, any other liability, in connection with the equipment furnished or its installation including, without limiting the generality of the proceeding liability, for loss of products, production, equipment, or profits and liability for consequential damages or any damage to person or property.

Metzgar does not warrant components manufactured by others. However, the manufacturer's warranty will apply for service on motors, reduction units, controls, electrical units, air or hydraulic cylinders, etc. Contact the local authorized service representative of the manufacturer. If none is available in your local area, contact the Metzgar distributor or the Metzgar factory. Metzgar will not be responsible for units that have been tampered with or dis-assembled by anyone other than the authorized representative.

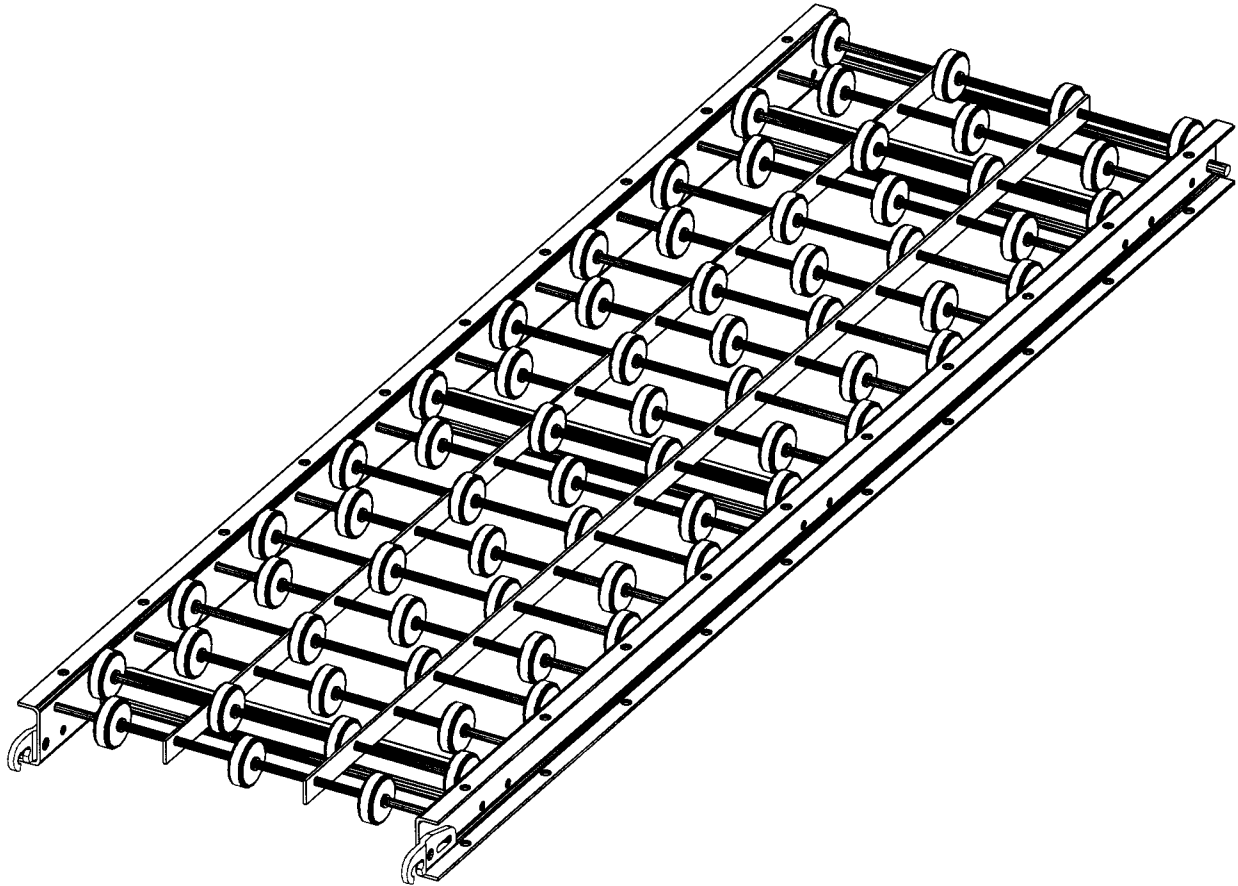
Occupational Safety and Health Act:

With respect to the Occupational Safety and Health Act of 1970, it is understood that detailed regulations applicable to conveyors and other equipment covered by this proposal are presently under consideration by the appropriate federal authorities and may be promulgated prior to completion of this project. The specifications in our proposal contemplate only inclusion of Metzgar's current standard safety devices and practices. If regulations under OSHA are issued prior to completion and require any changes in these specifications, Metzgar will make changes, and the additional price thereof will be added to the purchase price. Time for completion shall be extended for the additional time required to make such changes. If such regulations are issued after completion, or if any changes are due to conditions of use in the field, such changes will be your responsibility. However, Metzgar will be pleased to meet with you to review any problems which you identify and will give priority to any additional equipment or service required by you, covered by additional purchase orders to the Metzgar Conveyor Company.

Metzgar Conveyor Company
Comstock Park, Michigan 49321

**Section 1 – Gravity Conveyor**

Page	Description
1-1	Gravity Conveyor Index
1-2	Wheel Conveyor Specifications
1-3	Wheel Conveyor Straight Sections
1-4	Wheel Conveyor Curves
1-5	Wheel Conveyor Spur
1-6	Wheel Conveyor CurveSpur
1-7	Wheel Conveyor Gate
1-8	Wheel Conveyor Flexa-Switch
1-9	Wheel Conveyor Tranz-Rail
1-10	¾" Diameter Midget Roller Series
1-11	M Style Midget Roller Frames
1-12	1M Style Midget Roller Frames
1-13	2M Style Midget Roller Frames
1-14	SD138 Roller Series Specifications
1-15	SD138 Series Conveyor Straight Sections
1-16	SD138 Series Curves
1-17	SD138 Series Straight Spur
1-18	SD138 Series Curve Spur
1-19	SD138 Series Gate
1-20	MD190 Roller Series Specifications
1-21	MD190 Series Conveyor Straight Sections
1-22	MD190 Series Straight Roller Curves
1-23	MD190 Series Tapered Roller Curves
1-24	MD190 Series Straight Spur
1-25	MD190 Series Curve Spur
1-26	MD190 Series Gate
1-27	HD250 Heavy Duty Conveyor Specifications
1-28	HD250 Series Conveyor Straight Sections
1-29	HD250 Series Straight Roller Curves
1-30	1700 and 1900 Ball Transfer Unit Specifications
1-31	2200 and 4400 Ball Transfer Unit Specifications
1-32	Ball Transfer Modular Sections for Wheel Conveyor Frames
1-33	Ball Transfer Modular Sections for SD138 Conveyor Frames
1-34	Ball Transfer Modular Sections for MD190 Conveyor Frames
1-35	Ball Transfer Custom Tables
1-36	Gravity Frame and Roller Options
1-37	Gravity Spare Parts

**Gravity Wheel Conveyor Series Specifications:****Gravity Wheel Series Specifications**

Wheels: 1-15/16" Diameter Steel, Aluminum or Metzgar Nylo bearing and wheel.

Load rating for steel wheels is 60 lbs, Aluminum is 50 lbs and NYLO is 20lbs.

Axles: 5/16" headed bolts secured with lock nuts.

Metzgar Conveyor Co. uses the largest diameter wheel axles in the industry.

The Wheel is 13/32" above the top flange of the frame.

Spacers: 0.4375 outside diameter x .035 wall drawn aluminum tubing, effectively used to maintain strength and insure stable wheel patterns.

Center Band: 12 gauge galvanized or 1/8" aluminum accurately punched to align holes with the side frame and spaced to give maximum rigidity to the conveyor section.

Frame: 12 gauge galvanized formed channel 2-1/2" deep with 15/16" flanges.

Round Axle holes are 5/16" diameter punched on 3" centers.

Frame capacity for steel is 500 pounds with supports on 10 foot centers,

Aluminum frame capacity is 275 pounds with supports on 10 foot centers.

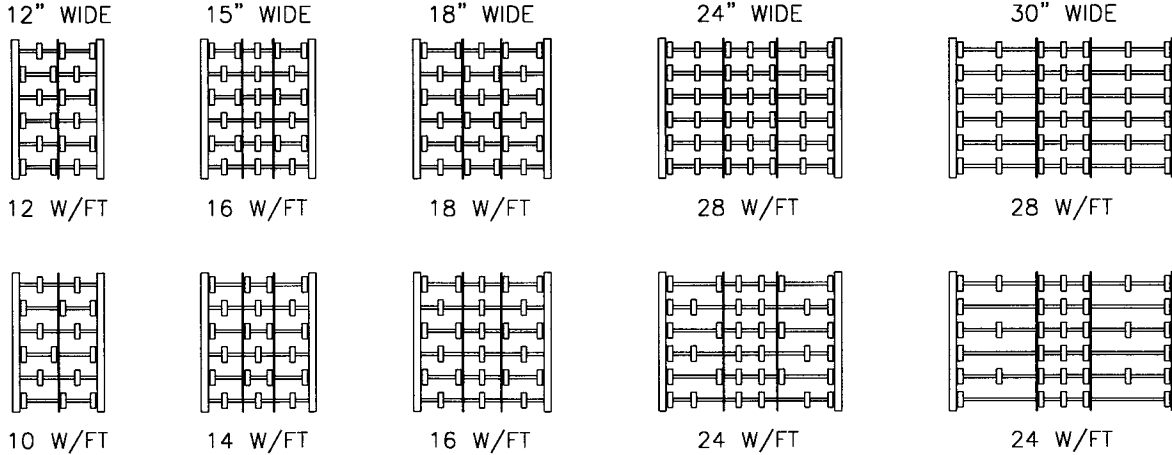
Crossmembers are rigid unitized double bolted design for strength.

Finish: Standard finish is galvanized steel or plain aluminum



Gravity Wheel Conveyor Straight Section:

Standard Wheel Patterns

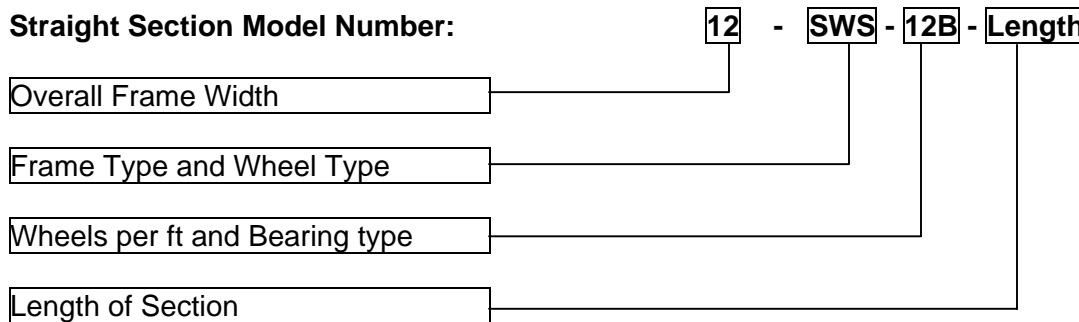


The Standard Bed Length is 10 feet. Special Lengths are Available.

Wheel Frame Dimensions:

Overall Width of the Frame	12	15	18	24	30
Width Between Frame	10 1/8"	13 1/8"	16 1/8"	22 1/8"	28 1/8"
Wheels Per Foot	10 or 12	14 or 16	16 or 18	24 or 28	24 or 28

Straight Section Model Number:



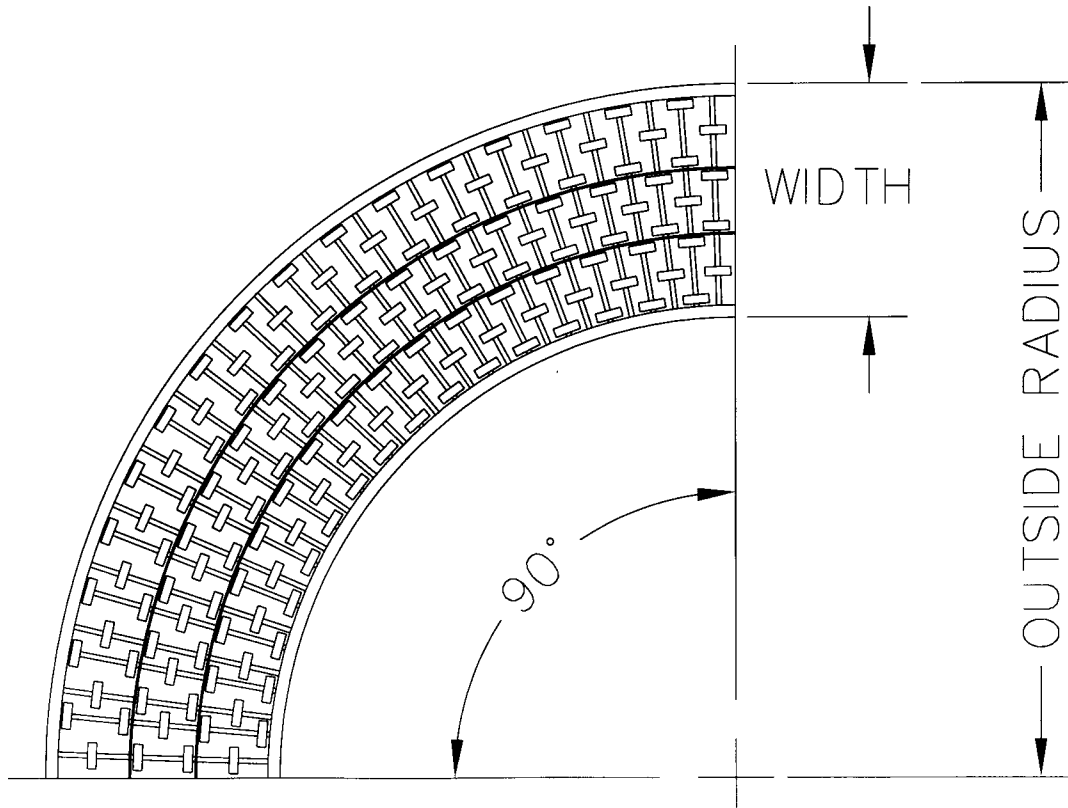
Frame and Wheel Types:

- SWS= Steel Frames Steel Wheels
- SWN= Steel Frames NYLO Wheels
- AWA= Aluminum Frames Aluminum Wheels
- B=Ball Bearings N=NYlo Bearings

- SWA=Steel Frames Aluminum Wheels
- AWS=Aluminum Frames Steel Wheels
- AWN= Aluminum Frames NYLO Wheels



Gravity Wheel Curves:



The Standard Curve is 90 degrees. Special Degree Curves are Available.

Wheel Curve Frame Dimensions:

Overall Width of the Frame	12	15	18	24	30
Width Between Frame	10 1/8"	13 1/8"	16 1/8"	22 1/8"	28 1/8"
Wheels Per Foot	12	16	18	28	28
Outside Radius in Feet	4,5 or 6	4,5 or 6	4,5 or 6	4,5 or 6	5 or 6

Curve Model Number:

C412 - SWS - 12B - 90

- Outside Radius and Frame Width
- Frame Type and Wheel Type
- Wheels per ft and Bearing type
- Degree of Curve

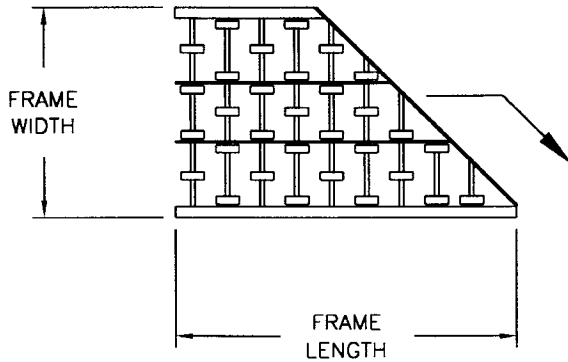
Frame and Wheel Types:

- SWS**= Steel Frames Steel Wheels
- SWN**= Steel Frames NYLO Wheels
- AWA**= Aluminum Frames Aluminum Wheels
- B**=Ball Bearings **N**=Nylo Bearings

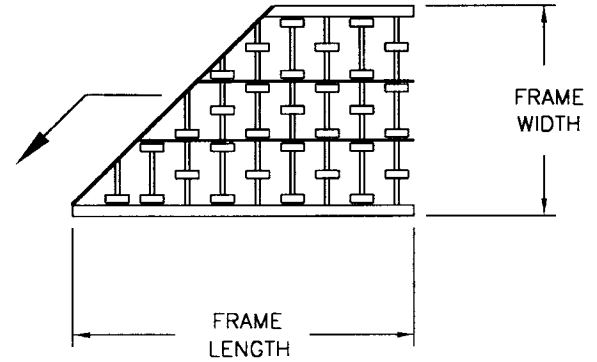
- SWA**=Steel Frames Aluminum Wheels
- AWS**=Aluminum Frames Steel Wheels
- AWN**= Aluminum Frames NYLO Wheels



Gravity Wheel 45 Degree Spur:



RIGHT HAND FLOW



LEFT HAND FLOW

Straight Butt Spurs are intended for travel from a gravity line onto a powered line. Spurs are not recommended for travel from gravity to gravity unless an operator manually pushes the product.

Wheel Spur Frame Dimensions:

Overall Width of the Frame	12	15	18	24	30
Width Between Frame	10 1/8"	13 1/8"	16 1/8"	22 1/8"	28 1/8"
Wheels Per Foot	12	16	18	28	28
Frame Length in Inches	22"	25"	28"	34"	40"

Spur Model Number:

B4-12 - SWS - B - LH or RH

Series and Frame Overall Width

Frame Type and Wheel Type

Bearing Type

Specify Left hand or Right Hand assembly when Ordering.

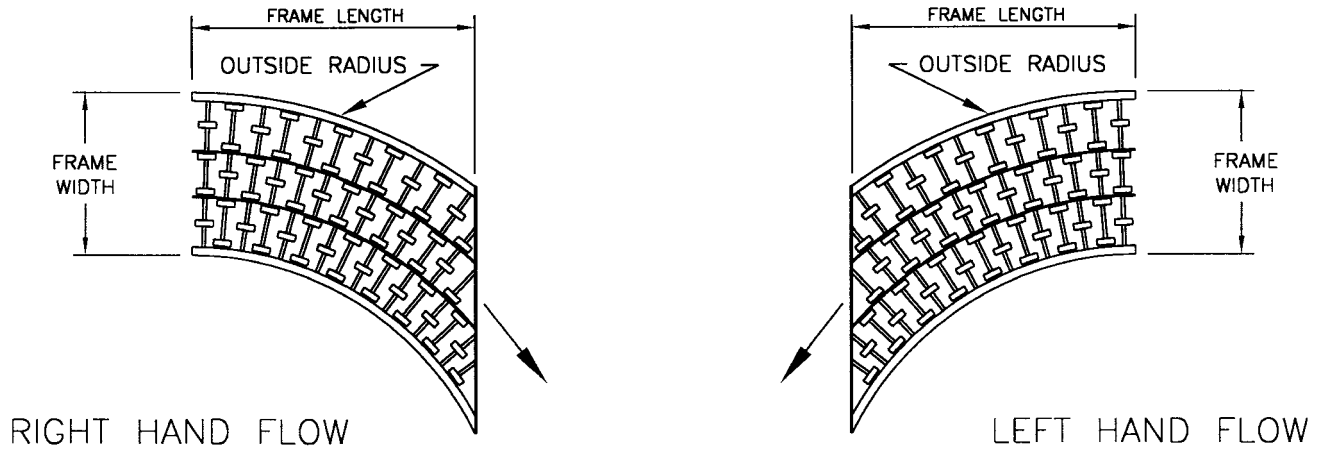
Frame and Wheel Types:

- SWS**= Steel Frames Steel Wheels
- SWN**= Steel Frames NYLO Wheels
- AWA**= Aluminum Frames Aluminum Wheels
- B**=Ball Bearings **N**=Nylo Bearings

- SWA**=Steel Frames Aluminum Wheels
- AWS**=Aluminum Frames Steel Wheels
- AWN**= Aluminum Frames NYLO Wheels



Gravity Wheel 90 Degree Curve Spur:



Curved Butt Spurs are intended for travel from a gravity line onto a powered line. Spurs are not recommended for travel from gravity to gravity unless an operator manually pushes the product.

Wheel Curve Spur Frame Dimensions:

Overall Width of the Frame	12	15	18	24	30
Width Between Frame	10 1/8"	13 1/8"	16 1/8"	22 1/8"	28 1/8"
Wheels Per Foot	12	16	18	28	28
Frame Length in Inches	30"	30"	33"	37"	37"
Outside Radius of Curve	4'-0"	4'-0"	5'-0"	6'-0"	6'-0"

Curve Spur Model Number:

B9-12 - SWS - B - LH or RH

Series and Frame Overall Width

Frame Type and Wheel Type

Bearing Type

Specify Left hand or Right Hand assembly when Ordering.

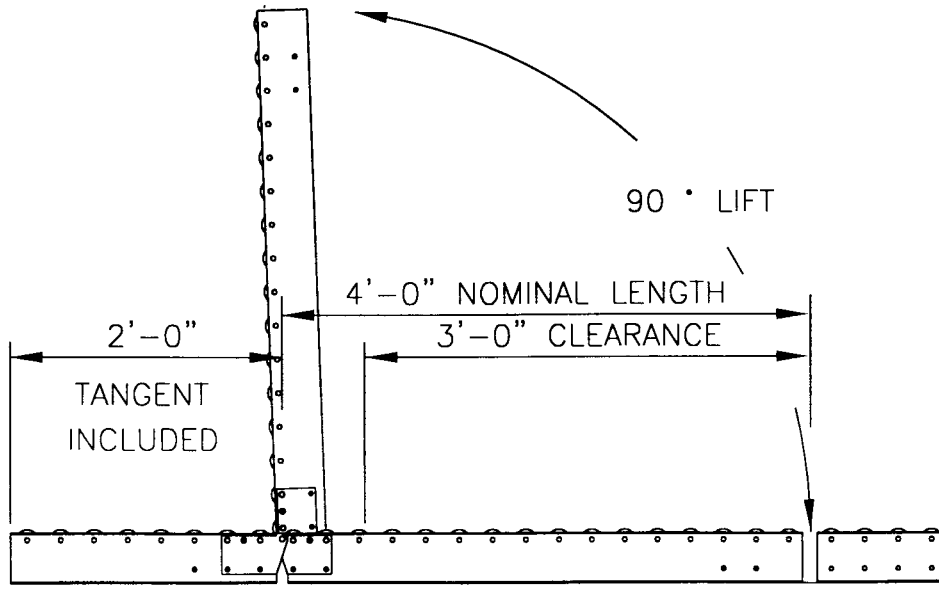
Frame and Wheel Types:

- SWS**= Steel Frames Steel Wheels
- SWN**= Steel Frames NYLO Wheels
- AWA**= Aluminum Frames Aluminum Wheels
- B**=Ball Bearings **N**=Nylo Bearings

- SWA**=Steel Frames Aluminum Wheels
- AWS**=Aluminum Frames Steel Wheels
- AWN**= Aluminum Frames NYLO Wheels



Gravity Wheel Hinge Gate Sections:



Gate Sections are designed to give personnel safe access around equipment. Please consider all options to determine the best location for the required gate. A standard gate includes wheel conveyor, tangent section, hinge brackets and all required mounting hardware.

Wheel Gate Frame Dimensions:

Overall Width of the Frame	12	15	18	24	30
Width Between Frame	10 1/8"	13 1/8"	16 1/8"	22 1/8"	28 1/8"
Wheels Per Foot	10 or 12	14 or 16	16 or 18	24 or 28	24 or 28

Gate Model Number:

HG4-12 - SWS - 10B

Gate Series & Frame Overall Width

Frame Type and Wheel Type

Wheels per ft and Bearing type

Frame and Wheel Types:

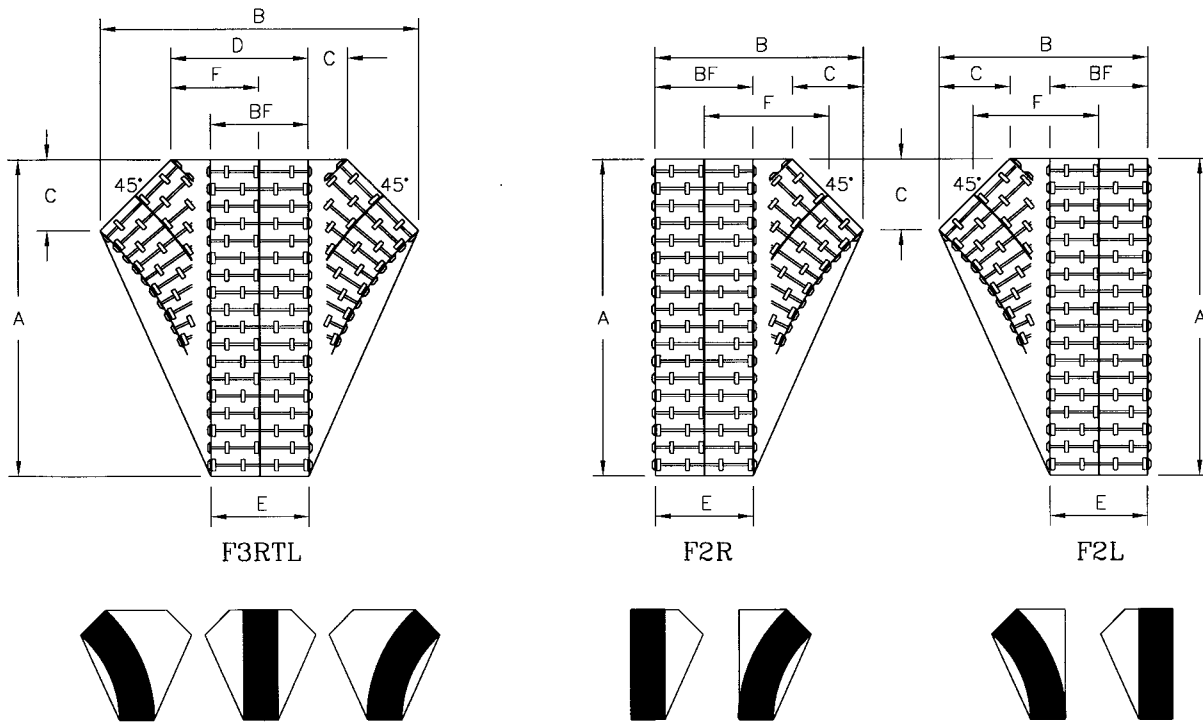
SWS= Steel Frames Steel Wheels
SWN= Steel Frames NYLO Wheels
AWA= Aluminum Frames Aluminum Wheels
B=Ball Bearings **N**=Nylo Bearings

SWA=Steel Frames Aluminum Wheels
AWS=Aluminum Frames Steel Wheels
AWN= Aluminum Frames NYLO Wheels

Optional Gas Cylinder or Spring Assist lifting kit is available.
Optional Gate Lengths are available.



Gravity Wheel Flexa-Switch:



Metzgar Flexa-Switch is protected by US PATENT No. 2,669,334. The term Flexa-Switch is a registered trade name.

The Flexa-Switch is used where two or three lines of conveyor converge on one line or where a single line is feeding two or three lines. Metzgar offers two basic switches, the three way and the two way, both can be ordered with manual or powered actuation. Manual switching is standard unless otherwise specified. Power switching can be done with air cylinders or electric motors activated at the switch or remotely depending on the controls used. Air cylinder operated switches are available in two or three way operation, electrically operated switches are only available in two way operation.

Flexa-Switch Model Number:

F2 - R - 12 - SW

Flexa-Switch and 2 or 3 way

Right, Through or Left (R,T or L)

Overall Width(12",15",18",24" or 30")

Steel Wheels



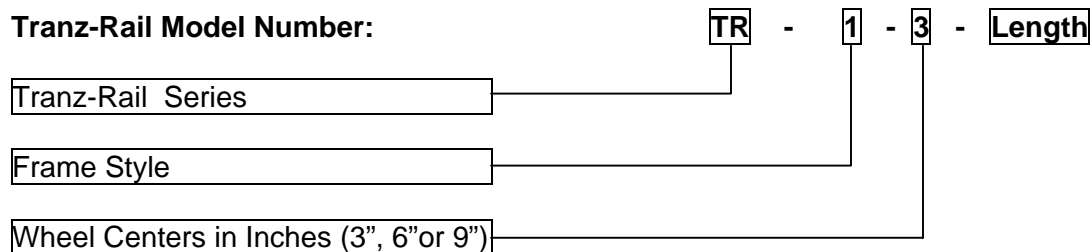
Tranz-Rail Sections:

STYLE	DIMENSIONS	STYLE	DIMENSIONS
<p>1</p>		<p>6</p>	
<p>2</p>		<p>7</p>	
<p>3</p>		<p>8</p>	
<p>4</p>		<p>9</p>	
<p>5</p>		<p>10</p>	

The Standard Tranz-Rail Length is 10 feet. Special Lengths are Available.

Tranz-Rail economically solves conveying problems. When used in live storage racks they utilize all the available space with first in first out usage. Wheel rail is excellent for handling light pallets and their flexibility makes it ideal for assembly line operators. The variety of design gives a wide choice of models to fit your particular application.

Tranz-Rail Model Number:



Tranz-Rail Series Specifications

Wheels: 1-15/16" Diameter Steel wheel. Load rating for a steel wheel is 60 lbs

Axles: 5/16" headed bolts secured with lock nuts.

Frame: 12 gauge galvanized steel.

Standard mounting holes 3" centers 3" from the end of the frame.

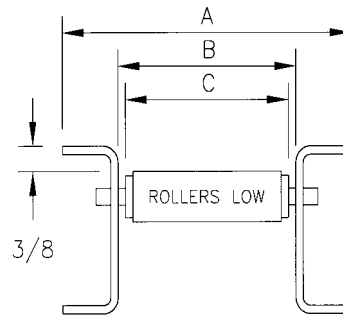
Finish: Standard finish is galvanized steel.

Tranz-Rail Frame Style 10 Wheels are on 1-1/2" Staggered Centers.

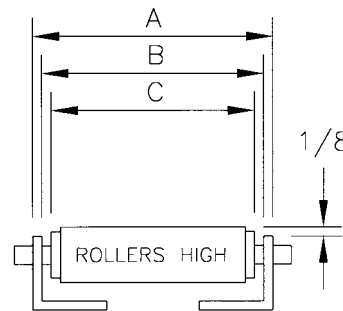


Gravity Midget Roller Series Specifications:

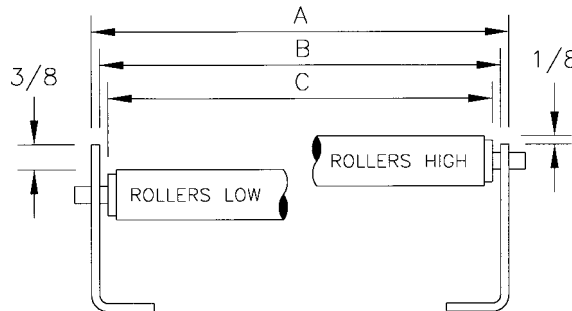
“M” Style



“1M” Style



“2M” Style



The Standard Bed Length is 10 feet. Special Lengths are Available.

Midget Series Specifications

Rollers: 3/4" Diameter x 20 gauge galvanized steel or Aluminum 0.035" wall

Roller capacity is 20 lbs each

Bearings: Steel Roller bearings or Nylo bearings

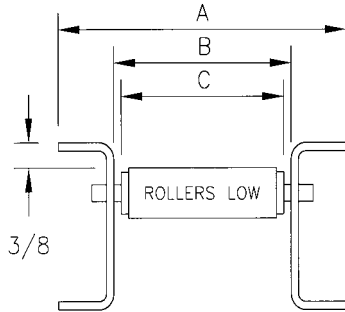
Axles: 1/4" Steel spring loaded.

Frame: 12 gauge galvanized steel or 1/8" Aluminum.

Finish: Standard finish is galvanized steel or plain aluminum



M Gravity Midget Roller Series:



M Style Midget frame is 2 1/2" x 15/16" x 12 gauge galvanized or 1/8" aluminum side angles with bolted crossmembers. Holes are punched on 0.857" centers for 14 rollers per foot or 1" centers for 4, 6, or 12 rollers per foot. Rollers are available mounted in the low location.

Midget Frame Dimensions:

Nominal Width of the Frame	7	12	16	20
Overall Width of Frame "A"	6 7/8"	12 3/8"	15 7/8"	19 5/8"
Inside Width of Frame "B"	5	10 1/2"	14	17 3/4"
Roller Length "C"	4 7/8"	10 3/8"	13 7/8"	17 5/8"

Straight Section Model Number:

M - **7** - **SRS** - **4** - **B** - **10**

Midget Series Frame Style

Frame Width

Frame and Roller Type

Rollers per foot (4,6,12 or 14)

Bearing Type B=Ball , N=Nylo

Length in feet (10ft Standard)

Curve Section Model Number:

M - **C3** - **7** - **SRS** - **B** - **90**

Midget Series Frame Style

Curve Radius (3',4' or 5')

Frame Width

Frame and Roller Type

Bearing Type B=Ball , N=Nylo

Degree of Curve – 90 is Standard

Frame and Roller Types:

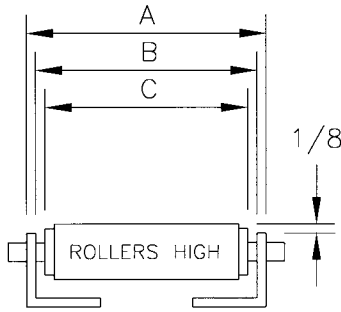
SRS= Steel Frames Steel Rollers

ARA= Aluminum Frames Aluminum Rollers

When ordering supports specify for midget frame style.



1M Gravity Midget Roller Series:



1M frame is recommended for bench mounting only.

1M Style Midget frame is 1" x 1" x 1/8" steel or aluminum side angles with welded crossmember straps. Holes are punched on 0.857" centers for 14 rollers per foot or 1" centers for 4, 6, or 12 rollers per foot. Rollers are mounted in the high location only.

Midget Frame Dimensions:

Nominal Width of the Frame	5	10	14	18
Overall Width of Frame "A"	5 ¼"	10 ¾"	14 ¼"	18"
Inside Width of Frame "B"	5	10 ½"	14	17 ¾"
Roller Length "C"	4 7/8"	10 3/8"	13 7/8"	17 5/8"

Straight Section Model Number:

1M - 5 - SRS - 4 - B - 10

Midget Series Frame Style

Frame Width

Frame and Roller Type

Rollers per foot (4,6,12 or 14)

Bearing Type B=Ball , N=Nylo

Length in feet (10ft Standard)

Curve Section Model Number:

1M - C3 - 5 - SRS - B - 90

Midget Series Frame Style

Curve Radius (3',4' or 5')

Frame Width

Frame and Roller Type

Bearing Type B=Ball , N=Nylo

Degree of Curve – 90 is Standard

Frame and Roller Types:

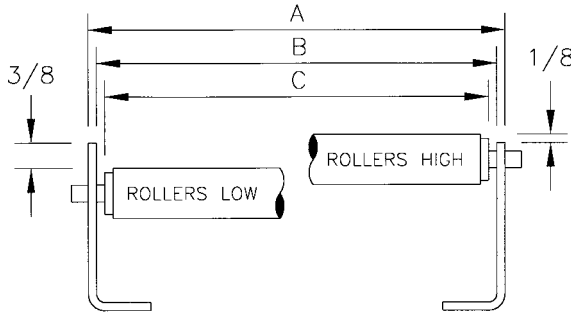
SRS= Steel Frames Steel Rollers

ARA= Aluminum Frames Aluminum Rollers

Supports not available for this style midget frame.



2M Gravity Midget Roller Series:



2M Style Midget frame is 2 1/2" x 15/16" x 12 gauge galvanized or 1/8" aluminum side angles with bolted crossmembers. Holes are punched on 0.857" centers for 14 rollers per foot or 1" centers for 4, 6, or 12 rollers per foot. Rollers are available mounted in the high or low location.

Midget Frame Dimensions:

Nominal Width of the Frame	5	10	14	18
Overall Width of Frame "A"	5 1/4"	10 3/4"	14 1/4"	18"
Inside Width of Frame "B"	5	10 1/2"	14	17 3/4"
Roller Length "C"	4 7/8"	10 3/8"	13 7/8"	17 5/8"

Straight Section Model Number:

2M - 5 - SRS - 4 - B - 10

Midget Series Frame Style

Frame Width

Frame and Roller Type

Rollers per foot (4,6,12 or 14)

Bearing Type B=Ball , N=Nylo

Length in feet (10ft Standard)

Curve Section Model Number:

2M - C3 - 5 - SRS - B - 90

Midget Series Frame Style

Curve Radius (3',4' or 5')

Frame Width

Frame and Roller Type

Bearing Type B=Ball , N=Nylo

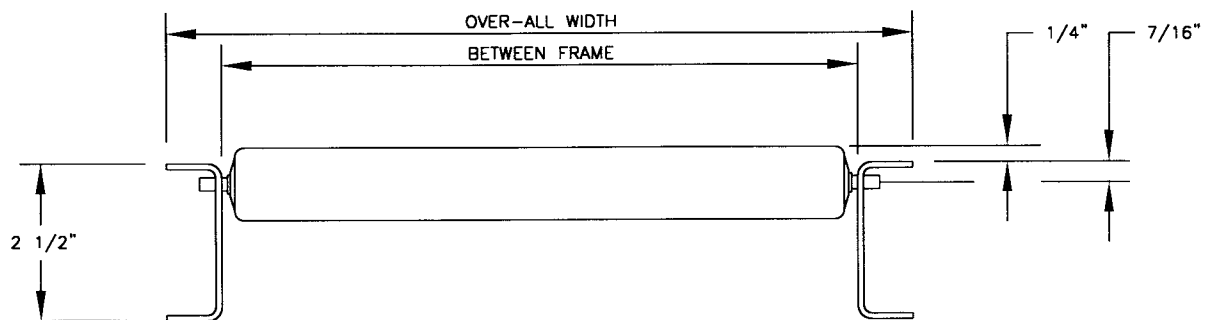
Degree of Curve – 90 is Standard

Frame and Roller Types:

SRS= Steel Frames Steel Rollers

ARA= Aluminum Frames Aluminum Rollers

When ordering supports specify for midget frame style.

**SD138 Gravity Standard Duty Roller Series:**

Standard duty roller conveyor offers excellent support for the bottom surfaces of the items to be transported. Therefore, items with irregular surfaces could transport very well on standard roller conveyor, providing the bottom surface does not conform to the shape of the rollers. Items may be manually pushed or the conveyor can be inclined to allow gravity to move the product.

SD138 Gravity Roller Series Specifications

Rollers: 1-3/8" diameter x 18 gauge galvanized Steel or .049" wall Aluminum with ball bearings.

Load rating for each roller is 50 lbs.

Axles: 1/4" diameter steel.

The roller is mounted 1/4" above the top flange of the frame.

Frame: 12 gauge galvanized or 1/8" aluminum formed channel 2-1/2" deep with 15/16" flanges.

Axle holes are 1/4" diameter punched on 1 1/2" centers.

Frame capacity for steel is 350 pounds, Aluminum frame capacity is 120 pounds.

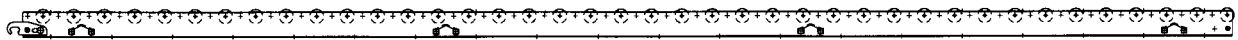
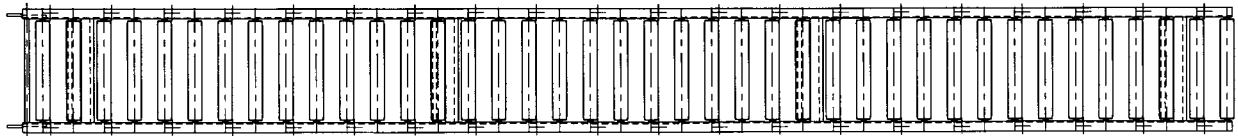
Crossmembers are rigid unitized double bolted design for strength.

Connectors: Hooks on one end and bar for the hook on the other end.

Finish: Standard finish is galvanized steel or plain aluminum



SD138 Gravity Standard Duty Straight Section:



The Standard Bed Length is 10 feet. Special Lengths are Available.

SD138 Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24	27	30
Width Between Frame	10 1/8"	13 1/8"	16 1/8"	19 1/8"	22 1/8"	25 1/8"	28 1/8"

Straight Section Model Number:

SD138 - 12 - SRS - 3 - 10

Gravity Series

Frame Width

Frame and Roller Type

Rollers Center (1 1/2", 3" or 4 1/2")

Length in feet (10ft Standard)

Frame and Roller Types:

SRS= Steel Frames Steel Rollers

ARA= Aluminum Frames Aluminum Rollers



SD138 Gravity Standard Duty Straight Roller Curve Section:

The inside radius of the curve is 30 inches.

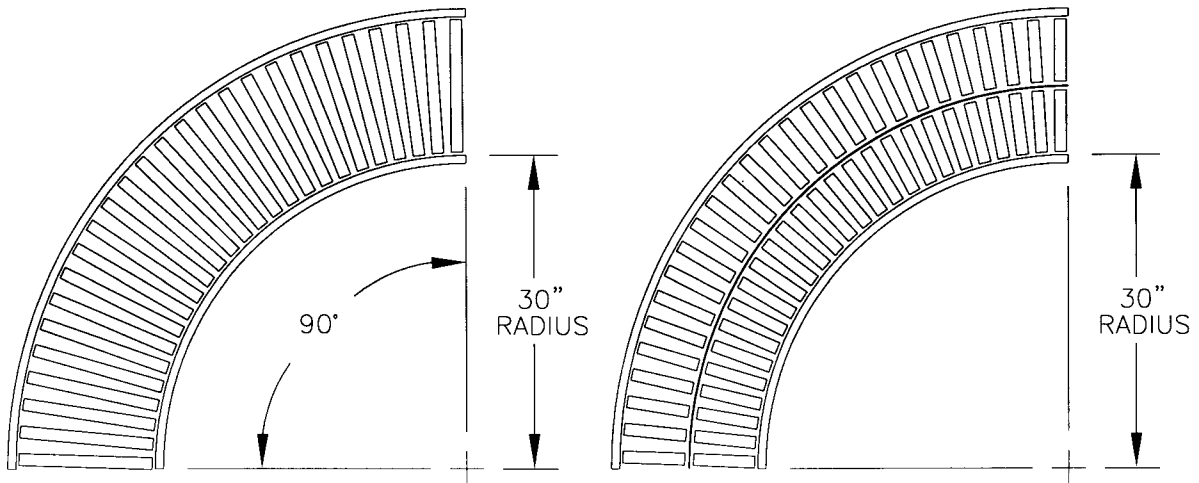
Curves contain hook bars at both ends.

90 Degree Curves contain 32 Rollers.

The Standard Curve is 90 Degrees. Special Degree Curves are Available.

SD Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24	27	30
Width Between Frame	10 1/8"	13 1/8"	16 1/8"	19 1/8"	22 1/8"	25 1/8"	28 1/8"



Straight Roller Curve Model Number:

SD138C - 12 - SRS - 90

Gravity Series

Frame Width

Frame and Roller Type

Degree of Curve

Split Straight Roller Curve Model Number:

SD138C - 12 - SRS - 2/90

Gravity Series

Frame Width

Frame and Roller Type

Degree of Curve

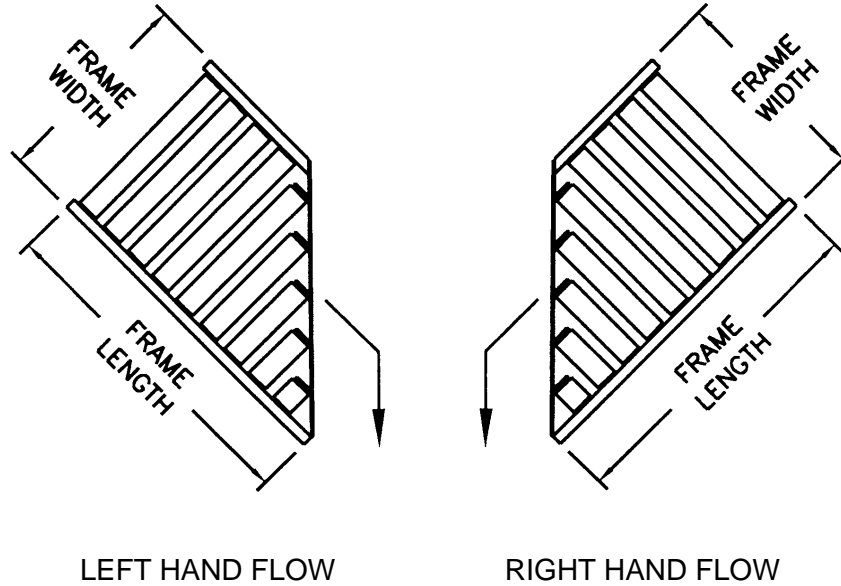
Frame and Roller Types:

SRS= Steel Frames Steel Rollers

ARA= Aluminum Frames Aluminum Rollers



SD138 Gravity Standard Duty Straight Spur Section:



SD138 Spur Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24	27	30
Width Between Frame	10 1/8"	13 1/8"	16 1/8"	19 1/8"	22 1/8"	25 1/8"	28 1/8"
Frame Length	22"	25"	28"	31"	34"	37"	40"

Butt Spurs are intended for travel from a gravity line onto a powered line, or from a power line onto a gravity line. Spurs are not recommended for travel from gravity to gravity unless an operator manually pushes the product. The rollers are on 1 1/2" Centers.

Straight Spur Model Number:

SD138SS - 24 - SRS - RH

Series Number

Overall Frame Width

Frame and Roller Type

Right Hand or Left Hand (RH or LH)

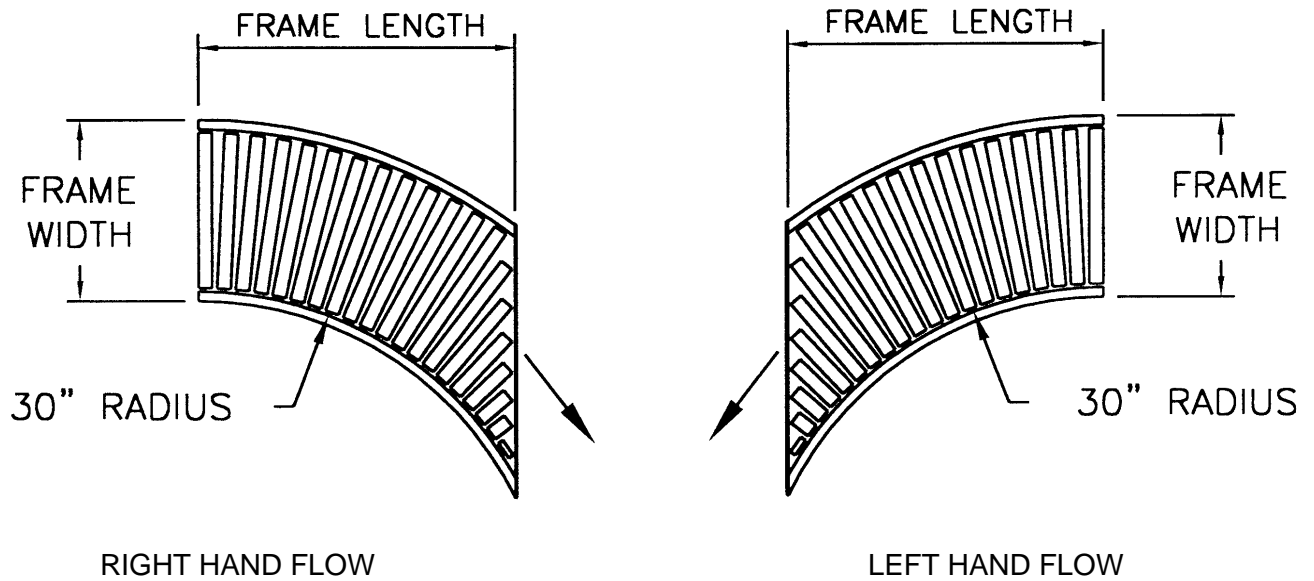
Frame and Roller Types:

SRS= Steel Frames Steel Rollers

ARA= Aluminum Frames Aluminum Rollers



SD138 Gravity Standard Duty Curve Spur Section:



SD138 Curve Spur Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24	27	30
Width Between Frame	10 1/8"	13 1/8"	16 1/8"	19 1/8"	22 1/8"	25 1/8"	28 1/8"
Frame Length	30"	30"	30"	30"	30"	30"	30"

Butt Spurs are intended for travel from a gravity line onto a powered line, or from a power line onto a gravity line. Spurs are not recommended for travel from gravity to gravity unless an operator manually pushes the product. The rollers are on approximately 1 1/2" Centers.

Curve Spur Model Number:

SD138SC - 24 - SRS - RH

Series Number

Overall Frame Width

Frame and Roller Type

Right Hand or Left Hand (RH or LH)

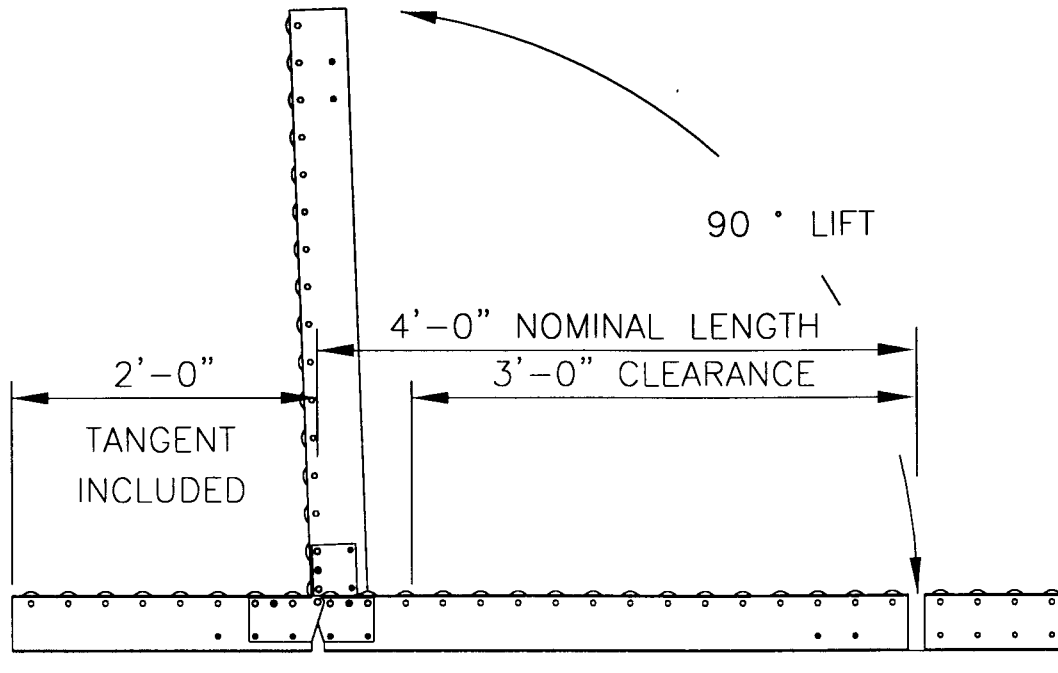
Frame and Roller Types:

SRS= Steel Frames Steel Rollers

ARA= Aluminum Frames Aluminum Rollers



SD138 Gravity Hinge Gate Sections:



Gate Sections are designed to give personnel safe access around equipment. Please consider all options to determine the best location for the required gate. A standard gate includes SD138 conveyor, tangent section, hinge brackets and all required mounting hardware.

SD138 Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24	27	30
Width Between Frame	10 1/8"	13 1/8"	16 1/8"	19 1/8"	22 1/8"	25 1/8"	28 1/8"

Gate Section Model Number:

SD138-HG4 - 12 - SRS - 3

Gravity Series

Frame Width

Frame and Roller Type

Roller Center (1 1/2", 3" or 4 1/2")

Frame and Roller Types:

SRS= Steel Frames Steel Rollers

ARA= Aluminum Frames Aluminum Rollers

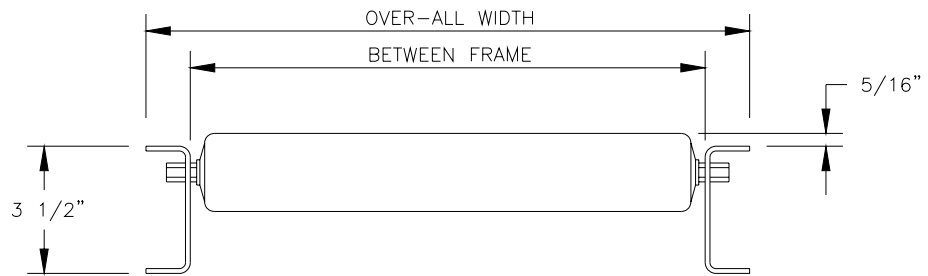
Optional Gas Cylinder or Spring Assist lifting kit is available.

Optional Gate Lengths are available.

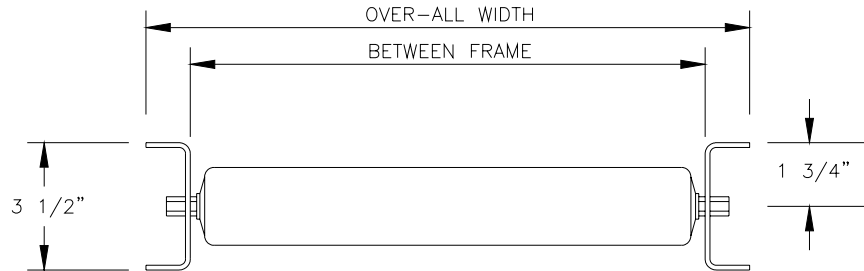


MD190 Gravity Roller Specifications:

Standard:



Optional Rollers Low:



Medium duty roller conveyor offers excellent support for the bottom surfaces of the items to be transported. Therefore, items with irregular surfaces could transport very well on medium roller conveyor, providing the bottom surface does not conform to the shape of the rollers. Items may be manually pushed or the conveyor can be sloped to allow gravity to move the product.

MD190 Gravity Roller Series Specifications

Rollers: 1.9" diameter x 16 gauge galvanized Steel with ball bearings.

Load rating for each roller is 260 lbs.

Standard Roller Centers are 2 1/4", 3", 4 1/2", 6" and 12"

Axles: Roller axles are 7/16" hex stock spring loaded for easy removal and assembly.

The roller mounting location is 5/16" above the top flange of the frame.

Optional rollers low locates rollers in the center of the frame.

Frame: 10 gauge steel formed channel 3-1/2" deep with 1 1/4" flanges.

Axle holes are 7/16" Hex punched on 1 1/2" or 2 1/4" centers.

The Frame capacity with supports on 10 foot centers is 700 pounds.

The Frame capacity with supports on 5 foot centers is 1100 pounds.

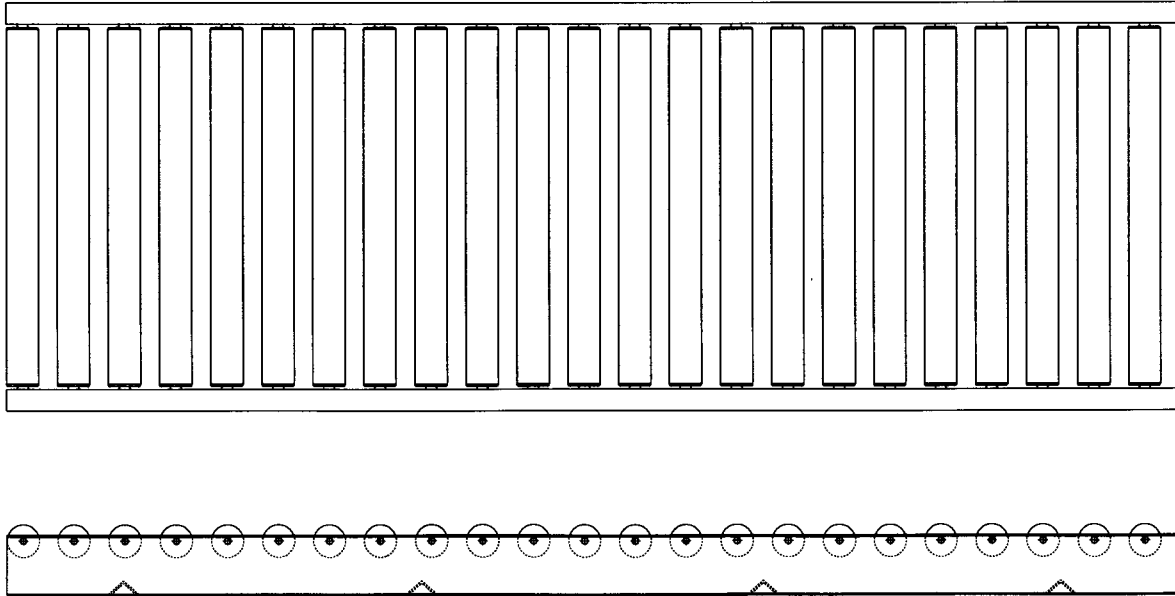
Crossmembers 1 1/2" x 1 1/2" x 3/16" structural angle are welded in for strength.

Standard Overall Widths are 12", 15", 18", 21", 24", 27", 30", 36", 42" and 48".

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green



MD190 Gravity Medium Duty Straight Section:



The Standard Bed Length is 10 feet. Special Lengths are Available.

MD190 Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24
Width Between Frame	9 ½"	12 ½"	15 ½"	18 ½"	21 ½"

Overall Width of the Frame	27	30	36	42	48
Width Between Frame	24 ½"	27 ½"	33 ½"	39 ½"	45 ½"

Straight Section Model Number:

MD190 - 12 - SRS - 3 - 10

Gravity Series

Frame Width

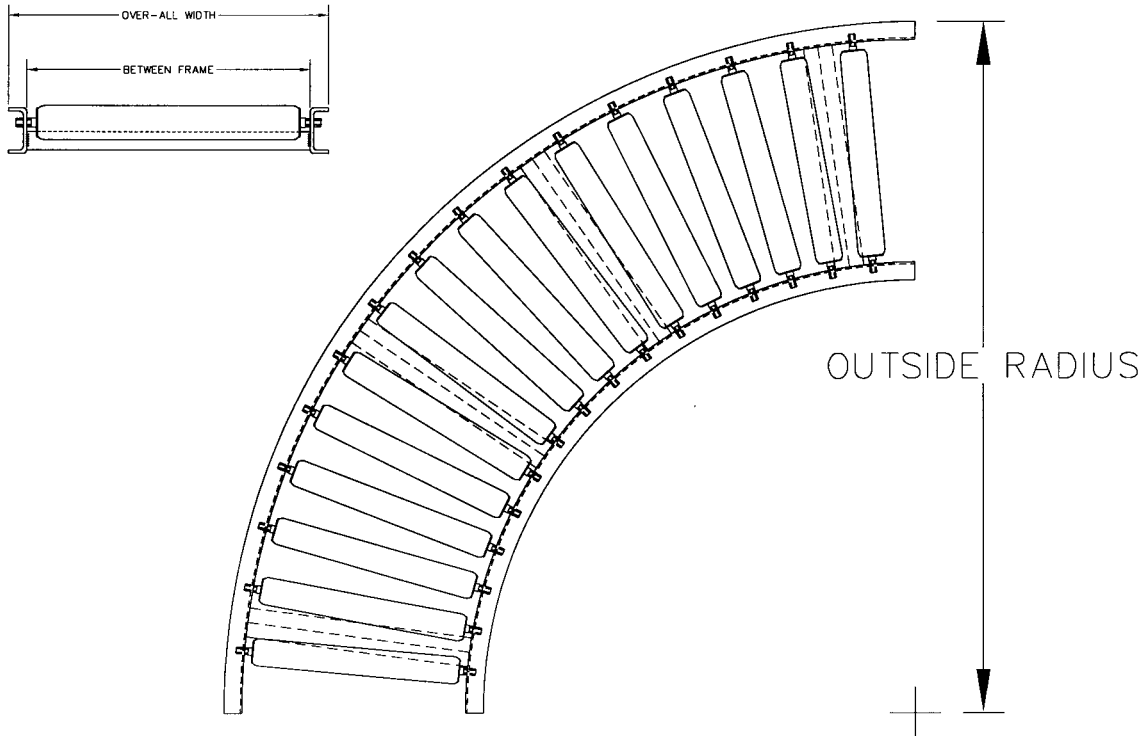
Steel Frame and Steel Roller

Roller Center (2 ¼", 3", 4 ½", 6" or 12")

Length in feet (10ft Standard)



MD190 Gravity Medium Duty Straight Roller Curve Section:



The Standard Curve is 90 Degrees. Special Degree Curves are Available.

MD190 Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24
Width Between Frame	9 1/2"	12 1/2"	15 1/2"	18 1/2"	21 1/2"
Outside Radius in Feet	4',5' or 6'	4',5' or 6'	4',5' or 6'	5' or 6'	5' or 6'

Overall Width of the Frame	27	30	36	42	48
Width Between Frame	24 1/2"	27 1/2"	33 1/2"	39 1/2"	45 1/2"
Outside Radius in Feet	5' or 6'	5', or 6'	6'	7'	8'

The 36", 42" and 48" wide curves have split rollers.
The 42" and 48" curves are made of two 45 degree sections.
4' Outside Radius curves contain 18 rollers
5' Outside Radius curves contain 24 rollers
6' Outside Radius curves contain 28 rollers

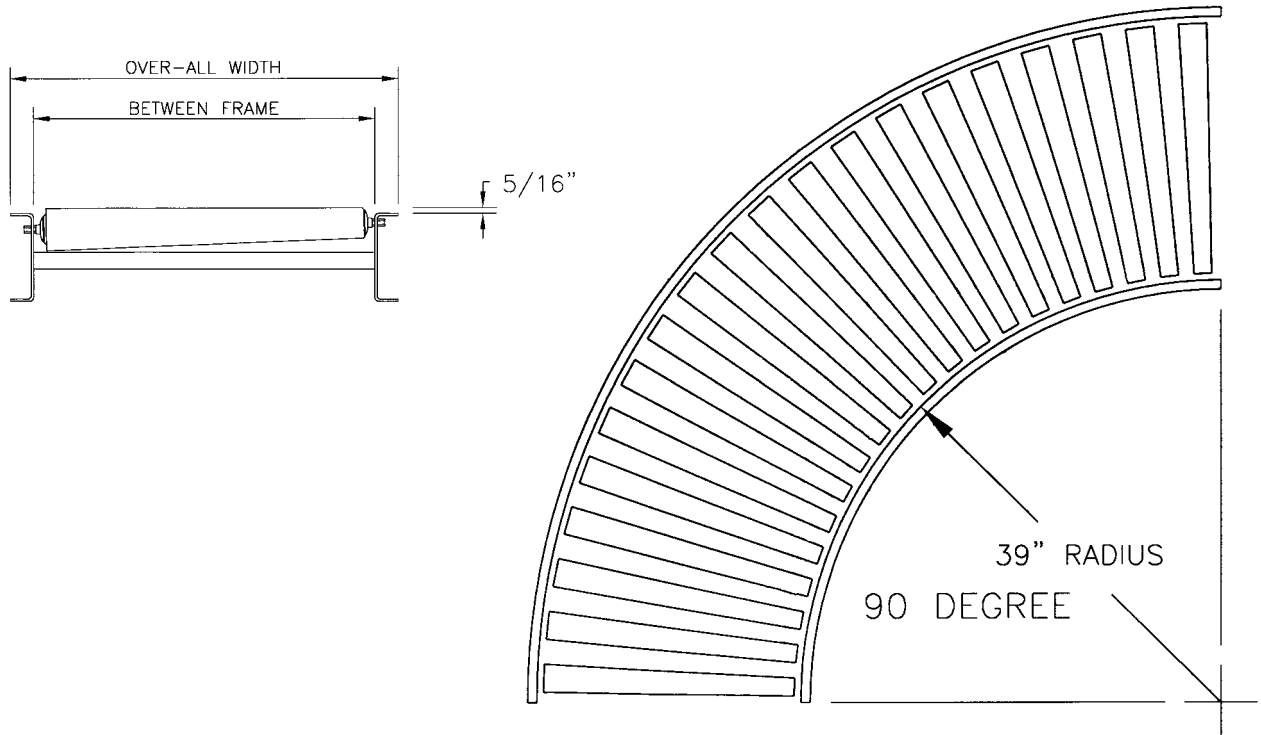
Straight Roller Curve Model Number:

MD190C4 - 12 - SRS - 90

- Gravity Series and Outside Radius
- Frame Width
- Steel Frame and Steel Roller
- Degree of Curve



MD190 Gravity Medium Duty Tapered Roller Curve Section:



**The Standard Curve is 90 Degrees.
Special Degree Curves are Available.**

MD190 Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24
Width Between Frame	9 ½"	12 ½"	15 ½"	18 ½"	21 ½"

Overall Width of the Frame	27	30	36	42	48
Width Between Frame	24 ½"	27 ½"	33 ½"	39 ½"	45 ½"

**The 36", 42" and 48" curves are made in two 45 degree sections.
The standard tapered roller curve contains 20 rollers
MD190 series tapered roller curves have a 39" radius to the inside of the frame.**

Tapered Roller Curve Model Number:

MD190CT - 12 - SRS - 90

Gravity Series and Outside Radius

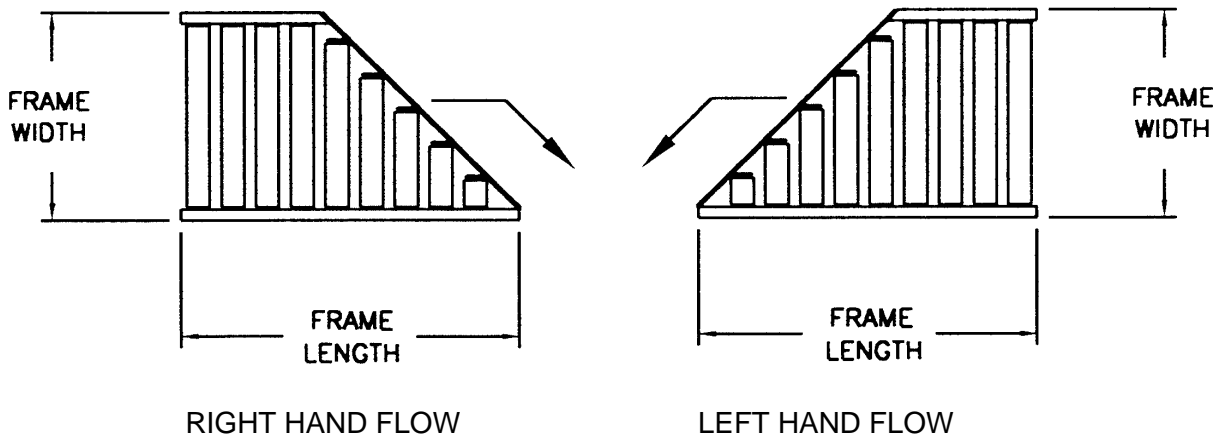
Frame Width

Steel Frame and Steel Roller

Degree of Curve



MD190 Gravity Medium Duty Straight Spur Section:



MD190 Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24
Width Between Frame	9 1/2"	12 1/2"	15 1/2"	18 1/2"	21 1/2"
Frame Length	22"	25"	28"	31"	34"

Overall Width of the Frame	27	30	36	42	48
Width Between Frame	24 1/2"	27 1/2"	33 1/2"	39 1/2"	45 1/2"
Frame Length	37"	40"	46"	52"	58"

Butt Spurs are intended for travel from a gravity line onto a powered line. Spurs are not recommended for travel from gravity to gravity unless an operator manually pushes the product. The rollers are on 3" Centers.

Straight Spur Model Number:

MD190B4 - 12 - SRS - 45 - RH

Gravity Series

Frame Width

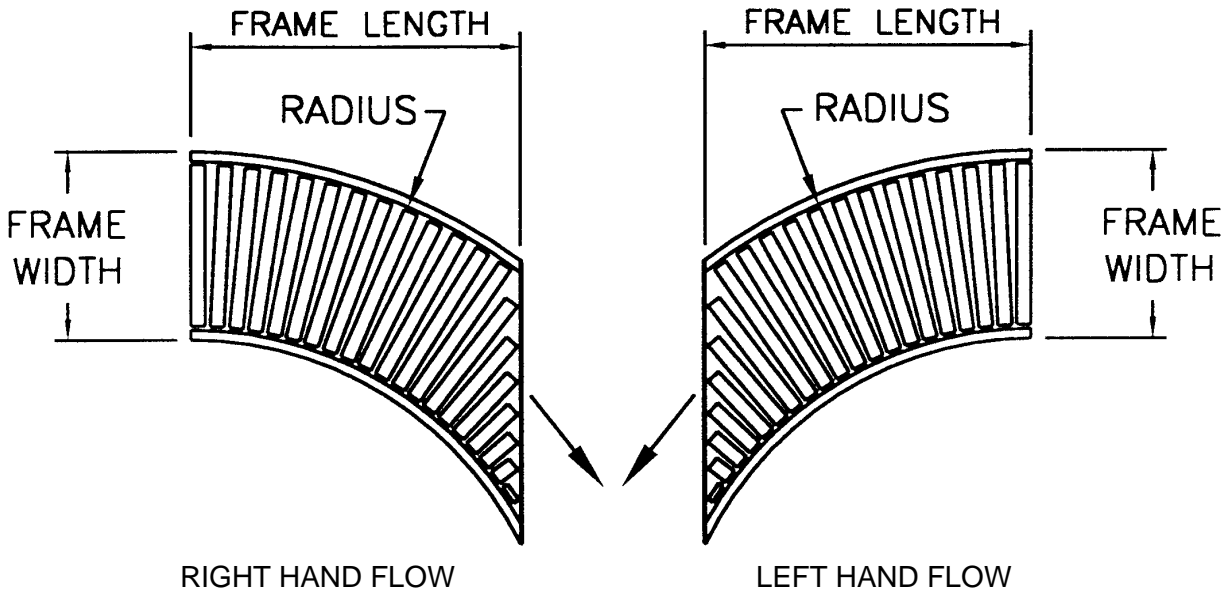
Steel Frame and Steel Roller

45 degree Spur

Right Hand or Left Hand (RH or LH)



MD190 Gravity Medium Duty Curve Spur Section:



MD190 Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24
Width Between Frame	9 1/2"	12 1/2"	15 1/2"	18 1/2"	21 1/2"
Frame Length	30"	30"	33"	33"	37"
Outside Radius	48"	48"	60"	60"	72"

Overall Width of the Frame	27	30	36	42	48
Width Between Frame	24 1/2"	27 1/2"	33 1/2"	39 1/2"	45 1/2"
Frame Length	37"	37"	37"	43"	49"
Outside Radius	72"	72"	72"	84"	96"

Butt Spurs are intended for travel from a gravity line onto a powered line, Spurs are not recommended for travel from gravity to gravity unless an operator manually pushes the product.

Curve Spur Model Number:

MD190B9 - 12 - SRS - 90 - RH

Gravity Series

Frame Width

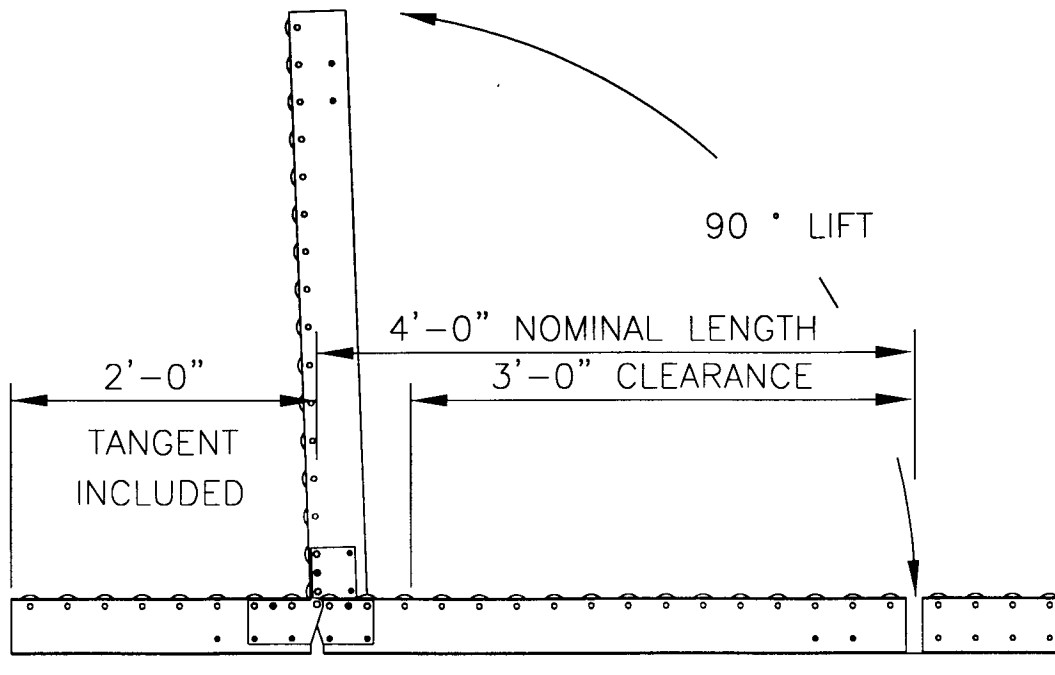
Steel Frame and Steel Roller

90 degree Spur

Right Hand or Left Hand (RH or LH)



MD190 Gravity Hinge Gate Sections:



Gate Sections are designed to give personnel safe access around equipment. Please consider all options to determine the best location for the required gate. A standard gate includes MD190 conveyor, tangent section, hinge brackets and all required mounting hardware.

MD190 Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24
Width Between Frame	9 ½"	12 ½"	15 ½"	18 ½"	21 ½"

Overall Width of the Frame	27	30	36	42	48
Width Between Frame	24 ½"	27 ½"	33 ½"	39 ½"	45 ½"

Gate Section Model Number:

MD190-HG4 - 12 - SRS - 3

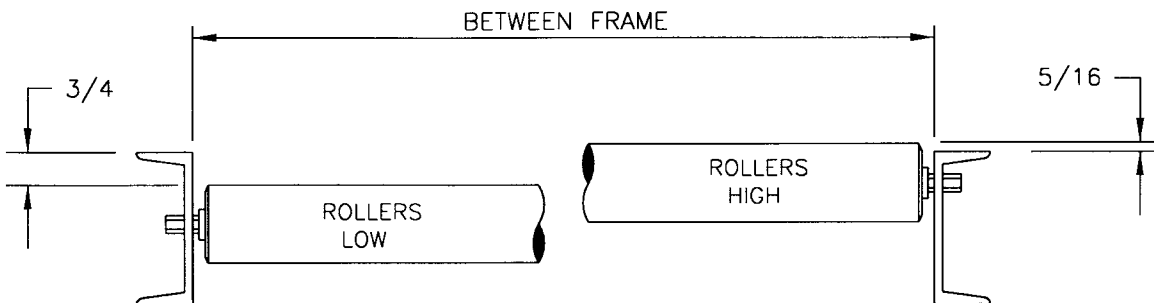
Gravity Series

Frame Width

Steel Frame and Steel Roller

Roller Center(2 ¼",3" , 4 ½", 6"or12")

**Optional Gas Cylinder or Spring Assist lifting kit is available.
Optional Gate Lengths are available.**

**HD250 Gravity Roller Specifications:****HD250 Gravity Roller Series Specifications**

Rollers: 2 1/2" diameter x 11 gauge Steel with ball bearings.

Load rating per roller is 650 lbs.

Standard Roller Centers are 3", 4", 6", 9" and 12"

Axles: Roller axles are 11/16" hollow hex stock spring loaded for easy removal and assembly.

The roller mounting location is 5/16" above or 3/4" below the top flange of the frame.

Axles are pinned for 11", 13" and 15" between frame sizes.

Frame: 4" x 5.4 pounds per foot structural steel channel.

Axle holes are 11/16" Hex punched on 3", 4", 6", 9" and 12" centers.

Frame capacity with supports on 10 foot centers is 3,500 pounds.

Frame capacity with supports on 5 foot centers is 10,000 pounds.

Crossmembers 2" x 2" x 1/4" structural angle are welded in for strength.

Standard Between Frame Widths are:

11", 13", 15", 17", 19", 21", 23", 25", 27", 31", 33", 37", 39", 43", 47", 51", 55", and 59".

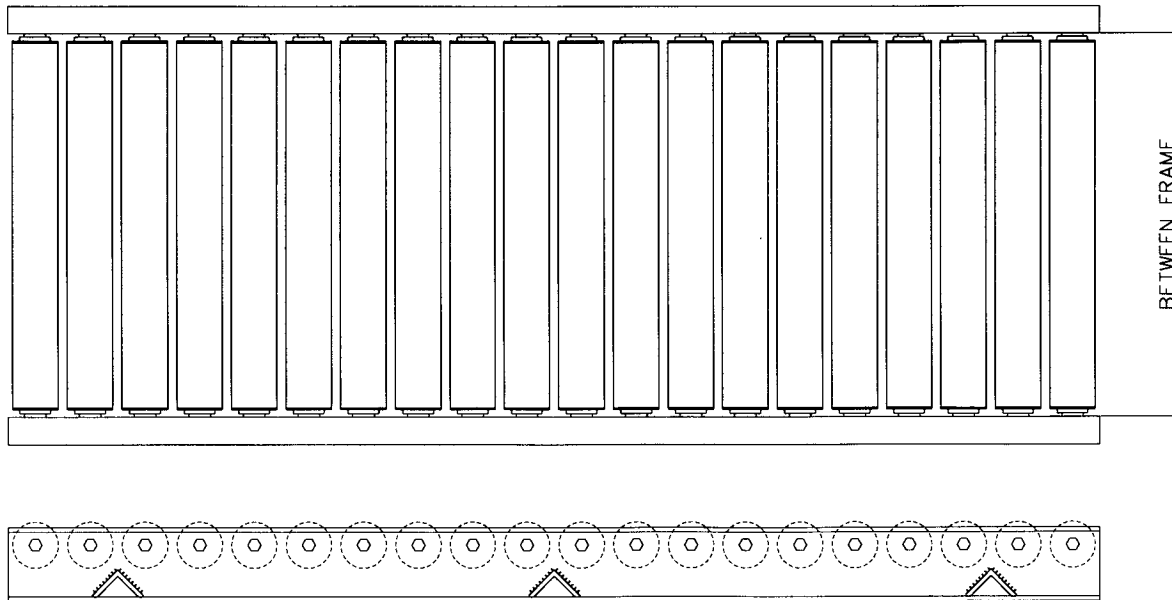
Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Optional 6" x 8.2 pounds per foot structural steel channel frames.

Optional 11/16" Solid Hex Axle is Available



HD250 Gravity Heavy Duty Straight Section:



(5'-0" Long frame shown)

The Standard Bed Length is 10 feet. Special Lengths are Available.

HD250 Series standard between frame widths are:

11", 13", 15", 17", 19", 21", 23", 25", 27", 31", 33", 37", 39", 43", 47", 51", 55", and 59".

Add 3 1/8" to BF dimension for approximate overall width.

Straight Section Model Number:

HD250 - 11 - 3 - H - 10

Gravity Series

Between Frame Width

Roller Center(3", 4", 6", 9" or 12")

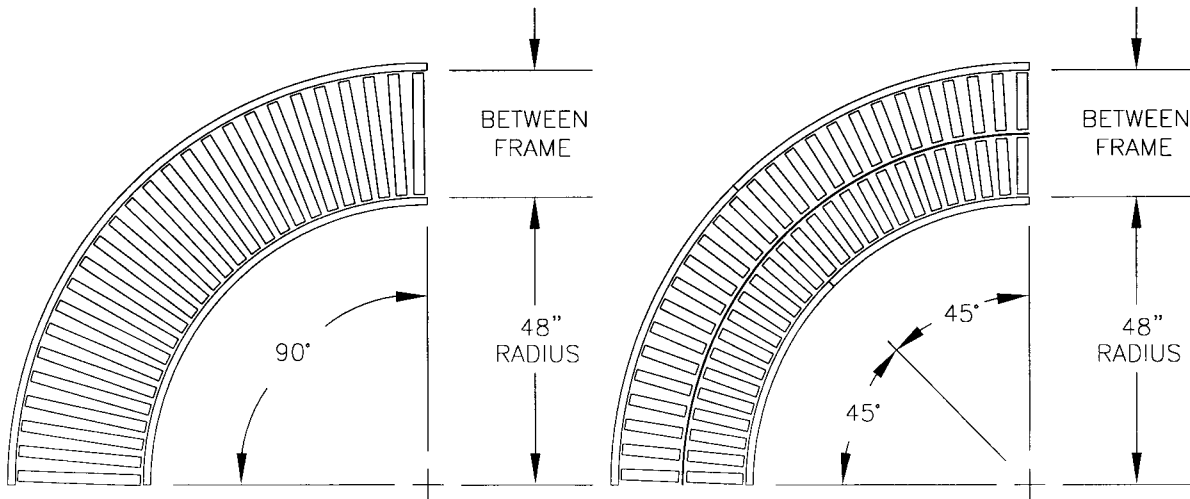
H=Rollers High, L= Rollers Low

Length in feet (10ft Standard)

***When ordering supports specify for HD250 frame style.
Optional 6" Deep Side Frames are available.***



HD250 Gravity Heavy Duty Straight Roller Curve Section:



The Standard Curve is 90 Degrees. Special Degree Curves are Available.

HD250 Roller curves contain 26 rollers as standard.

The inside radius for HD250 series curves is 48 inches.

HD250 Series standard between frame widths are:

11", 13", 15", 17", 19", 21", 23", 25", 27", 31", 33", 37", 39", 43", 47", 51", 55", and 59".

Add 3 1/8" to BF dimension for approximate overall width.

The 33" to 59" BF curves with rollers high have split rollers.

The 33" to 59" BF curves with rollers low have full width rollers.

The 33" to 59" BF curves are made in two 45 degree sections.

Straight Roller Curve Model Number:

HD250C - 11 - H - 90

Gravity Series

Between Frame Width

H=Rollers High, L=Rollers Low

Degree of Curve



Ball Transfer Unit Specifications:

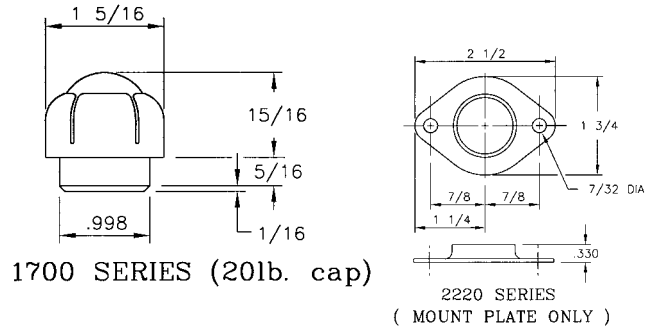
1700 Series:

Ball: 1" Diameter Delrin, Chrome plated Steel or Stainless Steel

Cup: Nylo for 1" Diameter Ball

Capacity: 20 pounds per Ball

Mounting: 0.998" Diameter Hole



1700 Part Numbers:

Nylo Cup Only	1700
1" Delrin Ball Only	1701
1" Chrome Plated Steel Ball Only	1702-C
1" Stainless Steel Ball Only	1702-S
Aluminum Shield Only	1703
Nylo Cup and Delrin Ball	1711
Nylo Cup and chrome Ball	1722-C
Nylo Cup and Stainless Ball	1722-S
2 hole Flange Mounting Plate Only	2220

1700 Assembly Part Numbers:

1700 Nylo Cup, Delrin Ball, 2 hole Flange Mount	2271
1700 Nylo Cup, Steel Ball, 2 hole Flange Mount	2272-C
1700 Nylo Cup, Stainless Ball, 2 hole Flange Mount	2272-S

1900 Series:

Ball: 1" or 1 1/2" Diameter Delrin or Chrome plated Steel

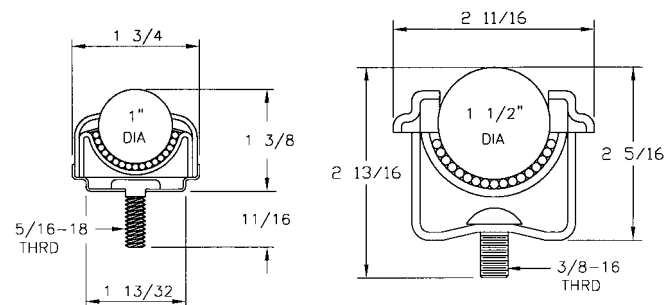
Cup: Steel for 1" or 1 1/2" Diameter Ball

Capacity: 1" Diameter Ball is 65 pounds per Ball

1 1/2" Diameter Ball is 250 pounds per Ball

Mounting: 1" Ball 5/16" –18 Stud Mount

1 1/2" Ball 3/8"-16 Stud Mount



1900 Part Numbers:

1" Chrome Ball, Steel Cup 5/16" Stud	1900-U
1" Delrin Ball, Steel Cup 5/16" Stud	1900-N-U
1 1/2" Chrome Ball, Steel Cup 3/8" Stud	1901-U



Ball Transfer Unit Specifications:

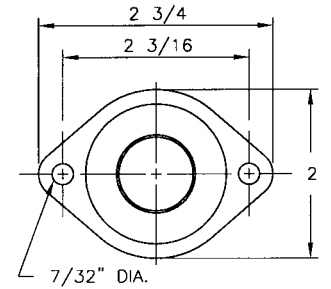
2200 Series:

Ball: 1" Diameter Delrin, Chrome plated Steel or Stainless Steel

Cup: Nylo for 1" Diameter Ball

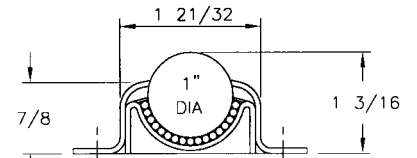
Capacity: 1" Diameter Ball is 65 pounds per Ball

Mounting: 2 hole Flange mounted (7/32" Diameter Holes)



2200 Part Numbers:

1" Chrome Ball, Steel Cup Flange Mount	2200-U
1" Delrin Ball, Steel Cup Flange Mount	2200-N-U
1" Chrome Ball, Steel Cup Flange Mount w/o Seal	2201-U



2200 SERIES (65lb. cap.)

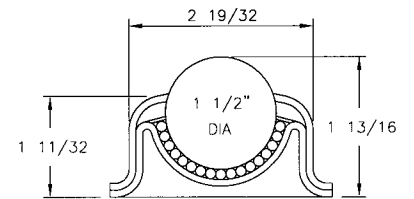
4400 Series:

Ball: 1 1/2" Diameter Delrin or Chrome plated Steel

Cup: Steel for 1 1/2" Diameter Ball

Capacity: 1 1/2" Diameter Steel Ball is 250 pounds per Ball

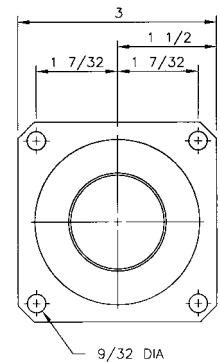
Mounting: 4 hole Flange mounted (9/32" Diameter Holes)



4400 SERIES (250lb.cap)

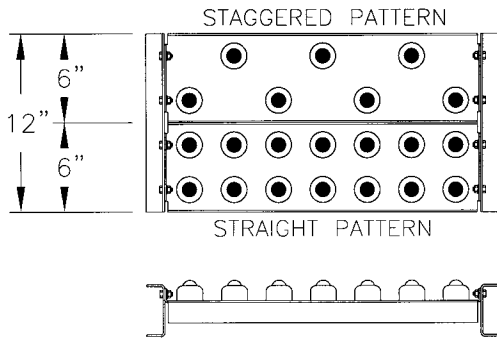
4400 Part Numbers:

1 1/2" Chrome Ball, Steel Cup Flange Mount	4400-U
1 1/2" Delrin Ball Flange Mount	4400-N-U





Modular Ball Transfer Section for Wheel Conveyor:



Ball Transfer Modular Series Specifications for Wheel Conveyor:

Ball Transfer: 1900 Series 1" Diameter ,65 pound capacity.

Standard Ball Mounting Patterns are 3" Straight and 3" Staggered.

Frame: 12 gauge galvanized formed channel 2-1/2" deep with 15/16" flanges.

Overall Frame Widths 12", 15", 18", 24", and 30" available.

Finish: Standard finish is galvanized steel.

Complete Ball Transfer Assemblies with Wheel Style Frame included:

A1620 Series is Straight mounting Pattern.

A1621 Series is Staggered mounting Pattern.

Ball Transfer Model Number:

A1620 - 15 - 12

Wheel Frame Ball Transfer Series

Overall Frame Width

Length in Inches (6" Increments)

Ball Transfer Assemblies for Wheel Style Conveyor Without Frames:

These Segments would be placed in frames ordered in the previous section of this catalog.

S1620 Series is Straight mounting Pattern.

S1621 Series is Staggered mounting Pattern.

Ball Transfer Model Number:

S1620 - 15 - 12

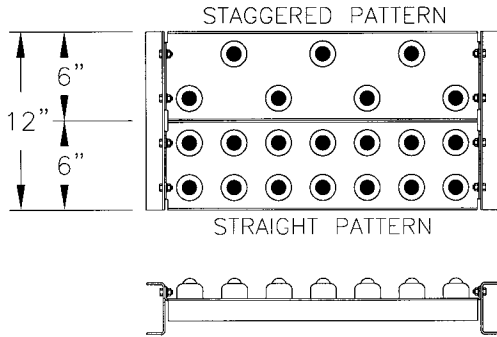
Wheel Frame Ball Transfer Series

Overall Frame Width(12,15,18,24,30)

Length in Inches (6" Increments)



Modular Ball Transfer Section for SD138 Roller Gravity Conveyor:



Ball Transfer Modular Series Specifications for SD138 Gravity Conveyor:

Ball Transfer: 1900 Series 1" Diameter ,65 pound capacity.

Standard Ball Mounting Patterns are 3" Straight and 3" Staggered.

Frame: 12 gauge galvanized formed channel 2-1/2" deep with 15/16" flanges.

Overall Frame Widths 12", 15", 18", 21", 24", 27" and 30" available.

Finish: Standard finish is galvanized steel.

Complete Ball Transfer Assemblies with SD138 Style Frame included:

A1610 Series is Straight mounting Pattern.

A1611 Series is Staggered mounting Pattern.

Ball Transfer Model Number:

A1610 - **15** - **12**

Wheel Frame Ball Transfer Series

Overall Frame Width

Length in Inches (6" Increments)

Ball Transfer Assemblies for SD138 Style Conveyor Without Frames:

These Segments would be placed in frames ordered in the previous section of this catalog.

S1610 Series is Straight mounting Pattern.

S1611 Series is Staggered mounting Pattern.

Ball Transfer Model Number:

S1610 - **15** - **12**

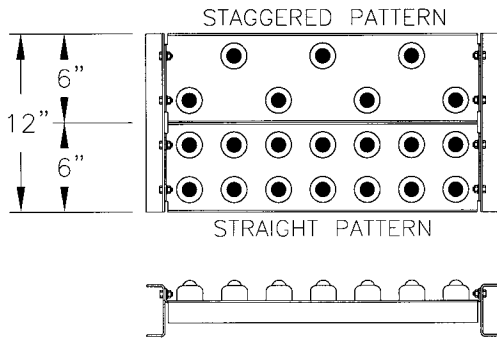
Wheel Frame Ball Transfer Series

Overall Frame Width(12,15,18,24,30)

Length in Inches (6" Increments)



Modular Ball Transfer Section for MD190 Roller Gravity Conveyor:



Ball Transfer Modular Series Specifications for MD190 Gravity Conveyor:

Ball Transfer: 1900 Series 1" Diameter ,65 pound capacity.

Standard Ball Mounting Patterns are 3" Straight and 3" Staggered.

Frame: 10 gauge galvanized formed channel 3-1/2" deep with 1 1/4" flanges.

Overall Frame Widths 12", 15", 18", 21", 24", 27", 30", 33", 36", 39", 42", 45" and 48".

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Complete Ball Transfer Assemblies with MD190 Style Frame included:

A1600 Series is Straight mounting Pattern.

A1601 Series is Staggered mounting Pattern.

Ball Transfer Model Number:

A1600 - **15** - **12**

Wheel Frame Ball Transfer Series

Overall Frame Width

Length in Inches (6" Increments)

Ball Transfer Assemblies for MD190 Style Conveyor Without Frames:

These Segments would be placed in frames ordered in the previous section of this catalog.

S1600 Series is Straight mounting Pattern.

S1601 Series is Staggered mounting Pattern.

Ball Transfer Model Number:

S1600 - **15** - **12**

Wheel Frame Ball Transfer Series

Overall Frame Width

Length in Inches (6" Increments)

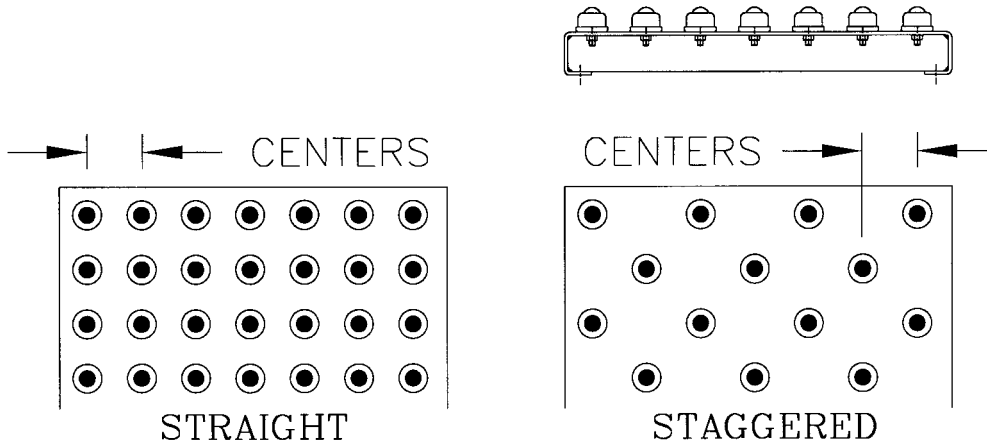


Custom Ball Transfer Tables:

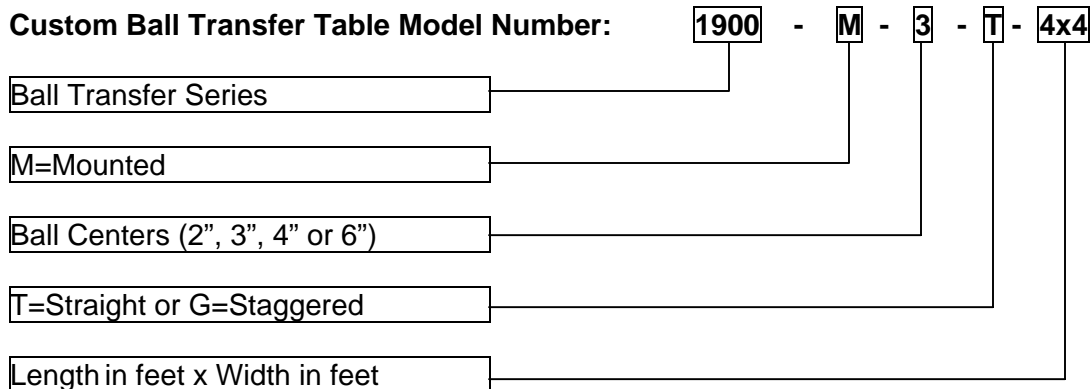
Frame: 7 gauge (3/16") thick Steel with holes punched for proper centers and pattern.
 2" x 1/4" Thick Flat Skirting and Stiffeners add strength and rigidity to the ball table.
 Ball Transfer: 1711, 1722-C , 1722-S, 1900, 2200
 Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green.
 Mounting Patterns: Straight or Staggered.

Balls Per Square Foot of Table:

Ball Centers	Straight	Staggered
2	36	18
3	16	8
4	9	4 1/2"
6	4	2



Custom Ball Transfer Table Model Number:



The maximum size of the table is 15 square feet. Larger sizes will be made in bolted together sections.



Gravity Options:

Frame Options:

- Butt Bolt Frame Connectors
- Special Widths to match an Existing Conveyor
- Special Degree Curves
- Special Paint Colors
- Powder Coated Frames
- Bright Zinc Plating on Frames

Roller Options:

- Special Roller Lengths
- Pinned Roller Axles
- Plastisol Coating on Rollers
- Plastisol Coating on Wheels
- Urethane Coating on Rollers
- Urethane Wheel Cover
- Powder Coated Rollers
- Bright Zinc Plating on Rollers
- Semi Precision Roller Bearings
- ABEC-1 Precision Roller Bearings



Gravity Replacement Parts:

1 15/16" Wheels

Bore	¼" Diameter	5/16" Diameter
Steel	WS-25	WS-31
Aluminum	WA-25	WA-31
Nylo	WN-25	WN-31

Midget Rollers

Between Frame	¾" Dia. X 20 ga Steel Ball Bearings	¾" Dia. X .035 Aluminum Ball Bearings	¾" Dia. X .035 Aluminum NYLO Bearings & Stainless Axle
5"	M5R-SB	M5R-AB	M5R-AN-SS
10 ½"	M10R-SB	M10R-AB	M10R-AN-SS
14"	M14R-SB	M14R-AB	M14R-AN-SS
17 ¾"	M17R-SB	M17R-AB	M17R-AN-SS

SD138 Gravity Rollers

Overall Width	1 3/8" Diameter 18 Ga. Galvanized Steel	1 3/8" Diameter .049 Aluminum
12	SD138-12-RS	SD138-12-RA
15	SD138-15-RS	SD138-15-RA
18	SD138-18-RS	SD138-18-RA
21	SD138-21-RS	SD138-21-RA
27	SD138-27-RS	SD138-27-RA
30	SD138-30-RS	SD138-30-RA

MD190 Gravity Rollers

Overall Width	1.9" Diameter 16 Ga. Galvanized Steel	1.9" Diameter 13 Ga. Steel	1.625" X .042" Tapered Steel Roller
12	MD190-12-RS-16	MD190-12-RS-13	N/A
15	MD190-15-RS-16	MD190-15-RS-13	MD190-15-RST
18	MD190-18-RS-16	MD190-18-RS-13	MD190-18-RST
21	MD190-21-RS-16	MD190-21-RS-13	MD190-21-RST
24	MD190-24-RS-16	MD190-24-RS-13	MD190-24-RST
27	MD190-27-RS-16	MD190-27-RS-13	MD190-27-RST
30	MD190-30-RS-16	MD190-30-RS-13	MD190-30-RST
33	MD190-33-RS-16	MD190-33-RS-13	MD190-33-RST
36	MD190-36-RS-16	MD190-36-RS-13	MD190-36-RST
39	MD190-39-RS-16	MD190-39-RS-13	MD190-39-RST
42	MD190-42-RS-16	MD190-42-RS-13	MD190-42-RST
45	MD190-45-RS-16	MD190-45-RS-13	MD190-45-RST
48	MD190-48-RS-16	MD190-48-RS-13	MD190-48-RST

HD250 Gravity Rollers

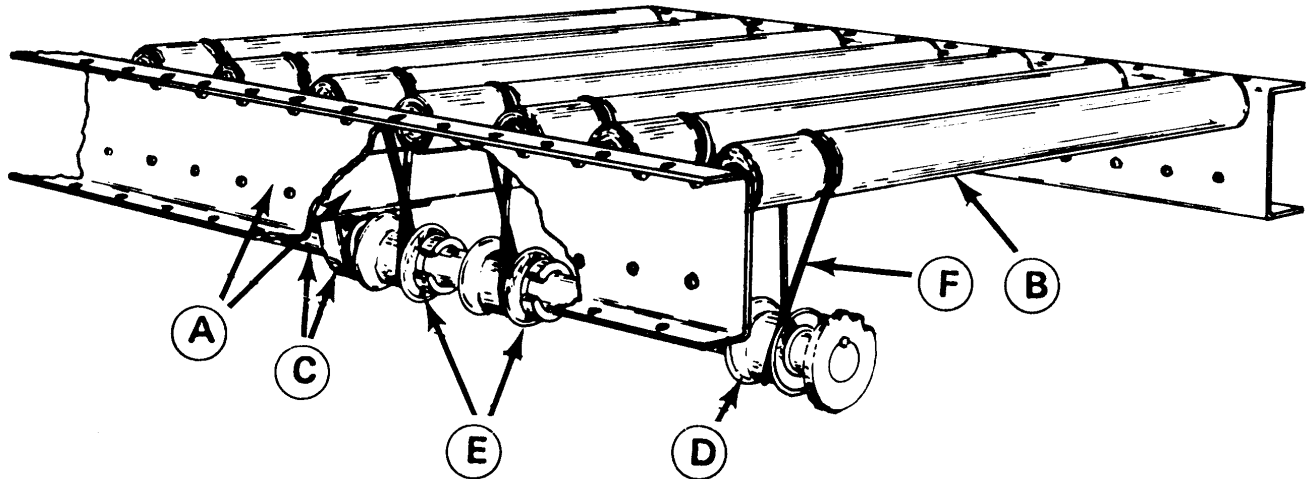
Between Frame Width	2 1/2" Diameter 11 Ga. Steel
11	HD250-11-RS
13	HD250-13-RS
15	HD250-15-RS
17	HD250-17-RS
19	HD250-19-RS
21	HD250-21-RS
23	HD250-23-RS
25	HD250-25-RS
27	HD250-27-RS
31	HD250-31-RS
33	HD250-33-RS
37	HD250-37-RS
39	HD250-39-RS
43	HD250-43-RS
47	HD250-47-RS
51	HD250-51-RS
55	HD250-55-RS
59	HD250-59-RS



Notes:

**Section 2 – Line Shaft Powered Conveyor**

Page	Description
2-1	Line Shaft Index
2-2	Basic Components
2-3	Introduction
2-4	Application Data
2-5	438 Series Specifications (1-3/8" Diameter Rollers)
2-6	440 Series Specifications (1.9" Diameter Rollers)
2-7	438 and 440 Horsepower Chart
2-8	438 and 440 Drive Packages
2-9	438 and 440 Curves
2-10	438 and 440 30-Degree Spurs
2-11	438 and 440 45-Degree Merge
2-12	438 and 440 90-Degree Belt Transfer
2-13	440 Roller Switch
2-14	438 and 440 Gate
2-15	438 and 440 Accessories
2-16	443 Series Specifications (2-1/2" Diameter Rollers, Mattress Style)
2-17	443 Horsepower Chart and Drive Packages
2-18	443 Curves
2-19	443 90-Degree Transfer
2-20	445 Series Specifications (2-1/2" Diameter Rollers)
2-21	445 Horsepower Chart and Drive Packages
2-22	Line Shaft Frame and Roller Options
2-23	438/440 Series Replacement Parts
2-24	438/440 and 443 Series Replacement Parts
2-25	445 and Misc. Lineshaft Series Replacement Parts

**Basic Line Shaft Components:**

- A - Frame:** Side channels bolted together with crossmembers. Frames are capable of being supported by either floor supports or ceiling hangers.
- B - Rollers:** Line Shaft rollers contain a groove for the drive belt.
- C - Line Shaft:** The Line Shaft runs the length of the conveyor. The Line Shaft is supported by bearings mounted to the crossmembers. The shaft is located directly below the groove in the roller.
- D - Spools:** Friction driven spools are located between the Line Shaft and drive belt.
- E - Collar:** The locking collar restricts the spool from moving laterally.
- F - Drive Belt:** The elastomeric belt which connects the roller to the drive spool.

**Introduction:**

The Metzgar “Line Shaft Conveyor” is a live roller conveyor that is suitable for light to medium service of product loads up to 40 pounds per roller. Please consult the factory for heavier loads. This conveyor design is a substantial improvement over conventional live roller conveyors which use either belt or chain drives. We power rollers individually, allowing an almost unlimited variety of hardware and system applications.

Line Shaft conveyor utilizes a drive shaft, which runs the length of the conveyor. Torque created in the “slip fit” pulleys from the rotating shaft is used to power each roller individually. The pulleys, or drive spools are held in place by “positioning collars” that assist the rollers individual drive capabilities. This is important when using the conveyor in “transportation”, “minimum pressure accumulation” and “zero pressure accumulation” operating modes. Power is transmitted to each roller from the spool by a urethane composition belt.

One significant advantage of this type of live roller conveyor is the ability to direct the shaft around curves, as a power source for several devices such as spurs and transfers. The reduction of drive components makes it economical and very attractive to the customer.

Advantages of using Line Shaft Conveyor:

There is plenty of drive to move the product, however if a foreign object becomes caught between the rollers, each roller, drive spool and belt will operate as a safety slip clutch. A full-length safety guard is provided around the rotating shaft.

Rollers can be assembled in sections to rotate in opposite directions, to achieve bi-directional travel at the same time on one unit.

This conveyor can be used for minimum pressure accumulation because the rollers do not usually rotate under a stopped package. The design allows accumulation with significantly less pressure than conventionally driven live roller conveyors. The design also allows for zero pressure accumulation with absolutely no pressure or contact between products being accumulated. The product can be released in “singulation” or “slug” modes.

The unique drive system eliminates pressure rollers and flat belt surfaces that create dirt-grime gathering areas. Conveyor rollers touch only the product they convey. Metzgar Line Shaft Conveyor with special surface finishes, meets actual Class100 clean room cleanliness requirements.

Line Shaft conveyor is much quieter than conventional live roller conveyors. There are fewer moving parts to make noise. The elastomeric drive belts hold the rollers firmly under tension, eliminating a major source of rattling in roller conveyors.

In addition to performing functions of conventional live roller conveyors, the Line Shaft can be easily modified to perform a variety of special functions, formerly requiring expensive designs. The fact that straight sections, curves, spurs, transfers, etc. can be driven off a single motor; in some instances an entire system; means a considerable savings in the number of drives and electrical controls required, which reduces installation and energy consumption costs.

To assist in maintaining control of transported items it is possible to skew individual rollers in order to position packages against a side guide.



Application Data:

Listed below are important items in selection of the proper Line Shaft equipment.

Product Sizes and Weights (Minimum and Maximum)

Type of Product: (corrugated boxes, totes etc.)

Environmental Conditions: (clean, dusty, oily, wet, dry, hot, cold)

System Thru put Rates: (Number of products conveyed per minute or per hour)

Air Pressure Available

Power Source Available:(Voltage, Number of Phases and Hertz)

Speed of Equipment interfacing with the conveyor.

A minimum of three rollers must be under the shortest product for stability, roller centers are determined by product weight, bottom surface condition and roller drive capacity.

Drive Capacities Per Roller Connected to the Driveshaft in Pounds:

438 Drive Capacity	440 Drive Capacity	Condition and Type of Product to be Conveyed
8	15	Soft uneven bottom, unbalanced loading, noticeable bumping thin corrugated, wire baskets, plastic or metal totes.
10	20	Slightly uneven bottom, balanced loading, normal corrugated, plastic or metal totes.
12	25	Firm flat even bottom, balanced loading, good surface to roller contact, heavy corrugated.
20	40	Hard flat even bottom, uniform and balance loading, full surface contact, plywood, fiberboard or rigid sheets

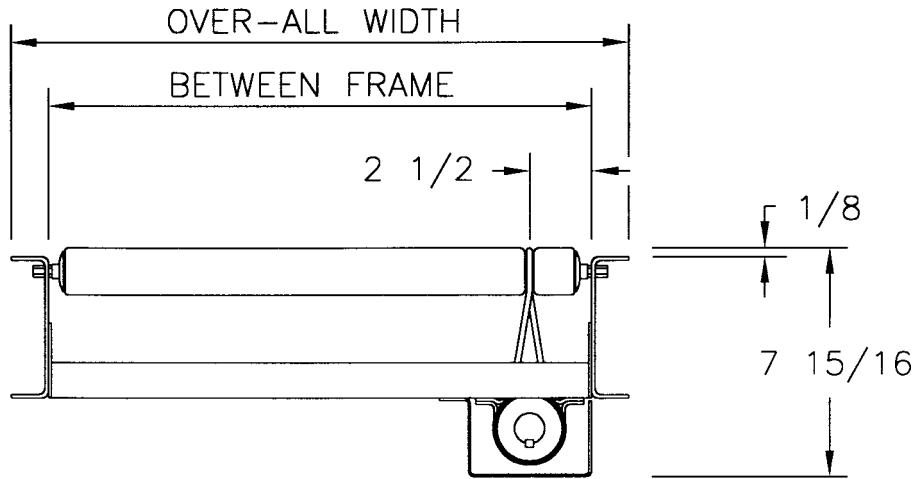
Precautions:

In addition to the many advantages of Line Shaft conveyor the design dictates some precautions to observe in applying the use of this equipment.

- 1) If oil, water, corrosive liquids or abrasive material contact the drive components it can alter or destroy the frictional characteristics of the equipment and cause malfunctions. Avoid sticky conditions as drive components will no longer allow accumulation.
- 2) The drive belts should not be exposed to direct sun or ultraviolet rays. Avoid temperatures in excess of 140 degrees or less than 32 degrees Fahrenheit. Consult the factory if such conditions exist.
- 3) Excessively slow speeds, less than 20 feet per minute, must be avoided. Speeds over 100 FPM require timing belt drive components. Consult factory for non-standard speeds.
- 4) Line Shaft conveyor is friction drive and its capacity is restricted. Be sure that the product can be conveyed, particularly at transfer or curve where drive power is the weakest. The drive horsepower must be increased for each device that is driven by the common shaft.
- 5) Horsepower must be increased for each increase in speed or elevation. Do not exceed 5 degrees of incline with plain rollers or 11 degrees with coated rollers. Allow for a decrease in drive capacity when conveying the product up an incline.
- 6) Do not use static sweep arms with Line Shaft conveyor unless fixed drive spools are incorporated at the divert location. Power face sweep arms or 90-degree transfers driven from the lineshaft are also acceptable solutions.
- 7) Anytime the application requires the product to be run into a guide rail, a low friction or wheel-lined guardrail is recommended.



438 Line Shaft Series Specifications:

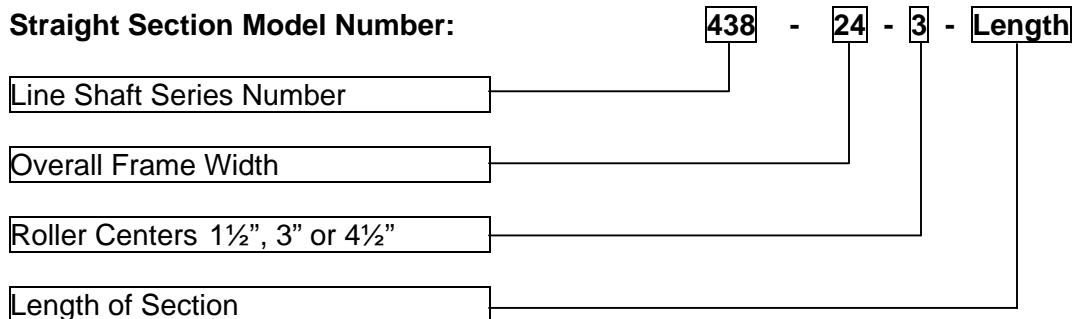


The Standard Bed Length is 10 feet. Special Lengths are Available
Bed Lengths are typically a multiple of roller centers.

438 Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24	27	30
Width Between Frame	9 1/2"	12 1/2"	15 1/2"	18 1/2"	21 1/2"	24 1/2"	27 1/2"

Straight Section Model Number:

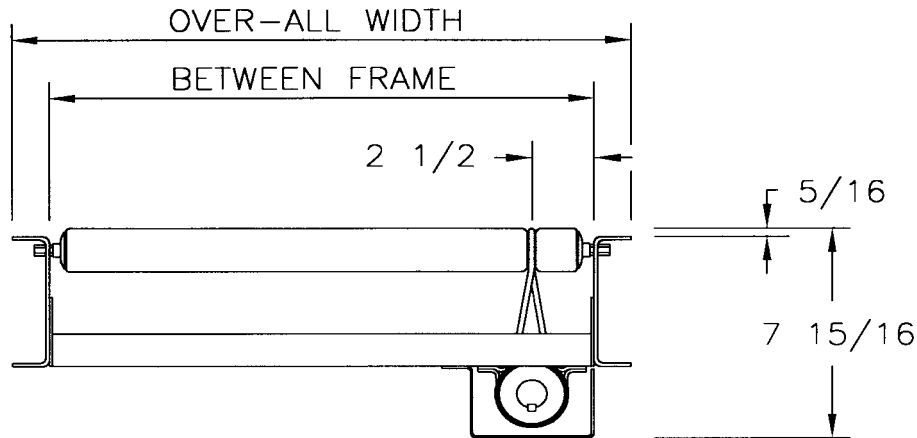


438 Series Specifications

- Rollers: 1-3/8" diameter x 18 gauge galvanized tube with 5/16" hex axle and ball bearings.
- Roller ends are swaged over the bearings to provide a smooth, full length carrying surface.
- Roller grooves are cold formed in the roller shell.
- Roller axles are 5/16" hex stock spring loaded for easy removal and assembly.
- The top of the roller is 1/8" above the top flange of the frame.
- Standard roller centers are available in 1-1/2", 3" and 4-1/2"
- Frame: 10 gauge formed channel 4-1/2" deep with 1-1/4" flanges.
- Axle holes are 5/16" hex punched on 1-1/2" centers.
- Crossmembers are formed 10 gauge steel bolted to frame.
- Drive Belts: 1/8" diameter x 83A durometer.
- Drive Shaft: 1" diameter 1045 CRS to specific size tolerance.
- Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green
- Pneumatic: Components are rated for 65 PSI filtered compressed air.



440 Line Shaft Series Specifications:



The Standard Bed Length is 10 feet. Special Lengths are Available.
Bed Lengths are typically a multiple of roller centers.

440 Frame Dimensions:

Overall Width of the Frame	12	15	18	21	24	27	30
Width Between Frame	9 1/2"	12 1/2"	15 1/2"	18 1/2"	21 1/2"	24 1/2"	27 1/2"

Overall Width of the Frame	33	36	39	42	45	48
Width Between Frame	30 1/2"	33 1/2"	36 1/2"	39 1/2"	42 1/2"	45 1/2"

Straight Section Model Number:

440 - 24 - 3 - Length

- Line Shaft Series Number
- Overall Frame Width
- Roller Centers 2 1/4", 3", 4 1/2" or 6"
- Length of Section

440 Series

Rollers: 1.9" diameter x 16 gauge galvanized tube with 7/16" hex axle and ball bearings.
 Roller ends are swaged over the bearings to provide a smooth, full length carrying surface.
 Roller grooves are cold formed in the roller shell.
 Roller axles are 7/16" hex stock spring loaded for easy removal and assembly.
 The top of the roller is 5/16" above the top flange of the frame.
 Standard roller centers are available in 2-1/4", 3", 4-1/2" and 6"
 Frame: 10 gauge formed channel 4-1/2" deep with 1-1/4" flanges.
 Axle holes are 7/16" hex punched on 1-1/2" centers.
 Crossmembers are formed 10 gauge steel bolted to frames.
 Drive Belts: 3/16" diameter x 83A durometer.
 Drive Shaft: 1" diameter 1045 CRS to specific size tolerance.
 Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green
 Pneumatic: Components are rated for 65 PSI filtered compressed air.
ABEC-1 Roller bearings required on speeds over 100FPM.



438 and 440 Series Line Shaft Horsepower Drive Charts:

Transportation Straight Sections

Speed in Feet Per Minute	20	30	40	50	60	70	80	90	100
HP per Foot for 2-1/4" Centers	.004	.005	.006	.008	.009	.010	.012	.013	.016
HP per Foot for 3" Centers	.003	.004	.005	.006	.007	.008	.009	.010	.012
HP per Foot for 4-1/2" Centers	.003	.003	.004	.005	.006	.007	.008	.008	.010
HP per Foot for 6" Centers	.002	.002	.003	.004	.004	.005	.006	.006	.009

Accumulation Straight Sections

Speed in Feet Per Minute	20	30	40	50	60	70	80	90	100
HP per Foot for 2-1/4" Centers	.006	.008	.010	.013	.017	.020	.021	.022	.025
HP per Foot for 3" Centers	.005	.006	.008	.011	.013	.015	.016	.017	.019
HP per Foot for 4-1/2" Centers	.004	.005	.007	.009	.010	.012	.012	.013	.015
HP per Foot for 6" Centers	.003	.004	.005	.008	.008	.009	.010	.010	.013

Accessories

Speed in Feet Per Minute	20	30	40	50	60	70	80	90	100
HP for 90 Degree Curve	.06	.08	.10	.13	.15	.18	.20	.22	.25
HP for 60 Degree Curve	.04	.06	.08	.11	.12	.14	.16	.18	.20
HP for 45 Degree Curve	.03	.04	.05	.07	.08	.10	.11	.12	.14
HP for 30 Degree Curve	.02	.03	.04	.05	.06	.07	.08	.09	.10
HP for 90 Degree Transfer	.04	.06	.08	.11	.13	.15	.17	.19	.21
HP for Parallel Slave	.01	.01	.02	.02	.02	.03	.03	.03	.04
HP for Diverter Switch	.01	.02	.02	.03	.03	.04	.05	.06	.06
HP for Merge Section	.08	.12	.16	.20	.25	.30	.36	.41	.46
HP for Spur Section	.02	.03	.04	.05	.06	.07	.08	.09	.10
HP for Powered Gate Section	.03	.04	.05	.06	.07	.08	.09	.10	.12

Maximum Horsepower Allowed

Speed in Feet Per Minute	20	30	40	50	60	70	80	90	100
Maximum Allowable Horsepower	1/2	3/4	1	1	1 1/2	1 1/2	2	2	2

Example:

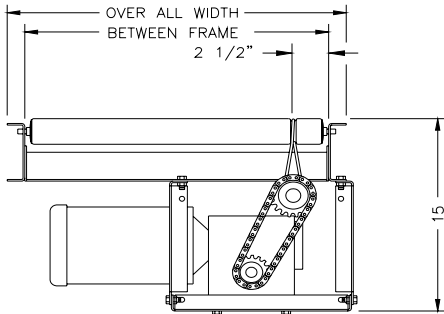
100 feet of 440 Line Shaft 3" Roller Center Accumulation at 60 FPM(100 x .013)= 1.3 Horsepower
 One 90 Transfer (1 x .130)= 0.13
 Total Horsepower Required ----- = 1.43
 Round Up to the next size or 1-1/2 HP

If the total horsepower required is greater than the maximum horsepower allowed for the required speed, more than one drive package is required. To determine the multiple number of drives required, divide the total horsepower by the maximum allowable horsepower in the bottom chart. If a gate is used, a drive package is required on both sides of the gate.

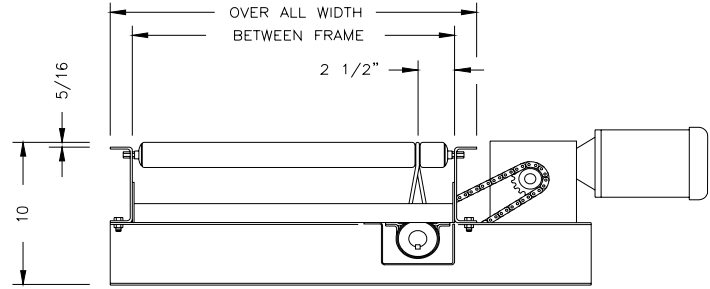
The maximum length conveyor with one drive package is 200 feet.



438 and 440 Drive Packages:



STANDARD DRIVE
MINIMUM BED LENGTH FOR DRIVE – 36”



* OPTIONAL SIDE MOUNTED DRIVE

438/440 Line Shaft Drive Specifications:

Motor: Nema “C” face heavy duty industrial type

Reducer: Heavy duty right angle gear head reducer (worm type)

Chain: RC-50 or RC-60 roller chain and sprockets (timing belts used on drives over 100FPM)

Drive Model Number:

440DR - 24 - 3/4 - 3 - 60 - B

Lineshaft Series Number

Overall Frame Width

Motor Horsepower

Single or Three Phase Power

Speed in Feet Per Minute

Mounting B=Standard, A=Side

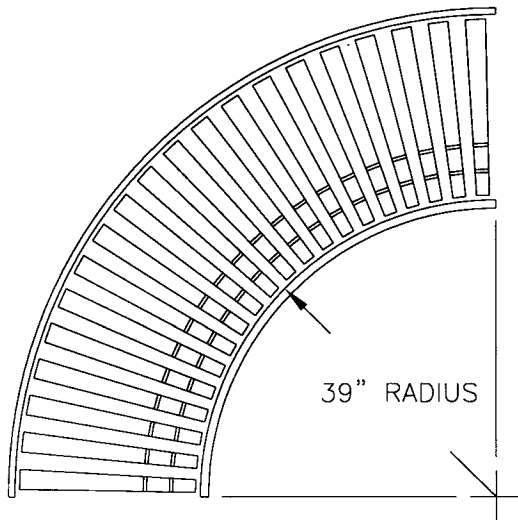
The minimum bed length for a drive is 36”

Consult factory for speeds over 100 FPM.

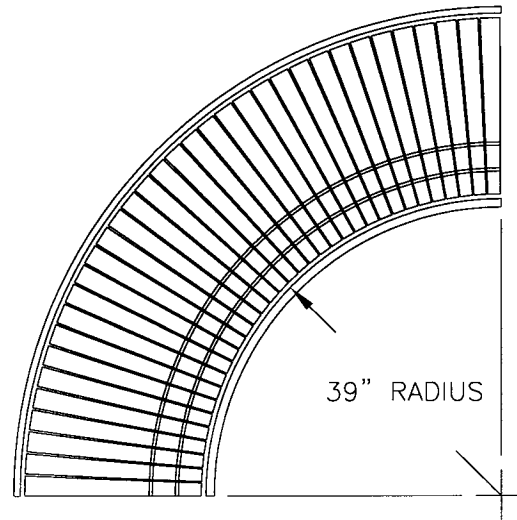
Order Separately: Line Shaft Bed Section and Motor Controls



438/440 Curves:



STANDARD 20 ROLLERS
90 DEGREE



CLOSE PACK 34 ROLLERS
90 DEGREE

440 Curves are available in 15", 18", 21", 24", 27", 30", 33", 36", 39", 42", 45", 48" OAW .

Curve Model Number:

440C - 24 - 90 - STD

Line Shaft Series Number

Overall Frame Width

Degree of Curve 30, 45, 60,90

Standard or Close Pack

440 Series Tapered Roller Curve:

- Tapered Rollers: 1-5/8" Diameter on small end with 7/16" hex axle and ball bearings.
- Tapered Rollers have .042" of taper per inch of length to the large end.
- Rollers have straight press bearings to provide a smooth, full length carrying surface.
- Two Roller grooves are cold formed in the roller shell.
- Roller axles are 7/16" hex stock spring loaded for easy removal and assembly.
- The top of the roller is 5/16" above the top flange of the frame.
- Frame: 10 gauge formed channel 4-1/2" deep with 1-1/4" flanges.
- Crossmembers are formed and welded 10 gauge steel.

Drive Belts: 3/16" diameter x 83A durometer.

Drive Shaft: 1" diameter 1045 CRS to specific size tolerance.

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Standard Curves Contain 20 Rollers in a 90 Degree Curve.

Close Pack Curves Contain 34 Rollers in a 90 Degree Curve.

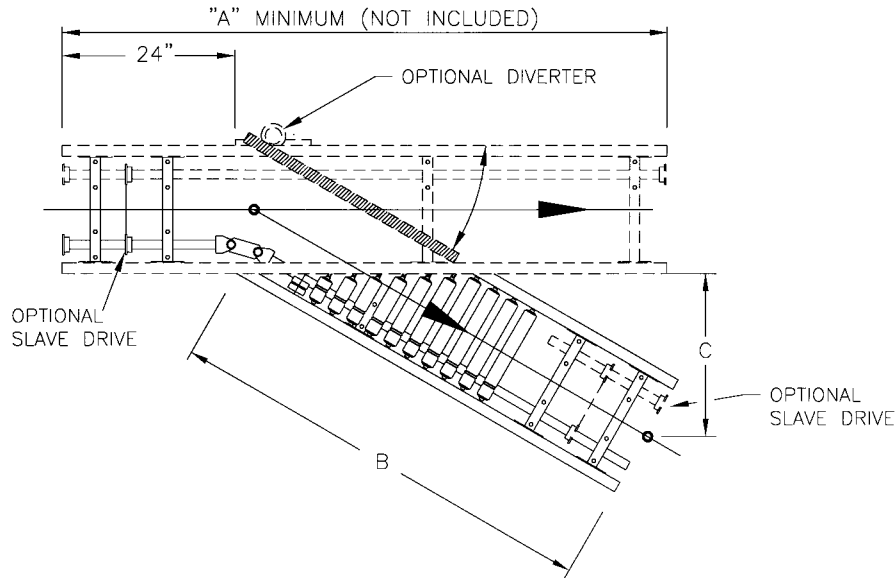
438 Series Curves in 12" OAW are available only with 1-3/8" Straight Rollers.

440 Series Curves in 12" OAW are available only with 1.9" Straight Rollers.

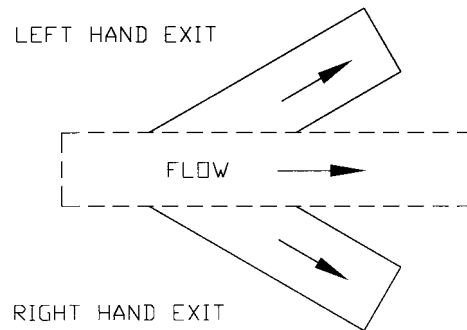
90 Degree Curves 36" to 48" OAW are shipped as two 45 Degree Curves.



438/440 30 Degree Spur:



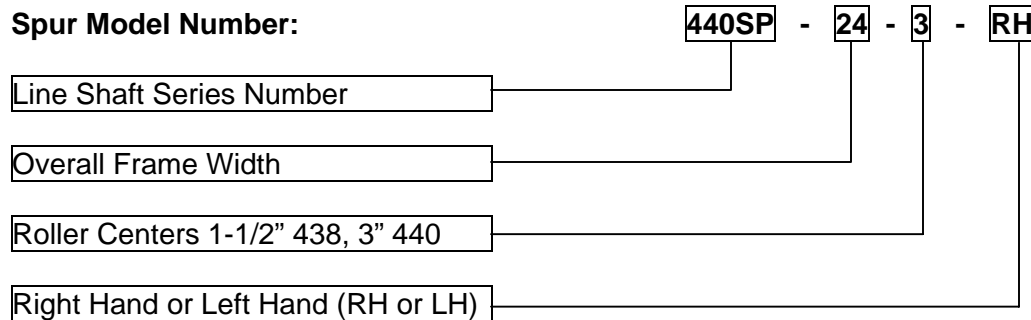
OAW	BF	"A"	"B"	"C"
12	9-1/2"	42	60	30
15	12-1/2"	48	60	30
18	15-1/2"	54	60	30
21	18-1/2"	60	60	30
24	21-1/2"	66	60	30
27	24-1/2"	72	60	30
30	27-1/2"	78	60	30
33	30-1/2"	84	96	48
36	33-1/2"	90	96	48
39	36-1/2"	96	96	48
42	39-1/2"	102	96	48
45	42-1/2"	108	96	48
48	45-1/2"	114	96	48



438 Spurs are available in 12", 15", 18", 21", 24", 27", 30" OAW.

440 Spurs are available in 12", 15", 18", 21", 24", 27", 30", 33", 36", 39", 42", 45", 48" OAW .

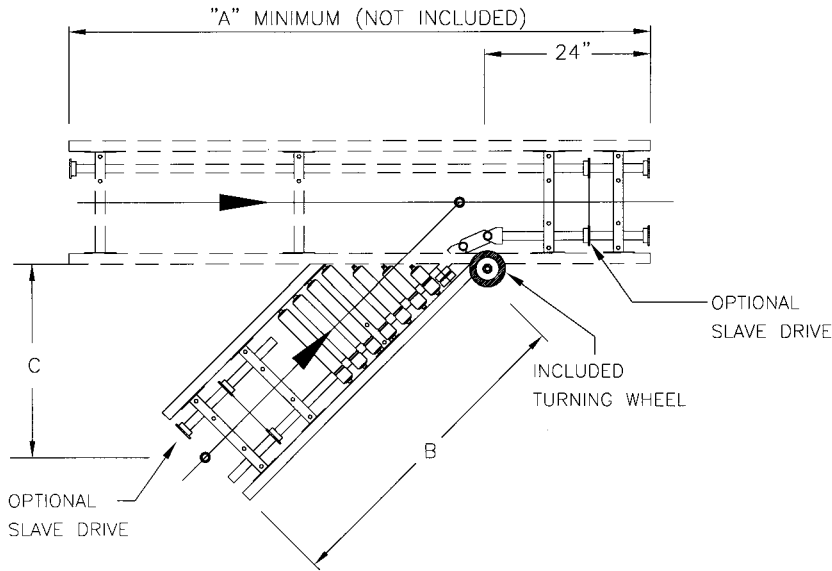
Spur Model Number:



**Spurs include Fixed Drive Spools on the Main Line and Spur Section.
Order Separately Main Line Section, Diverter Arm, Roller Arm or Roller Switch.
Specifications for 438/440 are Listed on Previous Pages.**

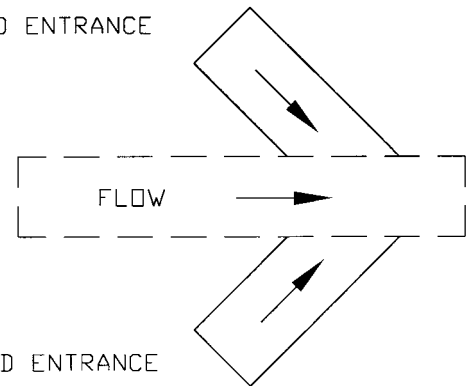


438/440 45 Degree Merge:



OAW	BF	"A"	"B"	"C"
12	9-1/2"	42	60	30
15	12-1/2"	48	60	30
18	15-1/2"	54	60	30
21	18-1/2"	60	60	30
24	21-1/2"	66	60	30
27	24-1/2"	72	60	30
30	27-1/2"	78	60	30
33	30-1/2"	84	96	48
36	33-1/2"	90	96	48
39	36-1/2"	96	96	48
42	39-1/2"	102	96	48
45	42-1/2"	108	96	48
48	45-1/2"	114	96	48

LEFT HAND ENTRANCE



RIGHT HAND ENTRANCE

438 Merges are available in 12", 15", 18", 21", 24", 27", 30" OAW.

440 Merges are available in 12", 15", 18", 21", 24", 27", 30", 33", 36", 39", 42", 45", 48" OAW .

Merge Model Number:

440MR - 24 - 3 - RH

Line Shaft Series Number

Overall Frame Width

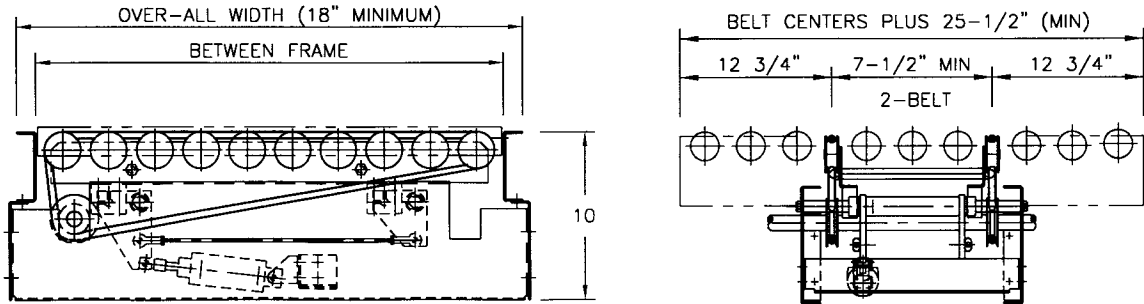
Roller Centers 1-1/2" 438, 3" 440

Right Hand or Left Hand (RH or LH)

**Merges include Fixed Drive Spools on the Main Line and Merge Section.
Order Separately Main Line Section, Turning Wheel or Internal Power Slave if Required.
Specifications for 438/440 are Listed on Previous Pages.**

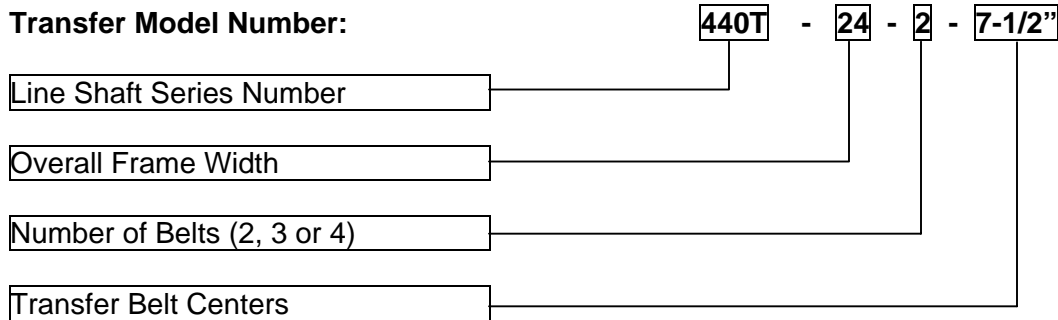


438/440 90 Degree Belt Transfer:



Standard Transfer raises 1/4" above roller and lowers 1/4" below roller (1/2" total travel).
 Standard Belt centers start at 7-1/2" and increase by 3" multiples to 34-1/2"
 Transfer Belts are 7/16" Diameter by 83A durometer urethane.
 Each urethane Transfer Belt has a 30 pound weight capacity.
 The transfer belt speed is 1.7 times the speed of the rollers.

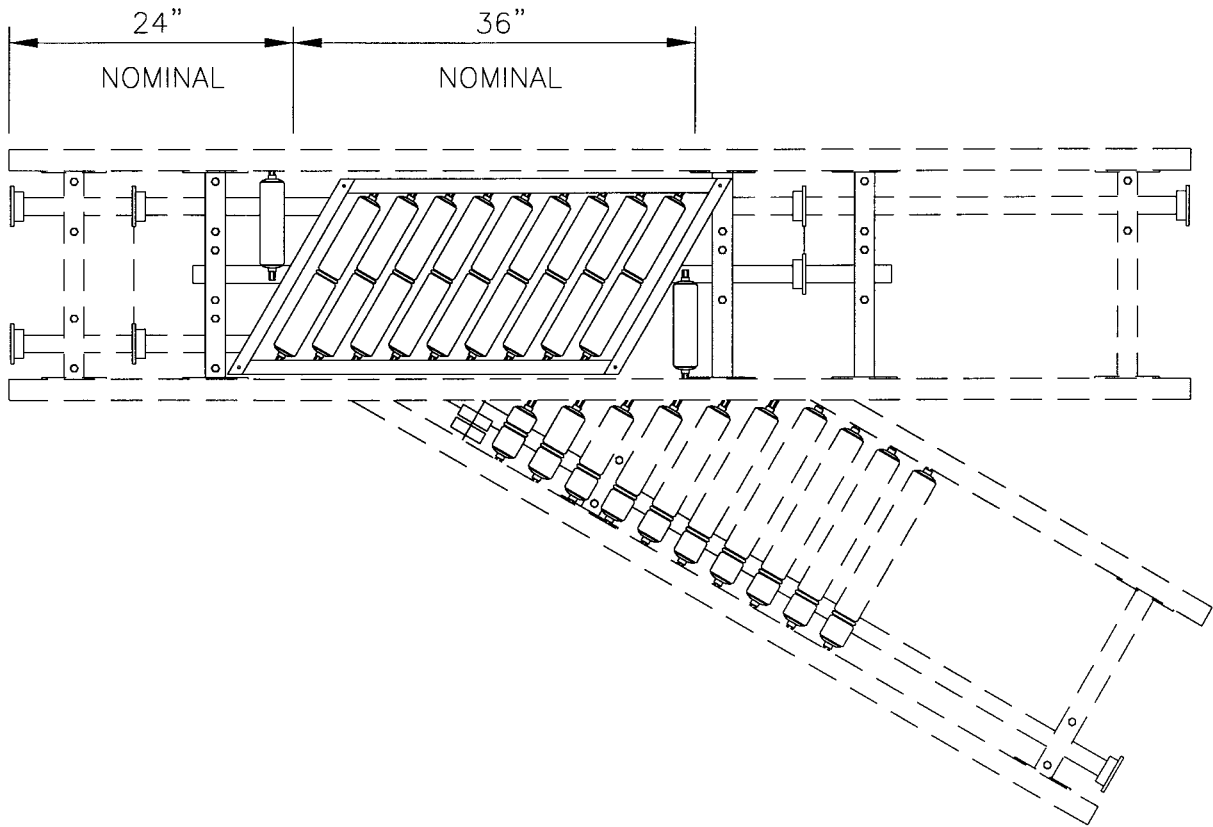
A Optional Fenner Power Twist ® Belt is available for heavier loads.
(an additional drive may be required).
An Optional Bi-directional Transfer with separate drive for reversing applications is available.



Conveyor Minimum Overall Width for a Transfer is 18".
The Transfer is Slave Driven from the Line shaft.
The Standard Transfer includes a 120 Volt Solenoid Valve.
Compressed air is required to operate the transfer.
Order Separately Conveyor Bed Section and Controls.



440 Series Roller Switch:



Right Hand Roller Switch Shown

Roller Switch available in 18", 21" and 24" Overall Widths.

Roller Switch Model Number:

440RS - 24 - RH

Line Shaft Series Number

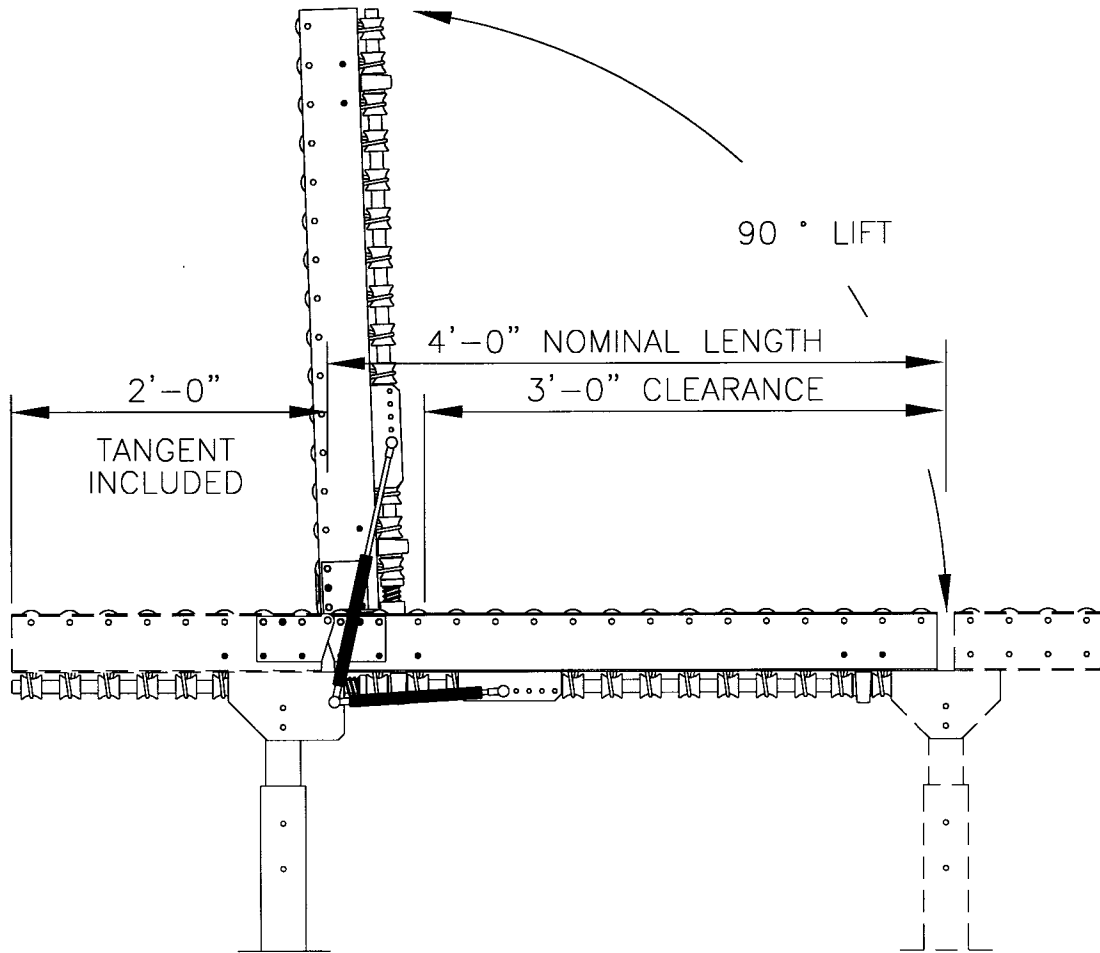
Overall Frame Width

Right Hand or Left Hand (RH or LH)

***The Roller Switch is Slave Driven from the Line shaft.
 The Standard Roller Switch includes a 120 Volt Solenoid Valve.
 Compressed air is required to operate the Switch.
 Order Separately Conveyor Bed Section, Spur Section and Controls.***



438/440 Series Line shaft Gate:



Gate sections are designed into a system for access and should always be located at the terminating end of a power run. If access is required in the middle of a powered run, an additional drive will be required downstream from the gate section. Controls may be required to stop the upstream section when the gate is in the raised position.

Gas assist lift cylinders are supplied as standard.
A 24" tangent section of conveyor is included as standard.

438 Series gates are available with 1-1/2", 3", and 4-1/2" roller centers.
440 Series gates are available with 2 1/4", 3", 4-1/2", and 6" roller centers.

Gate Model Number:

440G - 24 - 3

Line Shaft Series Number

Overall Frame Width

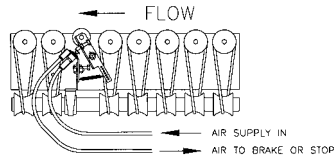
Roller Centers

An Optional Limit Switch with mounting bracket is available.
Specifications for 438/440 Series are Listed on Previous Pages.

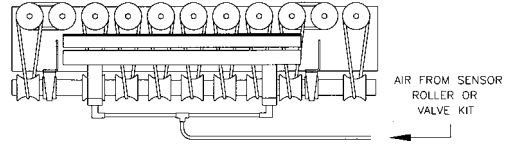


Order Controls Separately.
438/440 Accessories:

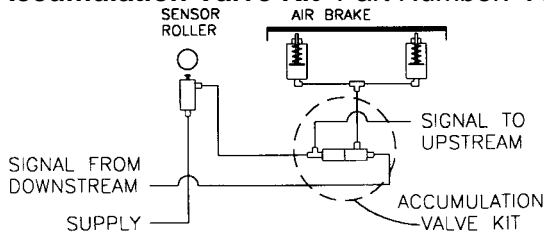
440 Sensor Roller
(Minimum Product Weight-5 lbs)
Optional low weight actuator is available.
Part Number: **440-Width-SR**



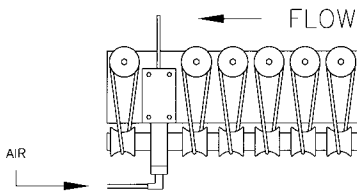
Roller Brake (Available in 12",18",24",30",36" lengths.)
Part Number: **440-AB-Length**



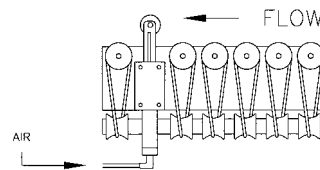
Accumulation Valve Kit Part Number: **440-ACCUKIT**



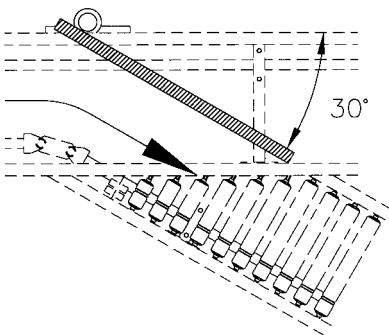
Pop-up Blade Stop
Part Number: **440-Width-BS**
(Includes 120vac Solenoid Valve)



Pop-up Roller Stop
Part Number: **440-Width-RS**
(Includes 120vac Solenoid Valve)



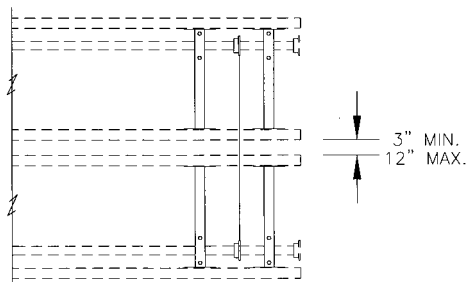
Diverter Arm – Manual or Pneumatically Operated



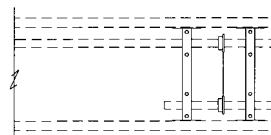
Manual Operated: 440-Width-MDA
Pneumatically Operated: 440-Width-PDA
Optional Power Face Divert Arm is Available

Compressed air is required to operate the above Accessories.

Lineshaft External Power Slave
Part Number: **440-PEXT**

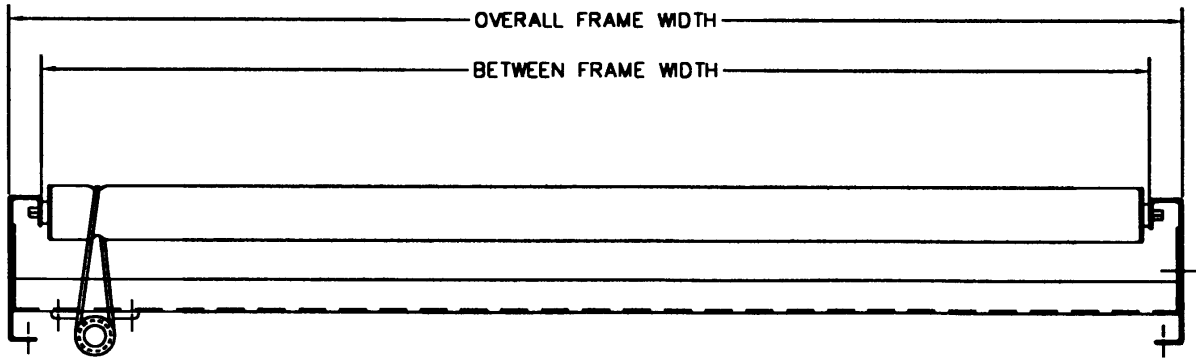


Lineshaft Internal Power Slave
Part Number: **440-PINT**





443 Line Shaft Series Specifications:



The drive capacity of one roller with a smooth bottom part is 25 pounds maximum.
The Standard Bed Length is 10 feet.
Special Lengths are Available in Multiples of the Roller Centers.

443 Frame Dimensions:

Overall Width of the Frame	54	63	69	72	75	78
Width Between Frame	51"	60"	66"	69"	72"	75"

Straight Section Model Number:

443 - 72 - 6 - Length

- Line Shaft Series Number
- Overall Frame Width
- Roller Centers 3" or 6"
- Length of Section

443 Series

Rollers: 2-1/2" diameter x 14 gauge tube with 7/16" hex axle and ball bearings.
 Rollers have swaged press bearings to provide a smooth, full length carrying surface.
 Roller grooves are cold formed in the roller shell.
 Roller axles are 7/16" hex stock spring loaded for easy removal and assembly.
 The top of the roller is 1/2" above the top flange of the frame.
 Standard roller centers are available in 3" and 6"

Optional White Power Coated Rollers

Frame: 10 gauge formed channel 6-11/16" deep with 1-1/2 Top flange 1-1/4" bottom flange.
 Axle holes are 7/16" hex punched on 1-1/2" centers.
 Crossmembers are formed and welded 10 gauge steel.

Drive Belts: 3/16" diameter x 83A durometer.
 Drive Shaft: 1" diameter 1045 CRS to specific size tolerance
 Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green
 Pneumatic: Components are rated for 65 PSI filtered compressed air.



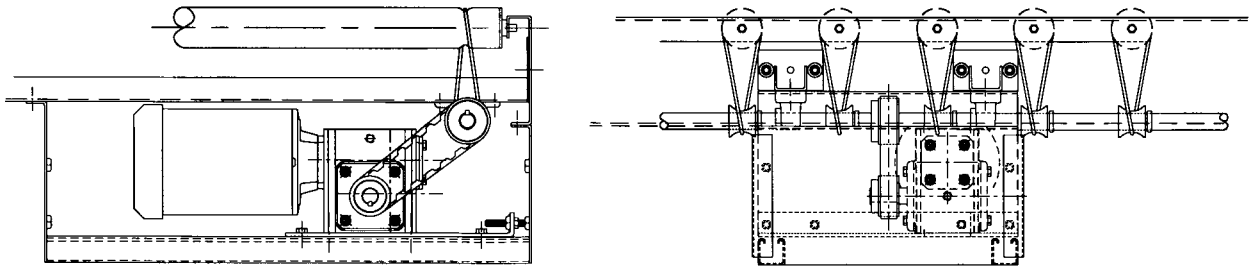
443 Series Line Shaft Horsepower Drive Charts:

Transportation Straight Sections

Speed in Feet Per Minute	20	30	40	50	60
Feet Driven per 1HP 3" Centers	70	60	50	40	30
Feet Driven per 1HP 6" Centers	140	120	100	80	60

The Maximum Motor size on a 443 Drive is 2 Hp.

If the total horsepower required is greater than the maximum horsepower allowed for the required speed, more than one drive package is required. To determine the multiple number of drives required, divide the total horsepower by the maximum allowable horsepower.



443 Line Shaft Drive Specifications:

Motor: Nema "C" face heavy duty industrial type

Reducer: Heavy duty right angle gear head reducer (worm type)

Timing Belt: ½" Pitch Timing Belt and GearBelt Pulleys

Drive Model Number:

443DR - 72 - 1 - 3 - 60

Series Number

Overall Frame Width

Motor Horsepower

Single or Three Phase Power

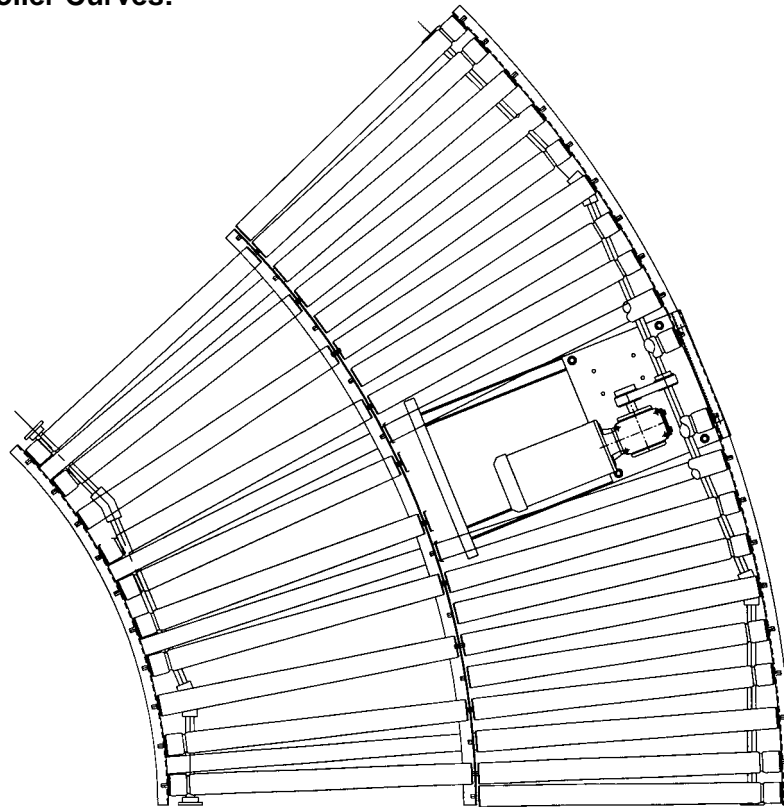
Speed in Feet Per Minute

The minimum bed length for a drive is 120"

Order Separately: Line Shaft Bed Section and Motor Controls



443 Split Straight Roller Curves:



443 Curves are available in 54", 63", 69", 72", 75", 78" OAW .

Curves have an inside radius of 60"

Curve Model Number:

443C - 72 - 90

Line Shaft Series Number

Overall Frame Width

Degree of Curve 30, 45, 60,90

443 Series Split Straight Roller Curve:

Rollers: 2-1/2" Diameter x 14ga. with 7/16" hex axle and ball bearings.

Rollers have swaged press bearings to provide a smooth, full length carrying surface.

One Roller grooves are cold formed in the roller shell.

Roller axles are 7/16" hex stock spring loaded for easy removal and assembly.

The top of the roller is 1/2" above the top flange of the frame.

Frame: 10 gauge formed channel 6-11/16" deep with 1-1/2" Top and 1-1/4" Bottom flanges.

Crossmembers are formed and welded 10 gauge steel.

Curve Drive: Outside Rollers driven by 1/2 hp DC variable speed adjustable for product size.

Inside Curve Rollers are Driven by Straight Section.

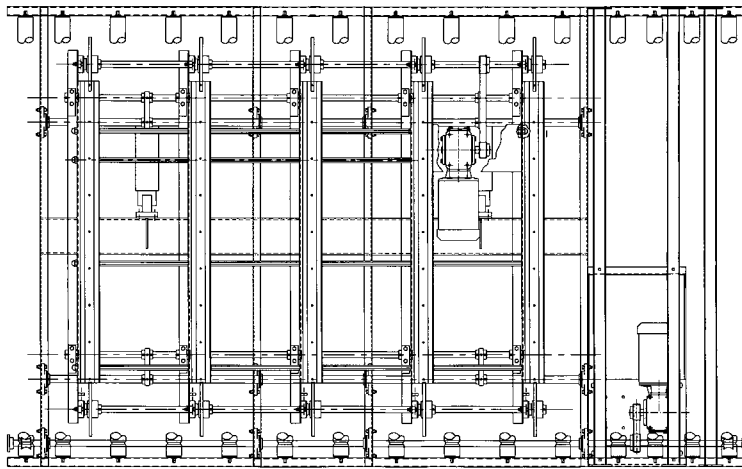
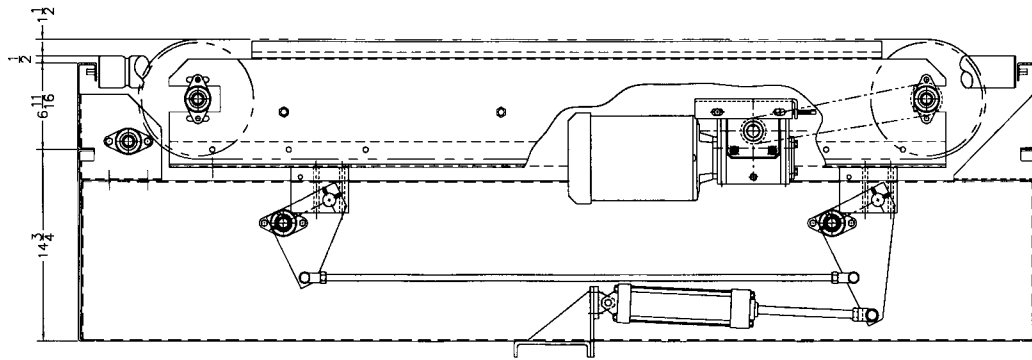
Drive Belts: 3/16" diameter x 83A durometer.

Drive Shaft: 1" diameter 1045 CRS to specific size tolerance.

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green



443 Series 90 Degree Belt Transfer:



Transfer Model Number:

443T - 72 - 5 - 18"

Line Shaft Series Number

Overall Frame Width

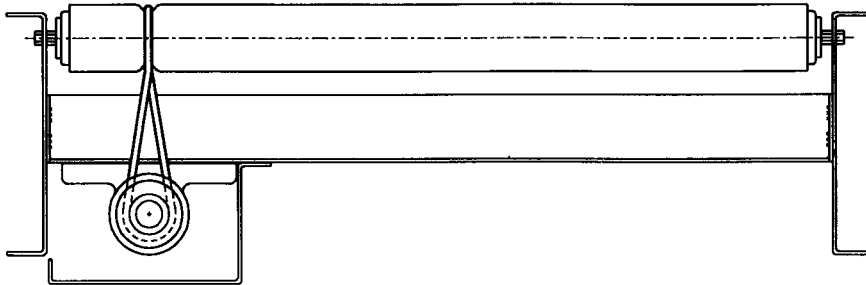
Number of Belts (5)

Transfer Chain Centers

***The Belts are Driven by a Dedicated Drive.
The Standard Transfer includes a 120 Volt Solenoid Valve.
Compressed air is required to operate the transfer.
Order Separately Conveyor Bed Section and Controls.***



445 Line Shaft Series Specifications:



The drive capacity of one roller with a smooth bottom part is 100 pounds.
The Standard Bed Length is 10 feet. Special Lengths are Available.

445 Frame Dimensions:

Overall Width of the Frame	24	27	30	36	42	48	54	60
Width Between Frame	21"	24"	27"	33"	39"	45"	51"	57"

Straight Section Model Number:

445 - 24 - 3 - Length

- Line Shaft Series Number
- Overall Frame Width
- Roller Centers 3", 6" or 9"
- Length of Section

445 Series

Rollers: 2-1/2" diameter x 11 gauge tube with 11/16" hex axle with ball bearings.
 Rollers have straight press bearings to provide a smooth, full length carrying surface.
 Roller grooves are cold formed in the roller shell.
 Roller axles are 11/16" hex stock spring loaded for easy removal and assembly.
 The top of the roller is 5/16" above the top flange of the frame.
 Standard roller centers are available in 3", 6" and 9"
 Frame: 7 gauge formed channel 9" deep with 1-1/2" flanges.
 Axle holes are 11/16" hex punched on 3" centers.
 Crossmembers are formed and welded 10 gauge steel.
 Drive Belts: 1/4" diameter x 83A durometer.
 Drive Shaft: 1-7/16" diameter 1045 CRS to specific size tolerance
 Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green
 Pneumatic: Components are rated for 65 PSI filtered compressed air.



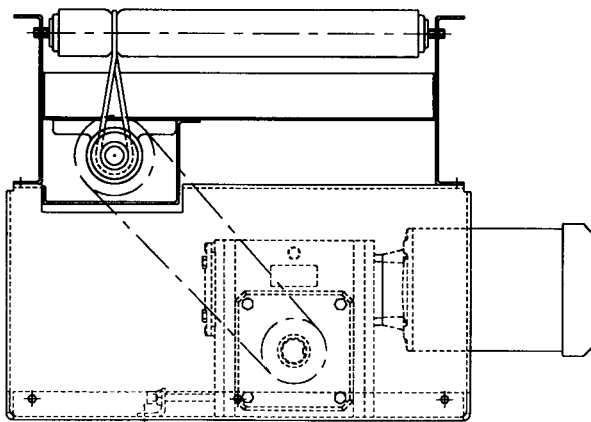
445 Series Line Shaft Horsepower Drive Charts:

Transportation Straight Sections

Speed in Feet Per Minute	20	30	40	50	60
Feet Driven per 1HP 3" Centers	45	40	30	25	20
Feet Driven per 1HP 6" Centers	85	70	50	40	30
Feet Driven per 1HP 9" Centers	120	100	70	60	45

The Maximum Motor size on a 445 Drive is 3 Hp.

If the total horsepower required is greater than the maximum horsepower allowed for the required speed, more than one drive package is required. To determine the multiple number of drives required, divide the total horsepower by the maximum allowable horsepower.



445 Line Shaft Drive Specifications:

Motor: Nema "C" face heavy duty industrial type

Reducer: Heavy duty right angle gear head reducer (worm type)

Chain: RC-60 or RC-80 roller chain and sprockets

Drive Model Number:

445DR - 24 - 1 - 3 - 60 - B

Series Number

Overall Frame Width

Motor Horsepower

Single or Three Phase Power

Speed in Feet Per Minute

Mounting B=Standard, A=Side

The minimum bed length for a drive is 36"

Order Separately: Line Shaft Bed Section and Motor Controls

Line shaft Options:



Frame Options:

Butt Bolt Frame Connectors
9" Deep Frames
Special Widths to match an Existing Conveyor
Special Degree Curves
Special Paint Colors
Powder Coated Frames
Bright Zinc Plating on Frames
Fixed Drive Spools for Positive Drive
Spare Drive Belts assembled on shaft
Universal Joint Couplings
Drive Timing Belt Components
Power Slave Timing Belt Components
Taper Lock Sprocket Hubs
Full Width End Covers
Full Width End Cover Stops
Perforated Line shaft Guard

Roller Options:

Special Roller Lengths
Plastisol Coating on Rollers
Urethane Coating on Rollers
Powder Coated Rollers
Bright Zinc Plating on Rollers
Semi Precision Roller Bearings
ABEC-1 Precision Roller Bearings



Lineshaft Replacement Parts:

438 Series Rollers:

Overall Width	1 3/8" Diameter Galvanized Single Groove	1 3/8" Diameter Galvanized Double Groove
12	438-12-RS-SG	438-12-RS-DG
15	438-15-RS-SG	438-15-RS-DG
18	438-18-RS-SG	438-18-RS-DG
21	438-21-RS-SG	438-21-RS-DG
24	438-24-RS-SG	438-24-RS-DG
27	438-27-RS-SG	438-27-RS-DG
30	438-30-RS-SG	438-30-RS-DG

438 Drive Belts:

438-DB-12	438 Drive Belt 1/8" x 12" long for 1 roller
438-DB-16.25	438 Drive Belt 1/8" x 16 1/4" long for pair of rollers
438-SB-8.25	438 Slave Belt 1/8" x 8 1/4" long for Slave between rollers on 3" Centers

440 Series Rollers:

Overall Width	1.9" Diameter Galvanized Single Groove	1.9" Diameter Galvanized Double Groove
12	440-12-RS-SG	440-12-RS-DG
15	440-15-RS-SG	440-15-RS-DG
18	440-18-RS-SG	440-18-RS-DG
21	440-21-RS-SG	440-21-RS-DG
24	440-24-RS-SG	440-24-RS-DG
27	440-27-RS-SG	440-27-RS-DG
30	440-30-RS-SG	440-30-RS-DG
33	440-33-RS-SG	440-33-RS-DG
36	440-36-RS-SG	440-36-RS-DG
39	440-39-RS-SG	440-39-RS-DG
42	440-42-RS-SG	440-42-RS-DG
45	440-45-RS-SG	440-45-RS-DG
48	440-48-RS-SG	440-48-RS-DG
51	440-51-RS-SG	440-51-RS-DG
54	440-54-RS-SG	440-54-RS-DG
57	440-57-RS-SG	440-57-RS-DG
60	440-60-RS-SG	440-60-RS-DG

440 Series Tapered Rollers:

Overall Width	1.9" Diameter Steel Double Groove
15	440-15-TRS-DG
18	440-18-TRS-DG
21	440-21-TRS-DG
24	440-24-TRS-DG
27	440-27-TRS-DG
30	440-30-TRS-DG
33	440-33-TRS-DG
36	440-36-TRS-DG
39	440-39-TRS-DG
42	440-42-TRS-DG
45	440-45-TRS-DG
48	440-48-TRS-DG

440 Drive Belts:

440-DB-13	440 Drive Belt 3/16" x 13" long for 1 roller
440-SB-9.75	440 Slave Belt 3/16" x 9 3/4" long for Slave between rollers on 3" Centers
440-SB-7.75	440 Slave Belt 3/16" x 7 3/4" long for Slave between rollers on 2 1/4" Centers
440-DB-11.78	440 Drive Belt Temporary Drive Belt 11 25/32" Long
440-DB-KIT	440 Drive Kit includes (30) Temp Fix Belts and (30) Split Spools



Parts 438/440

440-Spool	440 or 438 Drive Spool
440-Split Spool	440 or 438 Drive Screw Together Split Replacement Spool
440-FSpool	440 or 438 Fixed Drive Spool for positive drive
440-SpeedSpool	440 or 438 Speed-up Spool
440-Collar	440 or 438 Spool Collar (keeps spools in position)
440-XferSheave	440 Transfer Sheave for 7/16" diameter
440-BeltWKit	440 or 438 Belt Welding Kit
440-Bearing	440 or 438 1" ID Shaft Bearing
440-Shaft x length	440 or 438 1" Diameter Lineshaft (Specify Key Locations)
440-Coupling	440 or 438 Coupling Chain 8" long Delrin
440-SpktCoupling	440 or 438 Coupling Sprocket 40B16T x 1"
50B13T to 50B19	Standard Sprockets for #50 Chain
50-Chain	Feet of #50 Roller Chain
440-Ujoint	440 or 438 Universal Joint 1" Inside Diameter
440-GateCoupling	440 or 438 Spring Loaded Gate Coupling
440-StopBlock	440 pop-up Stop UHMW Block
440-CylStop	440 pop-up Stop Cylinder 1 1/2" bore x 2" stroke
440-CylAB	440 Air Brake Cylinder 1 1/4" bore x 1" stroke
440-CylXfer	440 Transfer Air Cylinder 1 1/2" bore x 2" stroke

443 Series Straight Rollers:

Overall Width	2 1/2" Diameter, 14 ga Steel Single Groove, Unpainted	2 1/2" Diameter, 14 ga Steel Double Groove, Unpainted	2 1/2" Diameter, 14 ga Steel Single Groove, Powder Coated White	2 1/2" Diameter, 14 ga Steel Double Groove, Powder Coated White
54	443-54-RS-SG	443-54-RS-DG	443-54-RSPC-SG	443-54-RSPC-DG
63	443-63-RS-SG	443-63-RS-DG	443-63-RSPC-SG	443-63-RSPC-DG
69	443-69-RS-SG	443-69-RS-DG	443-69-RSPC-SG	443-69-RSPC-DG
72	443-72-RS-SG	443-72-RS-DG	443-72-RSPC-SG	443-72-RSPC-DG
75	443-75-RS-SG	443-75-RS-DG	443-75-RSPC-SG	443-75-RSPC-DG
78	443-78-RS-SG	443-78-RS-DG	443-78-RSPC-SG	443-78-RSPC-DG

Note: Minimum Order Quantities Apply to Powder Coated Rollers.

443 Series Curve Rollers:

Specify Roller Location in the curve. (There are five different rollers in a 45-degree curve.)

443 Drive Belts:

443-DB-13	443 Drive Belt 3/16" x 13" long for one roller
443-SB-9.75	443 Slave Belt 3/16" x 9 3/4" long for Slave between rollers on 3" Centers

443 Parts:

443-Spool	443 Drive Spool
443-Shaft	443 Drive Shaft 1" Diameter
443-Collar	443 Positioning Collar
443-DR-TBelt	443 1/2" Pitch Drive Timing Belt
443-DriveSprocket	443 Timing Belt Drive Gear Pulley attached to Reducer 1/2" Pitch
443-DrivenSprocket	443 Timing Belt Drive Gear Pulley attached to Drive Shaft 1" ID 1/2" Pitch
443-Coupling	443 Coupling Chain
443-SpktCoupling	443 Coupling Sprocket 40B16 x 1" Bore
443-Bearing	443 1" ID Shaft Bearing

443 Plastic Table Top Chain Transfers

443-XferTTChain	Feet Plastic Table Top Chain for Transfer
443-CylXfer	443 Transfer Air Cylinder 3 1/4" Bore x 4" Stroke
443-SpktXfer	443 Table Top Chain Sprocket 150B35
443-PvtXfer	443 UHMW Pivot Block



445 Series Rollers:

Overall Width	2 ½" Diameter Steel Single Groove
24	445-24-RS-SG
27	445-27-RS-SG
30	445-30-RS-SG
33	445-33-RS-SG
36	445-36-RS-SG
39	445-39-RS-SG
42	445-42-RS-SG
45	445-45-RS-SG
48	445-48-RS-SG
51	445-51-RS-SG
54	445-54-RS-SG
57	445-57-RS-SG
60	445-60-RS-SG

445 Drive Belts:

445-DB-16	445 Drive Belt 1/4" x 16" long for one roller
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445 Parts:

445-Spool	445 Drive Spool
445-Shaft	445 Drive Shaft 1 7/16" Diameter
445-Collar	445 Positioning Collar
60B12T to 60B17T	Standard Sprockets for #60 Chain
60-Chain	Feet of #60 Roller Chain
445-Coupling	445 Coupling Chain #50 x 16 pitches Double Wide with Connector
445-SpktCoupling	445 Coupling Sprocket H50B-16Tx 1 7/16" Bore

Cord Stock for Transfers or Drive Belts

1/8"cord	Feet of 1/8" diameter cord stock
3/16"cord	Feet of 3/16" diameter cord stock
1/4"cord	Feet of ¼" diameter cord stock
7/16"cord	Feet of 7/16" diameter cord stock
440-BeltWKit	Belt Welding Kit for 1/8", 3/16", ¼" or 7/16" cord stock

Air Parts

440SR-Valve	440 Sensor Roller Valve
440ZP-Valve	Zero Pressure Accumulation Valve
1/4"Poly	Feet of ¼" OD Polyflow Air Tubing
3/8"Poly	Feet of 3/8" OD Polyflow Air Tubing

Touch-Up Paint

MB-SPaint	Spray Can of Metzgar Blue Touch-up Paint
MB-1gCPaint	One Gallon Can of Metzgar Blue Touch-up Paint
VG-SPaint	Spray Can of Vista Green Touch-up Paint
VG-1gCPaint	One Gallon Can of Vista Green Touch-up Paint



Notes:

Section 3 – Belt Conveyor

Page	Description
3-1	Belt Conveyor Index
3-2	Steps to Assembling a Complete Belt Conveyor
3-3	Elevation Examples
3-4	Power Conveyor Data Sheet
3-5	701 Belt Conveyor Specifications and Unit Model Number
3-6	801 Belt Conveyor Specifications and Unit Model Number
3-7	701 and 801 Bed Selection, Bottom Cover Pans
3-8	Belt Type and Length Selection Guide
3-9	701 and 801 Horsepower Selection
3-10	701 and 801 Motor and Reducer/Drive Model Selection
3-11	Drive Dimensional Information
3-12	End Pulley Assemblies
3-13	Gravity Wheel Feeders
3-14	Power Tail Assembly
3-15	Nose-over Bed Splice
3-16	Horizontal and Vertical Take-ups
3-17	Series 715 Belt Curve
3-18	Series 720 Brake Metering Belt
3-19	Series 725 Portable Power Helper
3-20	Series 730 Booster Stacker
3-21	Series 750 Press Conveyor
3-22	Series 760 Flat Wire Belt Conveyor
3-23	Series 765 Flat Wire Belt Conveyor
3-24	Belt Conveyor Options
3-25	Belt Conveyor Replacement Parts
3-26	Belt Conveyor Replacement Parts Continued

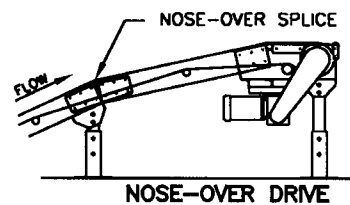
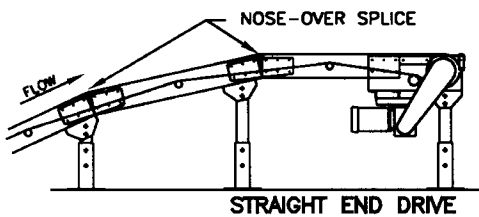
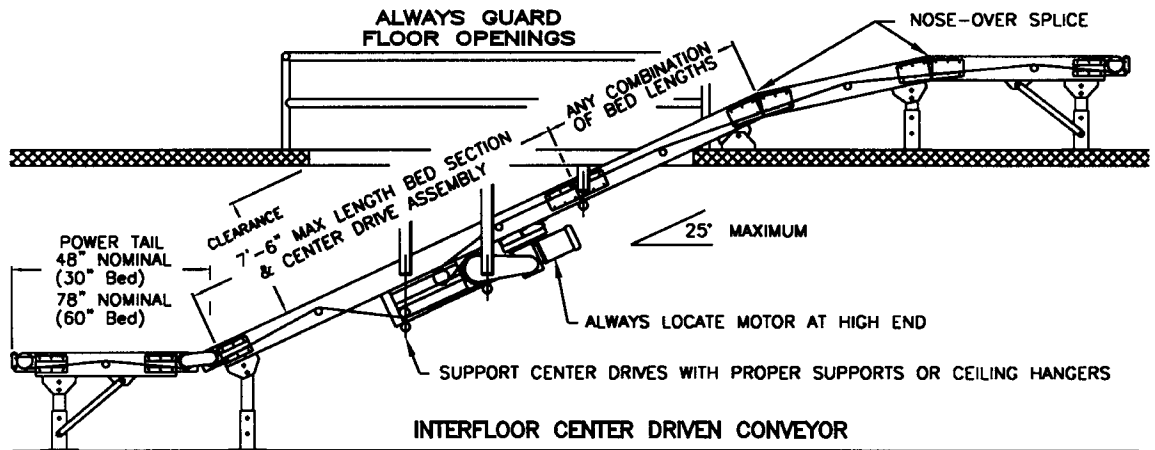
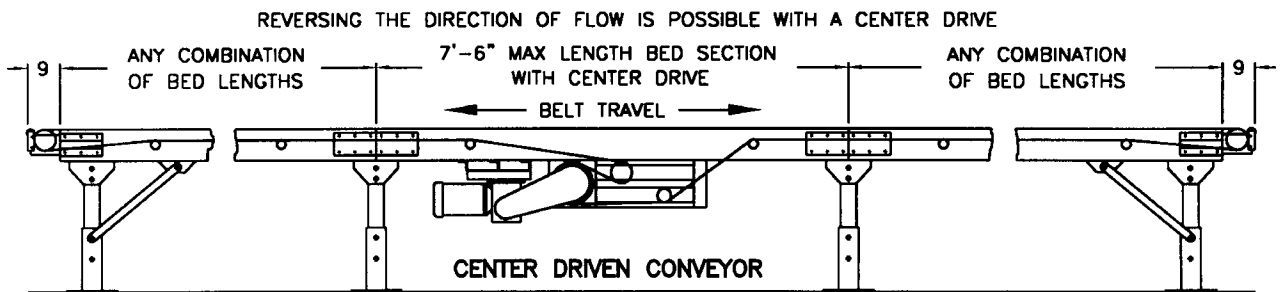
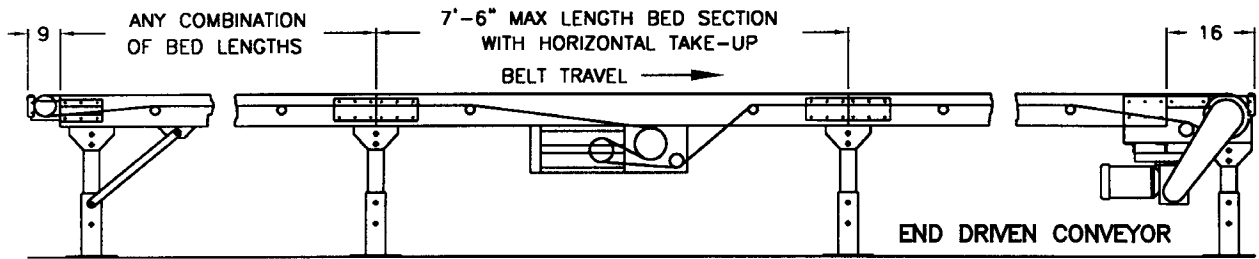
**Steps To Assembling a Complete Belt Conveyor Unit:**

The following steps will assist you in assembling a complete belt conveyor unit.

- 1) Determine the width of the belt you will require based on the widest product that will be conveyed on the unit.
- 2) Determine the overall length of the unit (starting point and ending point).
- 3) Determine the style of conveyor to be used.
 - 701 Slider bed conveyor is the most common and the most economical.
 - 801 Belt on Roller conveyor is used for heavy loads by reducing the amount of drive required. The rollers have less friction than the slider bed.
- 4) What is the heaviest product? How much product weight is on the conveyor total?
- 5) Select the Type of drive required.
 - End Drives are used for non-reversing applications.
 - Center Drives are used for reversing applications.
 - Nose-over End Drives are used in incline applications which are non-reversing.
- 6) Select the Motor and Reducer for the drive based on Speed and Horsepower.
- 7) Add a Nose-Over Splice if the unit is an incline and a smooth transition is required from the incline to return to horizontal. Multiple Nose-Overs may be utilized.
- 8) Select a Power or Gravity Feeder. These are used on Incline or Decline units.
 - Gravity Feeders are used in a incline mode the feeder allows a transition position for the product. Power Feeders in the incline or decline modes provide a smooth transition between the angle and the horizontal. Power feeders are commonly referred to as power tails.
- 9) Select End Pulleys as required.
 - One end pulley is required on an end drive conveyor without a power tail.
 - One end pulley is required on a center drive with a power tail.
 - Two end pulleys are required on a center drive without a power tail.
- 10) Select an auxiliary take-up if the length of the unit requires one, or if the end pulleys cannot be used as take-ups due to a length restriction. Belt length take-ups are required because over time the belt will stretch.
 - Center drives have a belt take-up built into the design.
 - End drives require a take-up if the end pulley cannot be adjusted due to length restrictions. The drive side is fixed so only one end pulley can be adjusted.
 - A horizontal take-up should be used on end drives with one adjustable tail pulley on conveyors 40 feet in length up to 110 feet in length.
 - A horizontal take-up should be used on end drives without an adjustable tail pulley on conveyors 10 feet in length up to 75 feet in length.
 - A vertical take-up should be used on end drives with one adjustable tail pulley on conveyors 40 feet in length up to 80 feet in length.
 - A vertical take-up should be used on end drives without an adjustable tail pulley on conveyors 10 feet in length up to 40 feet in length.
- 11) Select Accessories as required. These may include the following:
 - Guard Rail, Supports, Controls or conveyor that feeds product on the belt conveyor.



Elevation Examples of a Belt Conveyor Units:





Belt Conveyor Power Conveyor Data Sheet:

Unit Model Number:

Overall Unit Length:

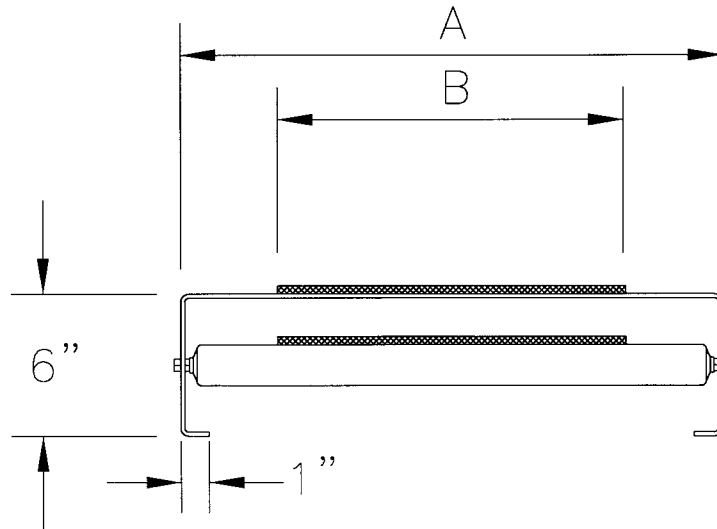
Speed of Unit:

Component	Part Number	Description
Drive		
Motor Horsepower		
Speed of Unit (FPM)		
Bed Construction		
Bottom Pans		
Feeders		
End Assembly		
Take-ups		
Connectors		
Belt type and length		
Accessories		
Guard Rails		
Trussing		
Controls		
Supports		
Finish	Metzgar Blue	



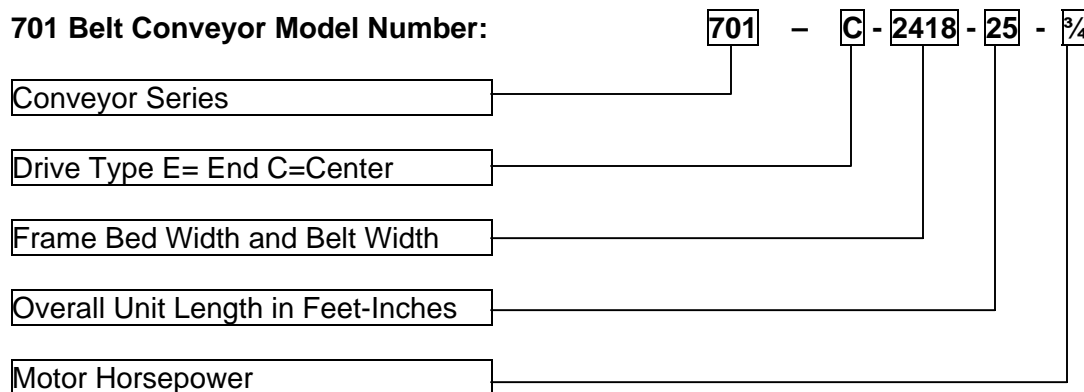
701 Belt Conveyor Specifications and Unit Model Number:

“A” Bed Width	“B” Belt Width
12 ½”	6
18 ½”	12
24 ½”	18
30 ½”	24
36 ½”	30
42 ½”	36
48 ½”	42



- Beds:** Box channel up to 30” wide are 12 gauge galvanized x 6” deep with 1” flange. Beds 36” wide and larger are 10 gauge welded and painted. All beds have bolted guardrail tube crossmembers and return rollers. A standard bed is 6 ½” wider than the belt. Allow 2 inches per side for hardware bolted to the frame.
- Drive Pulleys:** Standard Drive pulleys come in 6”, 9” or 12” diameter crowned and lagged. Drive pulley shafts come in 1 3/16” dia, 1 7/16” dia. or 1 15/16” dia.
- End Pulleys and Take-up Pulleys:** 4” diameter crowned with 1 3/16: dia. shaft. Internal mounted bearings are standard.
- Drive Snubber Roller:** Rollers are 2 ½” diameter 11 gauge steel with ball bearings and 11/16” hex tube spanner and 7/16” diameter shaft.
- Belt return Idler Rollers:** Rollers are 1.9” diameter x 16 gauge steel with ball bearings and 7/16” hex axles. Axles are spring loaded for easy assembly or removal.
- Belt Speed:** 60 Feet Per Minute (FPM) is the most common. Other speeds and variable speed is available as options.

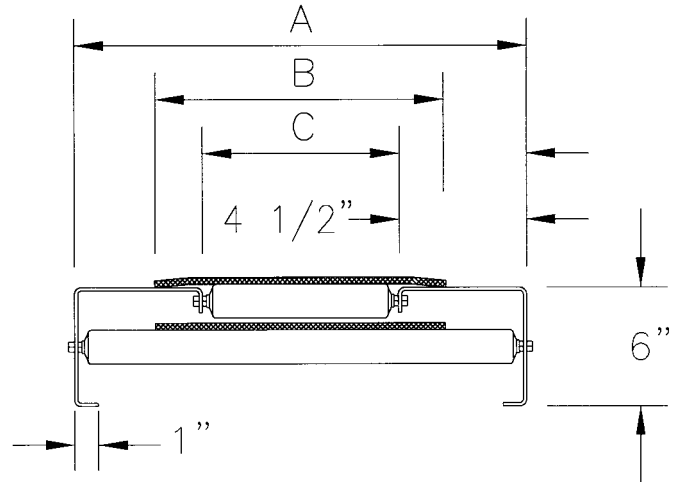
701 Belt Conveyor Model Number:





801 Belt Conveyor Specifications and Unit Model Number:

“A” Bed Width	“B” Belt Width	“C” Roller Width
18 1/2”	12	9 1/4”
24 1/2”	18	15 1/4”
30 1/2”	24	21 1/4”
36 1/2”	30	27 1/4”
42 1/2”	36	33 1/4”
48 1/2”	42	39 1/4”



Beds: Box channel 12 gauge galvanized x 6” deep with 1” flange.

Beds are bolted together using 11/16” hex tube and 7/16” spanner rod.

All beds have bolted guardrail tube crossmembers and return rollers.

A standard bed is 6 1/2” wider than the belt.

Allow 2 inches per side for hardware bolted to the frame.

Carrier Rollers: Rollers are 1.9” diameter x 16 gauge steel with ball bearings and 7/16” hex axles. Axles are spring loaded for easy assembly or removal.

The top of roller is located 1/8” above the top of conveyor bed.

Carrier rollers are available on 3”, 6”, 9” or 12” Centers.

Drive Pulleys: Standard Drive pulleys come in 6”, 9” or 12” diameter crowned and lagged.

Drive pulley shafts come in 1 3/16” dia, 1 7/16” dia. or 1 15/16” dia.

End Pulleys and Take-up Pulleys: 4” diameter crowned with 1 3/16: dia. shaft.

Internal mounted bearings are standard.

Drive Snubber Roller: Rollers are 2 1/2” diameter 11 gauge steel with ball bearings and 11/16” hex tube spanner and 7/16” diameter shaft.

Belt return Idler Rollers: Rollers are 1.9” diameter x 16 gauge steel with ball bearings and 7/16” hex axles. Axles are spring loaded for easy assembly or removal.

Belt Speed: 60 Feet Per Minute (FPM) is the most common. Other speeds and variable speed is available as options.

801 Belt Conveyor Model Number:

801 - C - 2418 - 6 - 25 - 3/4

Conveyor Series

Drive Type E= End C=Center

Frame Bed Width and Belt Width

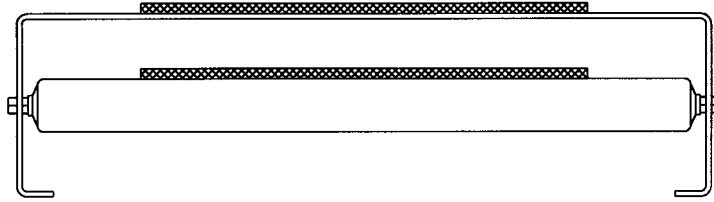
Carrier Roller Centers 6”, 9” or 12”

Overall Unit Length in Feet-Inches

Motor Horsepower



Belt Conveyor Bed Section Part Numbers:



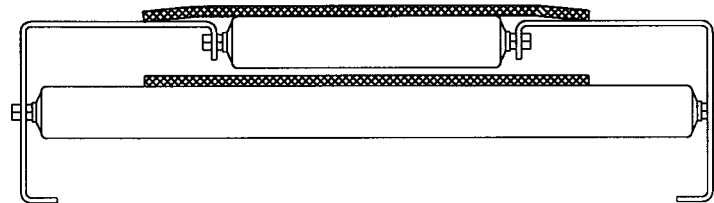
701 Bed Section Model Number:

701 - 2418 - 10

Conveyor Series

Frame Bed Width and Belt Width

Length of Bed Section



801 Bed Section Model Number:

801 - 2418 - 6 - 10

Conveyor Series

Frame Bed Width and Belt Width

Roller Centers

Length of Bed Section

Included as standard are guard rail mounting tubes, belt return idler rollers, one pair of splice plates.

Standard Bed Lengths are 2'-6", 5'-0", 7'-6" and 10'-0".

Center Drives are assembled on 7'-6" bed sections.

Bottom Cover Pans:

Bottom cover pans are used to cover the bottom side of a belt conveyor. They are used where product or personnel could come in contact with the return side of the belt. Typical applications are to cover the bottom of the unit between the floor and 7'-6" above the floor. Bottom Pans are made from 14 gauge galvanized steel with mounting holes and notches for clearance for supports stand heads. The standard assembly includes mounting hardware. Specify bed width and length of bed section when ordering.

Order Separately the Belt, Bottom Pans, Guard Rail and Supports.



Conveyor Belt Selection Guide:

Belt Type

Description	Application	Weight of Belt Per Inch Width
120 Black PVC COS x FS	Most Horizontal / Oil and Cut Resistant	.015
120 White PVC Food Grade	Most Horizontal / Non Marking	.095
120 Black PVC Roughtop	Inclines/Declines to 15° Oil and Cut Resistant	.130
2 ply Nitrile Roughtop	Inclines/Declines to 15° Oil and Cut Resistant	.125
2 ply Rubber Roughtop	Inclines/Declines to 15° Not Oil Resistant	.130
3 ply Rubber Ridgetop	Inclines/Declines to 15° 20° Not Oil Resistant	.125
2 ply Rubber Wedgegrip	Inclines/Declines 20° to 25° Not Oil Resistant	.075

Determining the weight of the belt that will be used for the horsepower calculation.

Take the (Weight of Belt PIW x Width of the belt) x Length of the Belt in Feet = Total Weight of Belt

Belt Length Chart

Model	Equipment Description	Length of Belt Req'd
712	12" Straight End Drive	3'-9"
712	12" Center Drive	4'-11"
709	9" Straight End Drive	3'-2"
709	9" Nose-over End Drive	3'-8"
709	9" Center Drive	3'-6"
706	6" Straight End Drive	2'-7"
706	6" Nose-over End Drive	3'-4"
706L	6" Low Profile Center Drive	3'-1"
706L	6" Low Profile End Drive	1'-2"
701	End Pulley Assembly 419	1'-2"
701	End Pulley Assembly 523	1'-5"
701	Horizontal Take-up	2'-10"
701	Vertical Take-up	1'-4"
701	2'-6" Power Tail Assembly	7'-4"
701	5'-0" Power Tail Assembly	12'-4"
701	Main Unit Power Tail Pulley	1'-4"
NOS	Nose-over Bed Splice	0'-7"

Determining the length of the Belt for a particular unit:

- 1) Take the length of all bed sections and multiply by two.
- 2) Add the belt lengths for each assembly required (See above Chart).

Application Notes:

The Temperature range on the standard belting listed above is 32° F to 150° F.

Consult the factory for low or high temperature applications.

The maximum incline for plastic totes is 15 degrees.

Consult the factory on applications with inclines or declines in excess of 25 degrees.



701 Horsepower Section:

To Determine the Horsepower required on a 701 Series Slider Bed Unit:

- 1) Determine the maximum weight of product that will be on the unit at any time.
- 2) Add the weight of the belt (calculated on page 6).
- 3) Add Steps one and two together.
- 4) Use Table 1 below to determine the estimated horsepower required.

Table 1 – 701 Series Maximum Load Including Belt (Angle of Conveyor Unit)

Estimated Horsepower	0°	5°	10°	15°	20°	25°
1/2	595	470	400	340	300	270
3/4	905	720	610	520	460	410
1	1200	955	810	690	610	545
1 1/2	1840	1465	1240	1055	935	835
2	2300	1870	1615	1405	1265	1130

For Loads that are greater than listed in this table consult the factory.

To Determine the Horsepower required on a 801 Series Belt on Roller Unit:

- 1) Determine the maximum weight of product that will be on the unit at any time.
- 2) Multiply the Weight per Foot in Table 2 times the length of the unit.
- 3) Add Steps one and two together.
- 4) Use Table 3 below to determine the estimated horsepower required.

Table 2 – Weight of Belt and Rollers Per Linear Foot in pounds

	1812	2418	3024	3630	4236	4842
6" Roller Centers	10	13	16	19	22	25
9" Roller Centers	8	11	13	16	18	21
12" Roller Centers	7	10	12	14	16	18

Table 3 – 801 Series Maximum Load Including Belt (Angle of Conveyor Unit)

Estimated Horsepower	0°	5°	10°	15°	20°	25°
1/2	2950	1330	850	630	505	420
3/4	4525	2000	1290	955	760	640
1	6000	2600	1670	1240	990	830
1 1/2	9200	3920	2640	1820	1500	1250
2	13900	5900	3975	2740	2250	1875

For Loads that are greater than listed in this table consult the factory.

Tables are based on 60 Feet Per Minute with a 1.25 service factor.



701 and 801 Drives:

Horsepower / Reducer Availability 6" Drive Speed in FPM

30	40	50	60	70	80	90	100
1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
N/A	N/A	N/A	1	1	1	1	1

Horsepower / Reducer Availability 9" Drive Speed in FPM

30	40	50	60	70	80	90	100
1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
N/A	1	1	1	1	1	1	1
N/A	N/A	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
N/A	N/A	2	2	2	2	2	2

Horsepower / Reducer Availability 12" Drive Speed in FPM

30	40	50	60	70	80	90	100
N/A	1	1	1	1	1	1	1
N/A	N/A	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
N/A	N/A	2	2	2	2	2	2
N/A	N/A	3	3	3	3	3	3

To Determine the part number for a drive the following information is required.

- 1) Bed Width and Belt Width
- 2) If a End Drive or Center Drive is Required.
- 3) The Horsepower of the motor (From Table 1 or 3)
- 4) Determine the drive size based on the load in table 4 using the load value of step 3 of Pg 9.

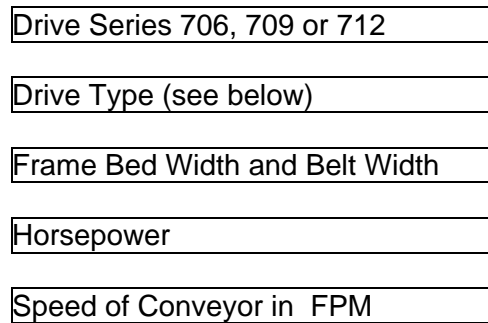
Table 4 - Drive Size

Drive Size	706	709	712
701 Horizontal Unit	975	1950	2775
701 Incline Unit	404	809	1152
801 Horizontal Unit	2925	5850	8325
801 Incline Unit	559	1119	1592

Do not exceed 120 pounds per inch of belt width working strength.

Belt Conveyor Drive Model Number:

709 - C - 2418 - 1/2 - 60



Drive Types:

S= Straight End Drive

LPS= Low Profile Straight End Drive

C= Center Drive

LPC= Low Profile Center Drive

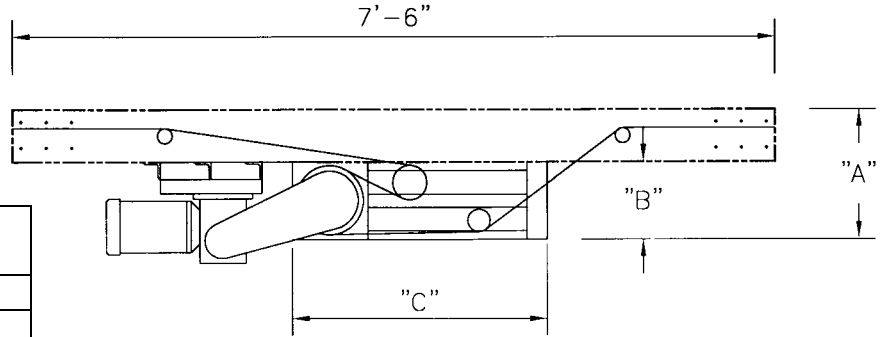


Drive Description and Dimensions:

Center Drive:

Drive Pulley	"A" Dim.	"B" Dim.	"C" Dim.
12" Dia.	24	18	56
9" Dia.	16	10	30
6" Dia. LPC	13	7	28

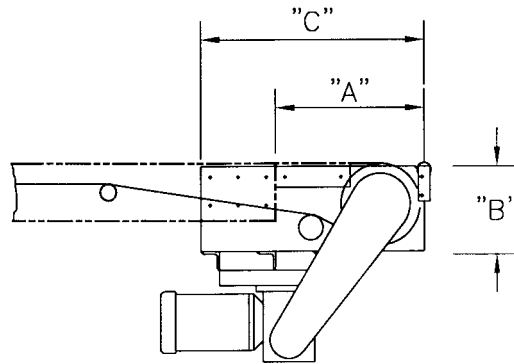
LPC = Low Profile Center



Straight End Drive:

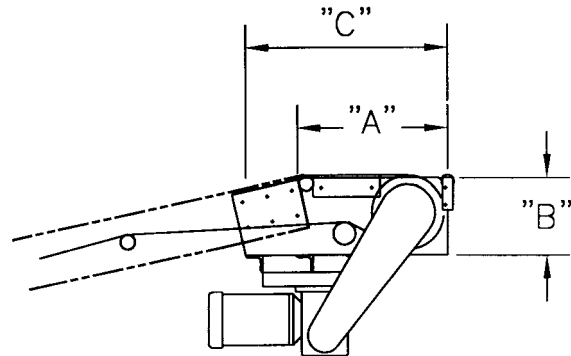
Drive Pulley	"A" Dim.	"B" Dim.	"C" Dim.
12" Dia.	18 1/2	12 7/8	27
9" Dia.	16	10 1/2	24
6" Dia.	15	9 3/4	22 1/2
6" Dia. LPS	5 1/2	5 3/4	11 1/2

LPS = Low Profile Straight



Nose-Over End Drive:

Drive Pulley	"A" Dim.	"B" Dim.	"C" Dim.
9" Dia.	20	10 1/2	26
6" Dia.	19	9 3/4	24 1/2





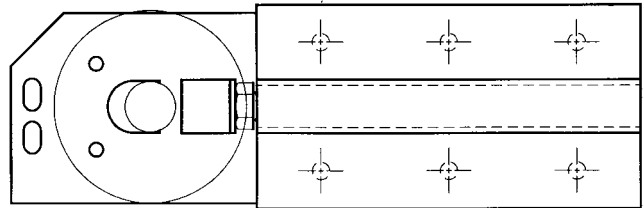
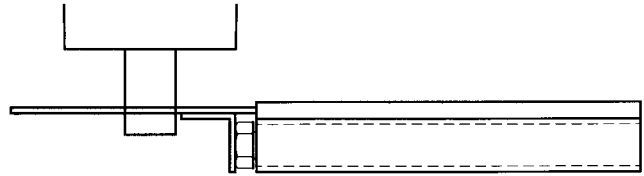
Belt Conveyor End Pulley Assemblies:

419 End Assembly

Pulley Diameter: 4 inch

Bearings: Internal to Pulley

Shaft Diameter: 1 3/16"



Optional 523 End Assembly

Pulley Diameter: 5 inch

Bearings: Mounted outboard on slide pockets

Shaft Diameter: 1 7/16"

One end pulley is required on an end drive conveyor without a power tail.

One end pulley is required on a center drive with a power tail.

Two end pulleys are required on a center drive without a power tail.

End Pulley Model Number:

701EP - 2418 - 419

Conveyor Series End Pulley

Frame Bed Width and Belt Width

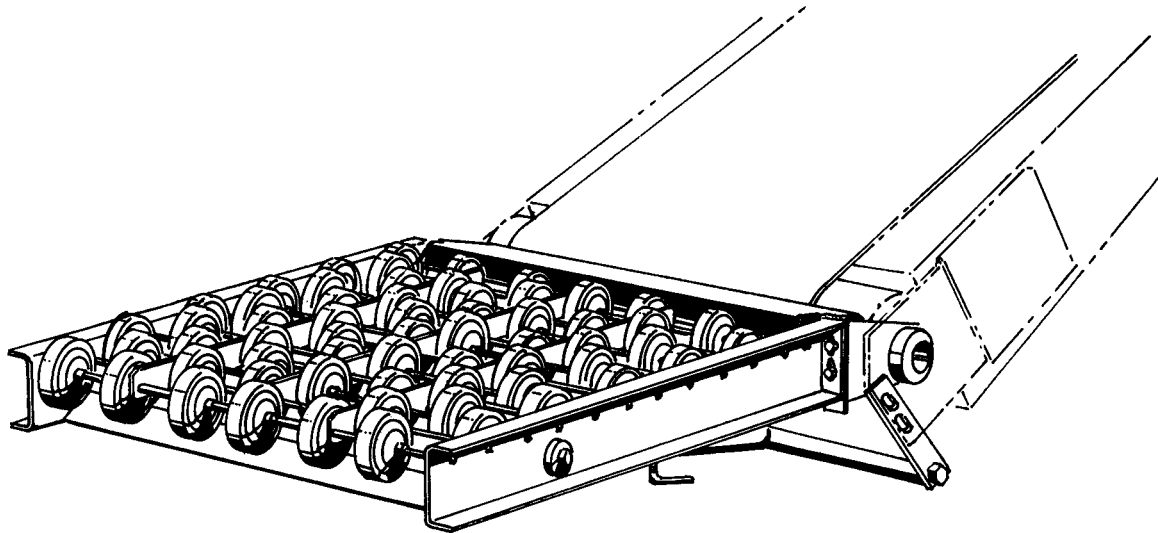
End Pulley Assy (419 or 523)

Options for 5" diameter pulley and outboard mounted bearings.

Standard unit Includes slide plates and pockets, pulley with internal bearings, shaft, pop-out roller, gravity connector with mounting brackets and gap plate.



Belt Conveyor Gravity Wheel Feeder:



Gravity wheel feeders are normally used in a system where a gravity line is feeding onto a line booster and a power tail is not desired. Wheel feeders are also used when manual loading product on a interfloor conveyor.

Gravity wheel feeders consist of an 18” long section of wheel conveyor with close packed wheels on 1 ½” centers. The feeder attaches to the shaft of a 419 end assembly. The feeder is self-supporting with enough adjustment to allow for proper feed angle on any incline conveyor. A pivot gap plate raises the leading edge of packages declining on the unit to prevent jamming near the first row of wheels, the pivot plate bridges the gap between the beds for the inclining product.

One end pulley is required on an end drive conveyor without a power tail.

One end pulley is required on a center drive with a power tail.

Two end pulleys are required on a center drive without a power tail.

End Pulley Model Number:

701 - GWF - 12

Conveyor Series

Gravity Wheel Feeder

Bed Width (12,18,24 or 30)

Standard unit includes gravity wheel section, pivoting gap plate and 419 End Assembly less the pop-out roller.



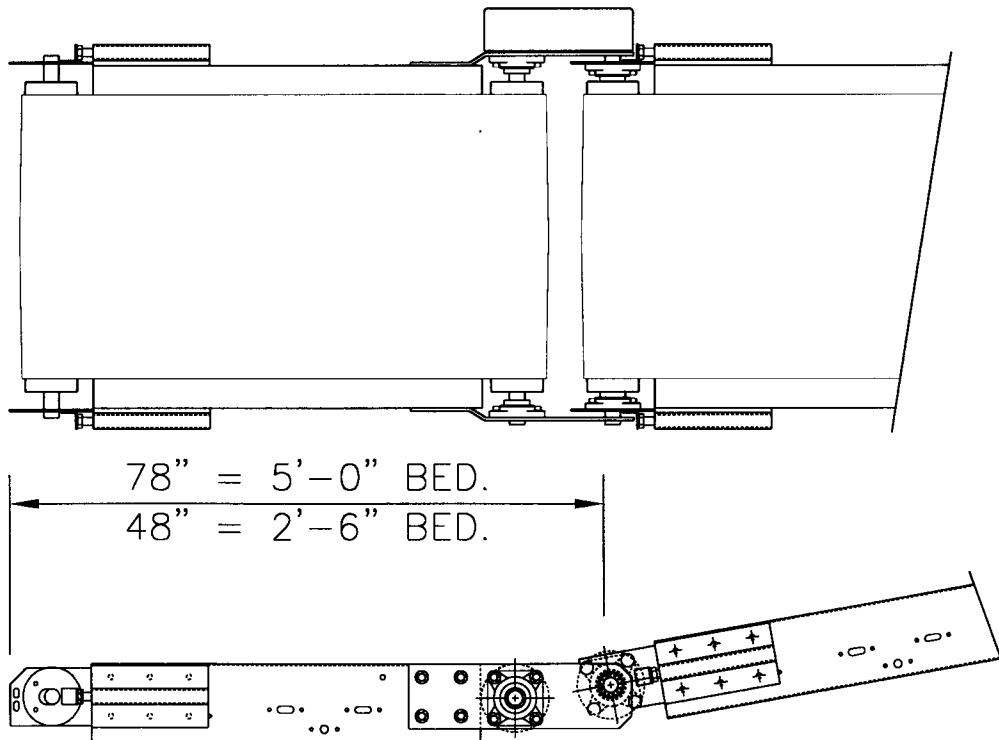
Belt Conveyor Power Tail Assembly:

The power tail is a short conveyor powered through sprockets and chain, by the end pulley on the main conveyor. When feeding a incline unit, power tails transfer product smoothly onto the incline unit, eliminating the possibility of a hang-up in horizontal to incline travel. Power tails are also effective on the decline conveyor transition to horizontal.

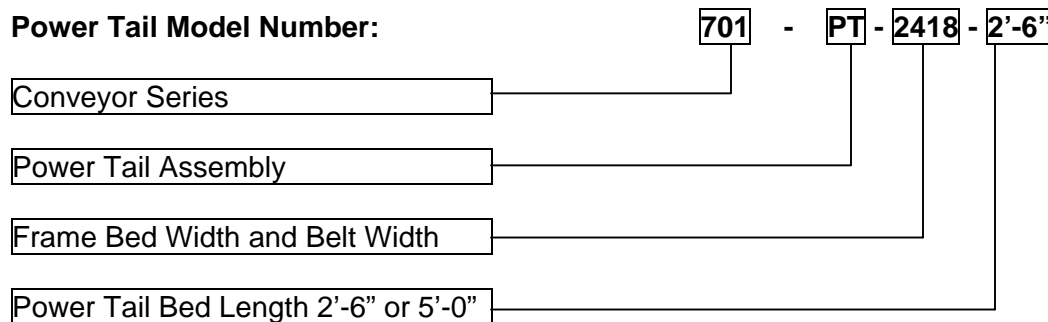
The angle of a power tail can be adjusted to utilize any angle of incline by the main conveyor.

The 2'-6" Power Tail is available for 126, 1812 and 2418 sizes.

The 5'-0" Power Tail is available for 126, 1812, 2418, 3024, 3630, 4236, 4842 sizes.



Power Tail Model Number:

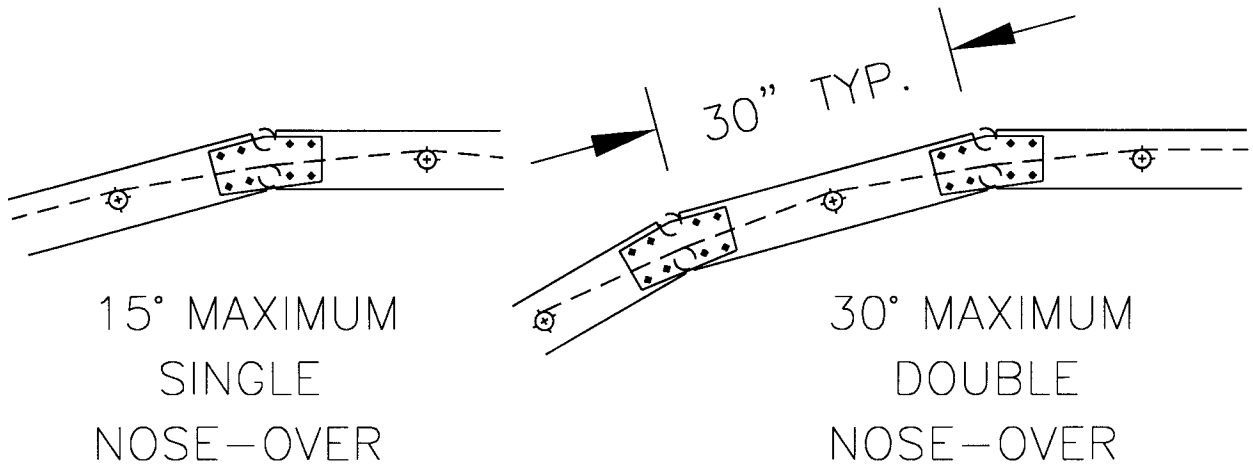


Standard unit includes two 5" diameter pulleys with 1 3/16" shafts, one 419 end assembly with pop-out roller, gravity hook bar and PVC 120 belt squared and laced.

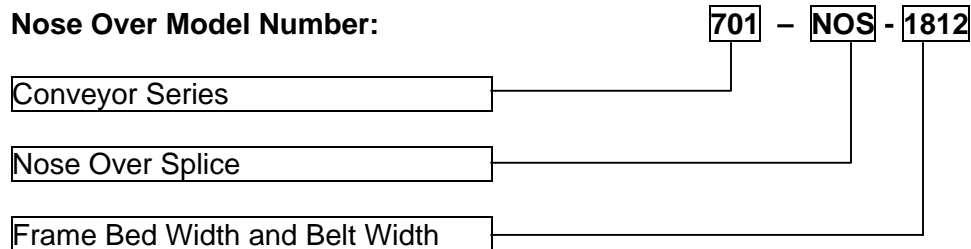


Nose over Bed Splice:

A nose over bed splice is used to provide a smooth transition from the incline to horizontal. The angle of transition of the nose over splice can be adjusted or two can be used to smooth out a steep incline/decline angle.



Nose Over Model Number:

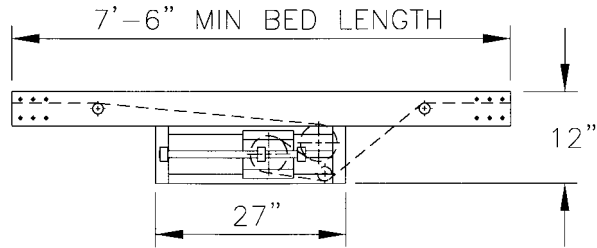


Standard unit contains two splice plates, one snubber roller and mounting hardware.



Horizontal and Vertical Take-ups:

Horizontal Take-up:



A horizontal take-up should be used on end drives with one adjustable tail pulley on conveyors 40 feet in length up to 110 feet in length.

A horizontal take-up should be used on end drives without an adjustable tail pulley on conveyors 10 feet in length up to 75 feet in length.

Horizontal Take-up Model Number:

701 - HTU - 1812

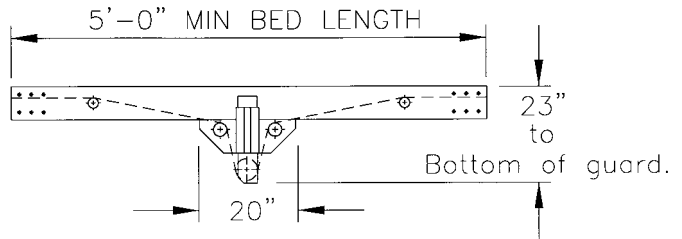
Conveyor Series

Horizontal Take-up

Frame Bed Width and Belt Width

Standard unit includes a take-up frame assembly with snubber roller, two 4" diameter pulleys with 1 3/16" diameter shafts and guards.

Vertical Take-up:



A vertical take-up should be used on end drives with one adjustable tail pulley on conveyors 40 feet in length up to 80 feet in length.

A vertical take-up should be used on end drives without an adjustable tail pulley on conveyors 10 feet in length up to 40 feet in length.

Vertical Take-up Model Number:

701 - VTU - 1812

Conveyor Series

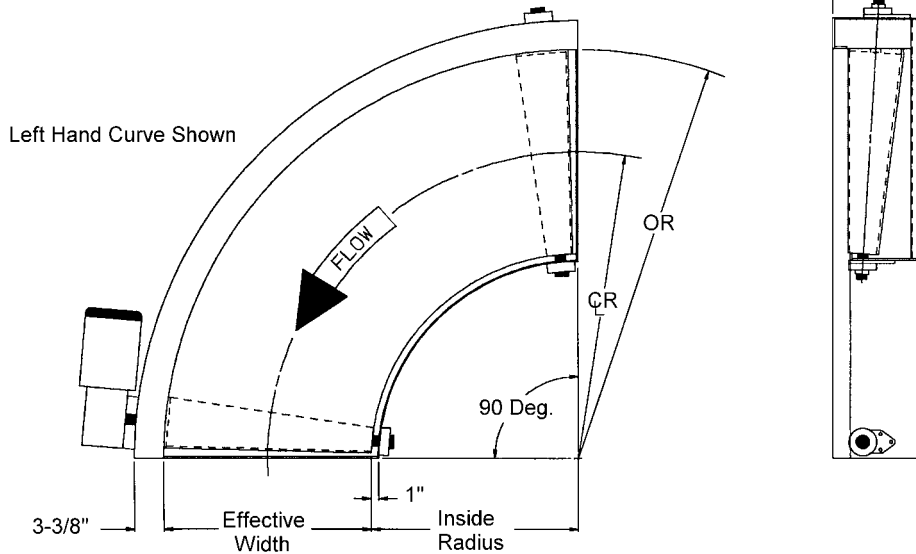
Vertical Take-up

Frame Bed Width and Belt Width

Standard unit includes a take-up frame assembly with two snubber rollers, one 4" diameter pulley with 1 3/16" diameter shafts and guards.



Series 715 Powered Belt Curve Specifications:



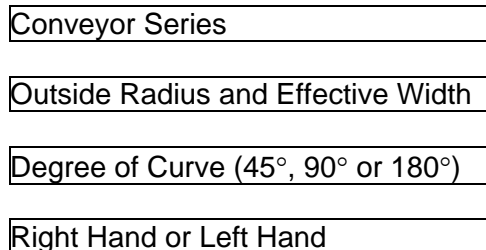
Outside Radius "OR"	Effective Belt Width	Inside Radius of Belt	Center Line Radius "CR"	Frame Channel "F"	Pulley Shaft Diameter	Maximum Live Load On Curve
36"	6"	30"	33"	10 7/8"	1"	400 lbs
	8"	28"	32"			
	12"	24"	30"			
48"	12"	36"	42"			
	18"	30"	39"			
	20"	28"	38"			
60"	24"	24"	36"	12 1/4"	1 3/16"	600 lbs
	24"	36"	48"			
	30"	30"	45"			
72"	36"	24"	42"	13 7/8"	1 7/16"	700 lbs
	36"	36"	54"			
	42"	30"	51"			
87"	48"	24"	48"	12 3/4"		800 lbs
	36"	51"	69"			
	42"	45"	66"			
	48"	39"	63"			

715 Series Specifications:

- Belt: Black PVC other belts are available as options.
- Side Frame: 10 gauge
- Standard Drive pulley is tapered with rough top lagging.
- Motor: 230/460 volt, 3 phase, 60 Hz specify voltage when ordering.
- Belt Speed: 60 Feet Per Minute (FPM) at the centerline of the carrying surface
- Other speeds are available as options.

715 Unit Model Number:

715BC - 6024 - 90 - RH

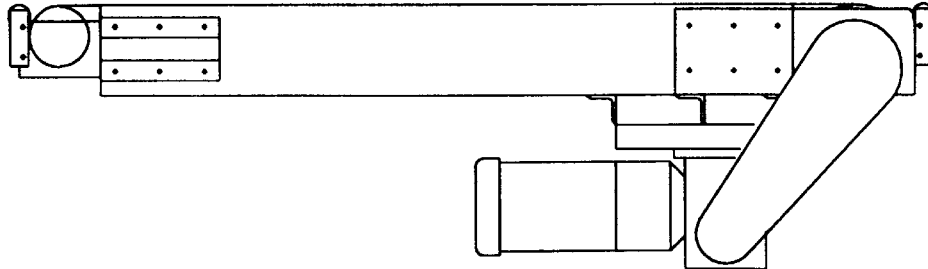


Order Controls and supports separately.



Series 720 Brake Metering Belt Specifications:

The series 720 brake metering belt is a short horizontal belt conveyor used to singulate, meter, retard or speed up product flow in a system.



Belt: PVC Roughtop

Beds: Box channel up to 30" wide are 12 gauge galvanized x 6" deep with 1" flange.

Beds 36" wide and larger are 10 gauge welded and painted. All beds have bolted guardrail tube crossmembers and return rollers. A standard bed is 6 1/2" wider than the belt. Allow 2 inches per side for hardware bolted to the frame.

Drive Pulley: Standard Drive pulley is 6" diameter crowned and lagged.

Drive pulley shaft is 1 3/16" dia.

Motor: 1/2 Hp 230/460 volt, 3 phase, 60 Hz specify voltage when ordering.

Clutch/Brake: Included on standard unit with 120vac rectifier. Form "C" relay contacts are required to operate the clutch/brake.

End Pulleys: 4" diameter crowned with 1 3/16" dia. shaft. Internal mounted bearings are standard.

Drive Snubber Roller: Rollers are 2 1/2" diameter 11 gauge steel with ball bearings and 11/16" hex tube spanner and 7/16" diameter shaft.

Belt return Idler Rollers: Rollers are 1.9" diameter x 16 gauge steel with ball bearings and 7/16" hex axles. Axles are spring loaded for easy assembly or removal.

Belt Speed: 60 Feet Per Minute (FPM) is the most common. Other speeds are available as options.

720 Unit Model Number:

720-BB - 1812 - 2'-6" - 1/2

Conveyor Series

Frame Bed Width and Belt Width

Length of Bed

Horsepower

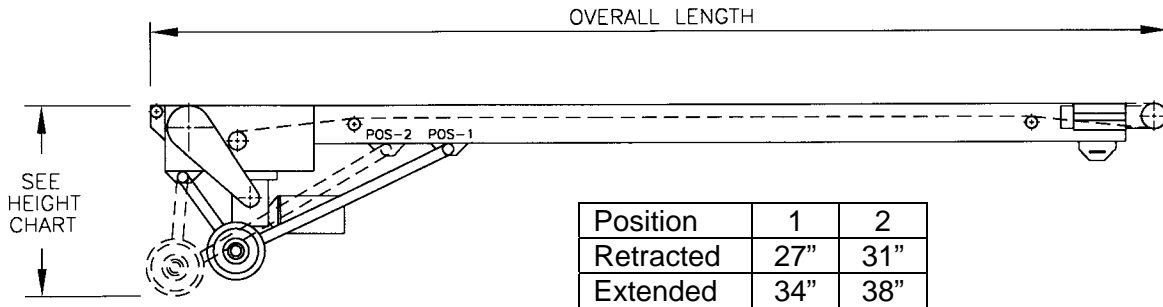
The standard unit is 3'-8" overall length. The bed length can be increased in one foot increments to a maximum of 8'-8" overall length.

Order Controls and supports separately.



Series 725 Portable Power Helper Specifications:

The series 725 Power Helper is a versatile unit that is easily moved to a stairway, loading dock or assembly operation. A convenient lift handle allows one person to maneuver into position.



Belt: Rubber Ridge Top

Beds: Box channel 1/8" Aluminum x 6" deep with 1" flange.

Standard Widths are 1812 and 2418.

Drive Pulley: Standard Drive pulley is 9" diameter crowned and lagged.

Drive pulley shafts is 1 7/16" dia.

Motor: 3/4 Hp 115, 1 phase, 60 Hz

End Pulley: 4" diameter crowned with 1 3/16" dia. shaft. Internal mounted bearings are standard.

Drive Snubber Roller: Rollers are 2 1/2" diameter 11 gauge steel with ball bearings and 11/16" hex tube spanner and 7/16" diameter shaft.

Belt return Idler Rollers: Rollers are 1.9" diameter x 16 gauge steel with ball bearings and 7/16" hex axles. Axles are spring loaded for easy assembly or removal.

Belt Speed: 60 Feet Per Minute (FPM) is Standard. Other speeds and variable speed is available as options.

Supports: Adjustable undercarriage at drive end with 8" diameter wheels. Overall width of the support is 24 inches wider than the bed width.

Controls: Reversing Controls Mounted and Wired to The Motor.

725 Unit Model Number:

725-PPH - 1812 - 10' - 3/4

Conveyor Series

Frame Bed Width and Belt Width

Overall Length of Unit

Horsepower

The standard units are 10', 12', 15', 17', and 22' long overall length.

The Maximum Distributed load for a horizontal application is 625 pounds.

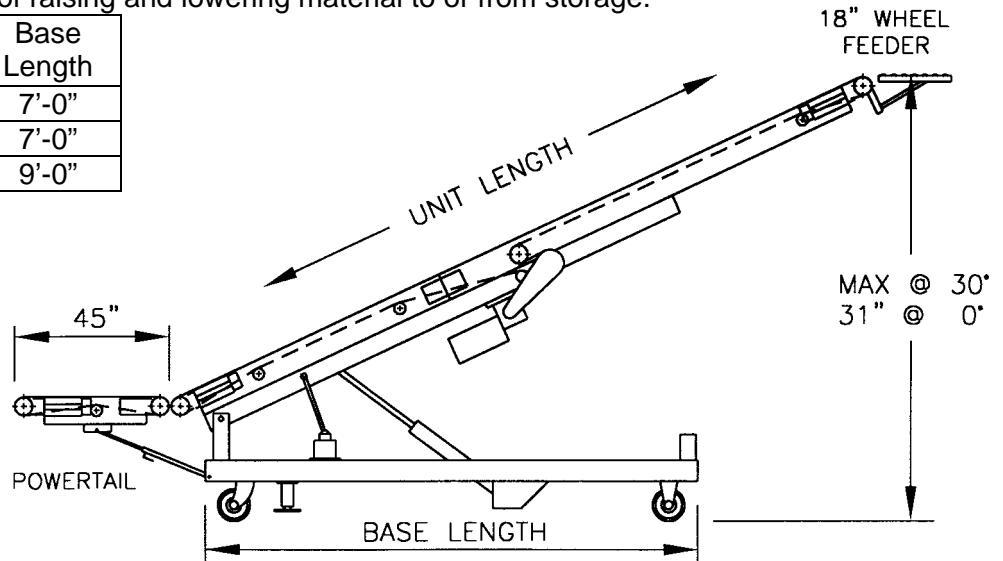
The Maximum Distributed load for a 30° incline is 235 pounds.



Series 730 Booster Stacker Specifications:

The series 730 Booster Stacker is a versatile unit which is used for conveying product in processing operations to make light work of raising and lowering material to or from storage.

Unit Length	Max Elevation at 30° Incline	Base Length
11'-3"	8'-3"	7'-0"
13'-9"	9'-6"	7'-0"
16'-3"	10'-9"	9'-0"



Belt: Rubber Ridge Top

Beds: Box channel 12 gauge galvanized x 6" deep with 1" flange.

Standard Widths are 1812 and 2418.

Drive Pulley: Standard Drive pulley is 6" diameter crowned and lagged.

Drive pulley shafts is 1 3/16" dia.

Motor: 3/4 Hp 115, 1 phase, 60 Hz

End Pulleys: 4" diameter crowned with 1 3/16" dia. shaft. Internal mounted bearings are standard.

Drive Snubber Roller: Rollers are 2 1/2" diameter 11 gauge steel with ball bearings and 11/16" hex tube spanner and 7/16" diameter shaft.

Belt return Idler Rollers: Rollers are 1.9" diameter x 16 gauge steel with ball bearings and 7/16" hex axles. Axles are spring loaded for easy assembly or removal.

Belt Speed: 60 Feet Per Minute (FPM) is Standard.

Portable Base: 10 gauge x 4 1/2" x 1 1/4" flange fabricated channel with 8" diameter casters.

Two casters are fixed and two are swivel type. Overall Width is Frame Width plus 12".

Two floor locks are used to hold the unit in position.

Hydraulic Jack: 2" dia. bore x 18" stroke hydraulic ram with hand operated pump and reservoir.

Controls: Reversing Controls Mounted and Wired to The Motor.

730 Unit Model Number:

730-BS - 1812 - 11' - 3/4

Conveyor Series

Frame Bed Width and Belt Width

Length of Bed

Horsepower

The standard units are 11', 14', and 16' long overall length.

The Maximum Distributed load for a horizontal application is 625 pounds.

The Maximum Distributed load for a 30° incline is 235 pounds.

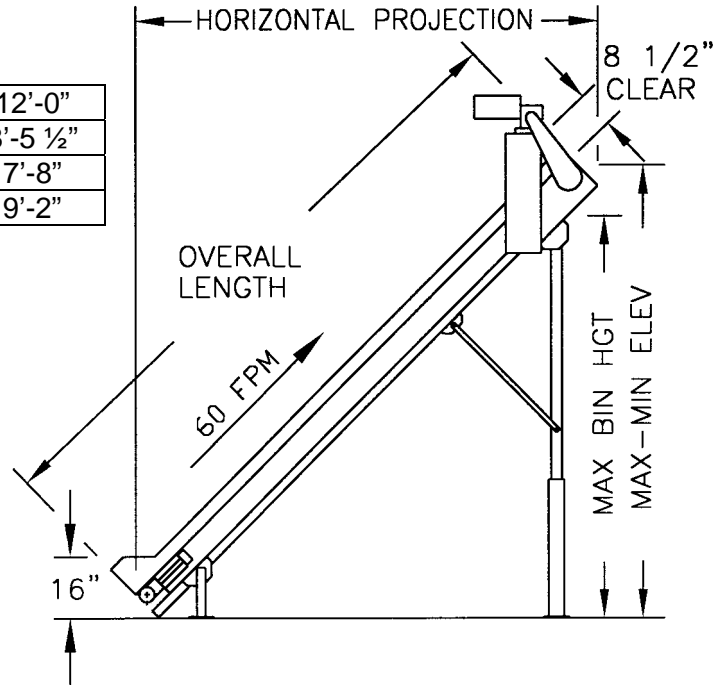
Optional Equipment: power feeders and/or gravity wheel feeders.



Series 750 Press Conveyor Specifications:

The series 750 Press Conveyor is designed to carry punch press formed or cast parts from a machine into a bin.

Overall Length	7'-0"	9'-6"	12'-0"
Maximum	4'-10 1/2"	6'-8"	8'-5 1/2"
Minimum	4'-4 1/2"	5'-4"	7'-8"
Horizontal Projection	5'-7"	7'-4"	9'-2"



Belt: PVC 120 with 1 1/2" cleats on 12" centers.

Beds: Box channel 12 gauge galvanized x 6" deep with 1" flange.

Standard Widths are 126, 1812 and 2418. Belt Return pans are mounted on 9'-6" and 12' overall length units.

Guardrail: 3" high angle guardrail and flipper gate located on the low end.

Drive Pulley: Standard Drive pulley is 6" diameter crowned and lagged.

Drive pulley shaft is 1 3/16" dia.

Motor: 1/2 Hp 115, 1 phase, 60 Hz

End Pulleys: 4" diameter crowned with 1 3/16" dia. shaft. Internal mounted bearings are standard.

Belt Speed: 60 Feet Per Minute (FPM) is Standard. Other Speeds are Available.

Supports: C700 series Adjustable "H" style Supports

Controls: Non-Reversing Manual Motor Starter Mounted and Wired to the Motor.

750 Unit Model Number:

750-PC - 1812 - 7' - 1/2

Conveyor Series

Frame Bed Width and Belt Width

Length of Bed

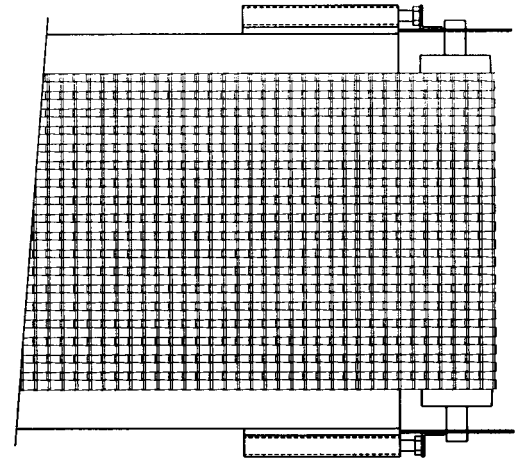
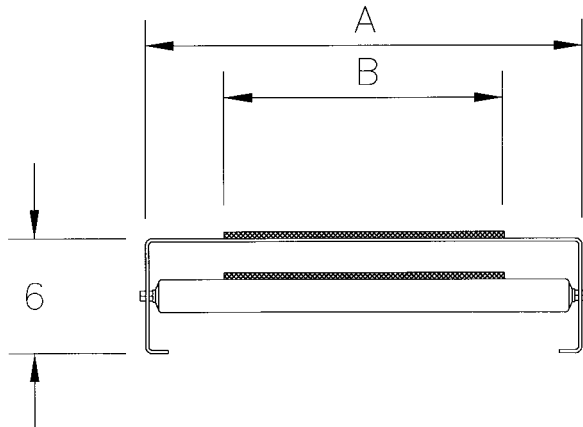
Horsepower

This unit is not recommended for thin parts such as washers.

Optional Equipment Casters for the high end support, other voltages, widths or number of cleats.



Series 760 Flat Wire Belt on Slider Bed Conveyor Specifications:



Bed "A"	Belt "B"
18 ½"	12"
24 ½"	18"
30 ½"	24"

Belt: ½" x 1" "Flat Wire" galvanized with safety cinched edge. Picket 3/8" x 0.046" Flat Wire with 12 gauge connectors.

Beds: Box channel 12 gauge galvanized x 6" deep with 1" flange.

Standard Widths are 1812, 2418 and 3024

Drive Pulley: Number 6 sprockets on 6" centers. Drive shaft is 1 3/16" dia. keyed with set screws.

Motor: 3/4 Hp 230/460, 3 phase, 60 Hz

End Pulleys: 4" diameter flat faced with 1 3/16" dia. shaft. Internal mounted bearings are standard.

Belt return Idler Rollers: Rollers are 1.9" diameter x 16 gauge steel with ball bearings and 7/16" hex axles. Axles are spring loaded for easy assembly or removal.

Belt Speed: 60 Feet Per Minute (FPM) is Standard. Other Speeds are Available.

760 Unit Model Number:

760-FW - 1812 - 7' - 3/4

Conveyor Series

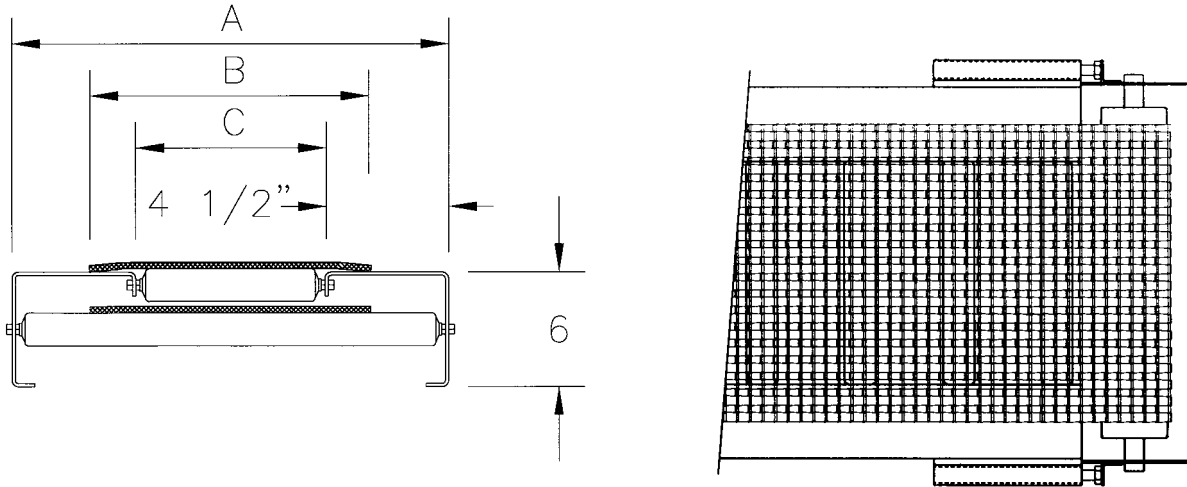
Frame Bed Width and Belt Width

Length of Bed

Horsepower



Series 765 Flat Wire Belt on Roller Bed Conveyor Specifications:



Bed "A"	Belt "B"	Roller "C"
18 1/2"	12"	9 1/4"
24 1/2"	18"	15 1/4"
30 1/2"	24"	21 1/4"

Belt: 1/2" x 1" "Flat Wire" galvanized with safety cinched edge. Picket 3/8" x 0.046" Flat Wire with 12 gauge connectors.

Beds: Box channel 12 gauge galvanized x 6" deep with 1" flange. Bolted together with 11/16" hex tube and 7/16" spanner rod. Standard Widths are 1812, 2418 and 3024

Belt Carrier Rollers: Rollers are 1.9" diameter x 16 gauge steel with ball bearings and 7/16" hex axles on 6" centers. Axles are spring loaded for easy assembly or removal.

Drive Pulley: Number 6 sprockets on 6" centers. Drive shaft is 1 3/16" dia. keyed with set screws.

Motor: 3/4 Hp 230/460, 3 phase, 60 Hz

End Pulleys: 4" diameter flat faced with 1 3/16" dia. shaft. Internal mounted bearings are standard.

Belt return Idler Rollers: Rollers are 1.9" diameter x 16 gauge steel with ball bearings and 7/16" hex axles. Axles are spring loaded for easy assembly or removal.

Belt Speed: 60 Feet Per Minute (FPM) is Standard. Other Speeds are Available.

765 Unit Model Number:

765-FW - 1812 - 7' - 3/4

Conveyor Series

Frame Bed Width and Belt Width

Length of Bed

Horsepower



Belt Conveyor Options:

**Options include widths, lengths and controls
Consult factory with a dimensional sketch of the desired unit.**

Frame Options:

Special Widths to match an Existing Conveyor
Special Paint Colors
Powder Coated Frames
Bright Zinc Plating on Frames

801 Belt on Roller Options:

Special Roller Widths
Upgrade Roller Bearings
Bright Zinc Plating on Rollers
Pinned Roller Axles

Drive Options:

Single or Three Phase Motors
Clutch/Brake Assemblies
Timing Belt Components
Brake Motors



Belt Conveyor Replacement Parts:

6" Drive Pulleys (5" Diameter plus Lagging) Includes 1 3/16" Diameter Shaft

Overall Width	Belt Width	Face Width	Pulley with 1 3/16" Bore
12 1/2"	6"	7"	706-126Dpulley
18 1/2"	12"	13"	706-1812Dpulley
24 1/2"	18"	19"	706-2418Dpulley
30 1/2"	24"	25"	706-3024Dpulley
* 36 1/2"	30"	31"	706-3630Dpulley
* 42 1/2"	36"	37"	706-4236Dpulley
* 48 1/2"	42"	43"	706-4842Dpulley

* = For power tail drive pulleys only

9" Drive Pulleys (8" Diameter plus Lagging) Includes 1 7/16" Diameter Shaft

Overall Width	Belt Width	Face Width	Pulley with 1 7/16" Bore
12 1/2"	6"	7"	709-126Dpulley
18 1/2"	12"	13"	709-1812Dpulley
24 1/2"	18"	19"	709-2418Dpulley
30 1/2"	24"	25"	709-3024Dpulley
36 1/2"	30"	31"	709-3630Dpulley
42 1/2"	36"	37"	709-4236Dpulley
48 1/2"	42"	43"	709-4842Dpulley

12" Drive Pulleys (12" Diameter plus Lagging) Includes 1 15/16" Diameter Shaft

Overall Width	Belt Width	Face Width	Pulley with 1 15/16" Bore
18 1/2"	12"	13"	712-1812Dpulley
24 1/2"	18"	19"	712-2418Dpulley
30 1/2"	24"	25"	712-3024Dpulley
36 1/2"	30"	31"	712-3630Dpulley
42 1/2"	36"	37"	712-4236Dpulley
48 1/2"	42"	43"	712-4842Dpulley

4" End Pulley (4" Diameter with Internal Bearings) Includes 1 3/16" Diameter Shaft

Overall Width	Belt Width	Face Width	Pulley with 1 3/16" Bore
12 1/2"	6"	7"	701-126-419Epulley
18 1/2"	12"	13"	701-1812-419Epulley
24 1/2"	18"	19"	701-2418-419Epulley
30 1/2"	24"	25"	701-3024-419Epulley
36 1/2"	30"	31"	701-3630-419Epulley
42 1/2"	36"	37"	701-4236-419Epulley
48 1/2"	42"	43"	701-4842-419Epulley

5" End Pulley (5" Diameter with Internal Bearings) Includes 1 7/16" Diameter Shaft

Overall Width	Belt Width	Face Width	Pulley with 1 3/16" Bore
12 1/2"	6"	7"	701-126-523Epulley
18 1/2"	12"	13"	701-1812-523Epulley
24 1/2"	18"	19"	701-2418-523Epulley
30 1/2"	24"	25"	701-3024-523Epulley
36 1/2"	30"	31"	701-3630-523Epulley
42 1/2"	36"	37"	701-4236-523Epulley
48 1/2"	42"	43"	701-4842-523Epulley

701/801 Snubber Roller

Overall Width	Belt Width	Snubber Rollers Steel
12 1/2"	6"	701-126SRS
18 1/2"	12"	701-1812SRS
24 1/2"	18"	701-2418SRS
30 1/2"	24"	701-3024SRS
36 1/2"	30"	701-3630SRS
42 1/2"	36"	701-4236SRS
48 1/2"	42"	701-4842SRS



701/801 Return Rollers with 7/16" Hex Shaft

Overall Width	Belt Width	Return Rollers Steel
12 ½"	6"	701-126RRS
18 ½"	12"	701-1812RRS
24 ½"	18"	701-2418RRS
30 ½"	24"	701-3024RRS
36 ½"	30"	701-3630RRS
42 ½"	36"	701-4236RRS
48 ½"	42"	701-4842RRS

801 Carrier Rollers with 7/16" Hex Shaft

Overall Width	Belt Width	Carrier Rollers Steel
12 ½"	6"	801-126CRS
18 ½"	12"	801-1812CRS
24 ½"	18"	801-2418CRS
30 ½"	24"	801-3024CRS
36 ½"	30"	801-3630CRS
42 ½"	36"	801-4236CRS
48 ½"	42"	801-4842CRS

Four Hole Flange Bearings

ID of Bearing	Part Number
1 3/16"	706-4hole19
1 7/16"	709-4hole23
1 15/16"	712-4hole31

Plastic Chain Guards

Drive	Part Number
706	706-PCG
709 & 712	709-PCG
Power Tail	701-PT-PCG

Chain Parts:

50B12T to 50B35T	Standard Sprockets for #50 Chain
50-Chain	Feet of #50 Roller Chain
60B11T to 60B36T	Standard Sprockets for #60 Chain
60-Chain	Feet of #60 Roller Chain
80B12T to 80B30T	Standard Sprockets for #80 Chain
80-Chain	Feet of #80 Roller Chain

Touch-Up Paint

MB-SPaint	Spray Can of Metzgar Blue Touch-up Paint
MB-1gCPaint	One Gallon Can of Metzgar Blue Touch-up Paint
VG-SPaint	Spray Can of Vista Green Touch-up Paint
VG-1gCPaint	One Gallon Can of Vista Green Touch-up Paint

Notes:

**Section 4 – Belt Driven Live Roller Conveyor**

Page	Description
4-1	BDLR Conveyor Index
4-2	Steps to Assembling a Complete BDLR Conveyor
4-3	Elevation Examples
4-4	Power Conveyor Data Sheet
4-5	401 Belt Conveyor Specifications and Unit Model Number
4-6	430 Belt Conveyor Specifications and Unit Model Number
4-7	401 and 430 Bed Selection
4-8	Belt Lengths and 430 Accumulation Operation
4-9	401 Horsepower Selection
4-10	430 Horsepower Selection
4-11	401 and 430 Drive Size and Model Number
4-12	401 and 430 Drive Dimensions and End Pulley Assembly
4-13	401 and 430 Horizontal and Vertical Take-ups
4-14	435 Electronic Accumulating BDLR Elevation and Features
4-15	435 Belt Driven Conveyor Specifications and Unit Model Number
4-16	450 Series Tapered Roller Curves
4-17	450 Series Curve Tangents
4-18	450 Series 90° Spur/Merge
4-19	450 Series 45° Spur/Merge
4-20	460 Belt Conveyor Specifications and Unit Model Number
4-21	460 Bed Selection, Belt Length and End Pulley
4-22	Drive Horsepower vs Load Chart 3" Roller Centers
4-23	Drive Horsepower vs Load Chart 6" Roller Centers
4-24	460 Drive Model Number
4-25	Belt Driven Live Roller Conveyor Options
4-26	BDLR Replacement Parts
4-27	BDLR Replacement Parts Continued
4-28	BDLR Replacement Parts Continued

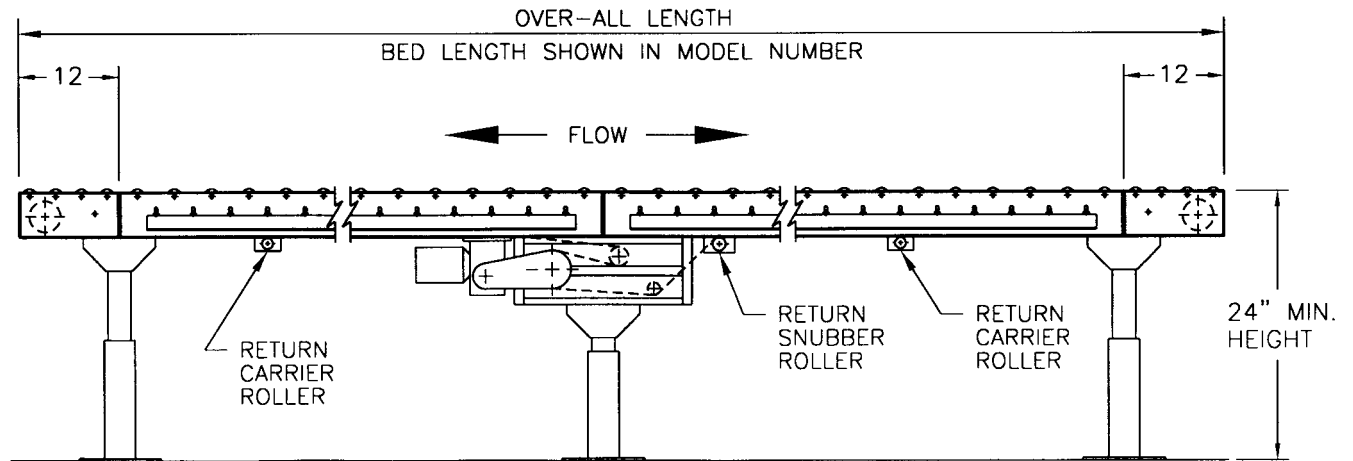
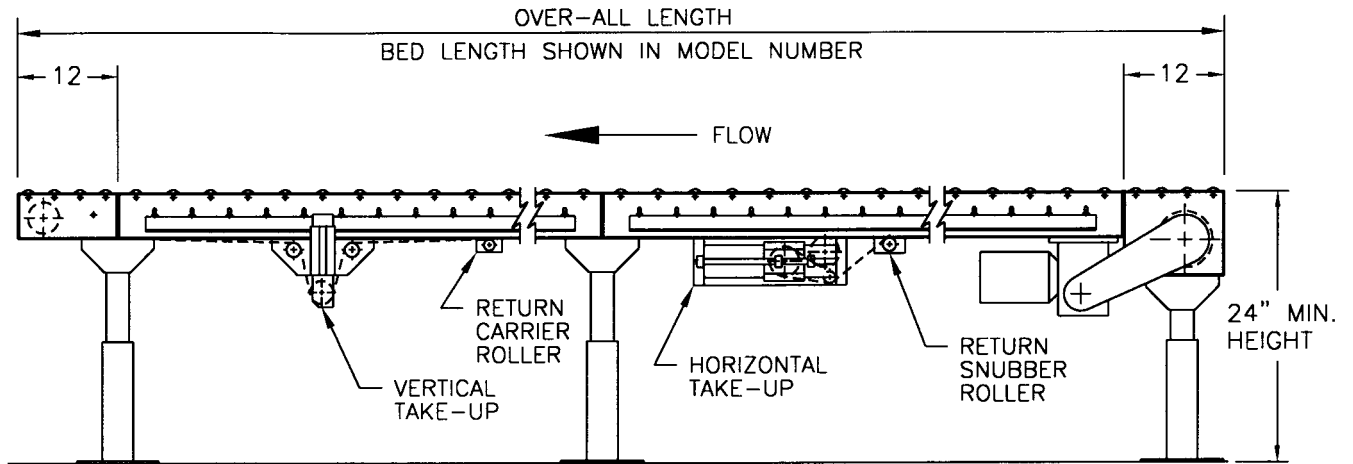
**Steps To Assembling a Complete Belt Driven Live Roller Conveyor Unit:**

The following steps will assist you in assembling a complete belt conveyor unit.

- 1) Determine the width of the conveyor you will require based on the widest product that will be conveyed on the unit.
- 2) Determine the overall length of the unit (starting point and ending point).
- 3) Determine the style of conveyor to be used.
 - 401 Belt Drive Live Roller mainly used for transportation.
 - 430 Belt Driven Live Roller accumulating conveyor.
 - 435 Belt Driven Live Roller electronic accumulating conveyor.
- 4) What is the heaviest product? How much product weight is on the conveyor total?
- 5) Select the Type of drive required.
 - End Drives are used for non-reversing applications.
 - Center Drives are used for reversing applications.
- 6) Select the Motor and Reducer for the drive based on Speed and Horsepower.
- 7) Select End Pulleys as required.
 - One end pulley is required on an end drive conveyor without a power tail.
 - One end pulley is required on a center drive with a power tail.
 - Two end pulleys are required on a center drive without a power tail.
- 8) Select an auxiliary take-up if the length of the unit requires one, or if the end pulleys cannot be used as take-ups due to a length restriction. Belt length take-ups are required because over time the belt will stretch.
 - Center drives have a belt take-up built into the design.
 - End drives require a take-up if the end pulley cannot be adjusted due to length restrictions. The drive side is fixed so only one end pulley can be adjusted.
 - A horizontal take-up should be used on end drives with one adjustable tail pulley on conveyors 40 feet in length up to 110 feet in length.
 - A horizontal take-up should be used on end drives without an adjustable tail pulley on conveyors 10 feet in length up to 75 feet in length.
 - A vertical take-up should be used on end drives with one adjustable tail pulley on conveyors 40 feet in length up to 80 feet in length.
 - A vertical take-up should be used on end drives without an adjustable tail pulley on conveyors 10 feet in length up to 40 feet in length.
- 9) Select Accessories as required. These may include the following:
 - Guard Rail, Supports, Controls or conveyor that feeds product on the belt conveyor.
- 10) Overhead applications require axle hold-down strips to prevent roller pop-out.



401/430 Belt Drive Live Roller Elevation Examples:





Belt Conveyor Power Conveyor Data Sheet:

Unit Model Number:

Overall Unit Length:

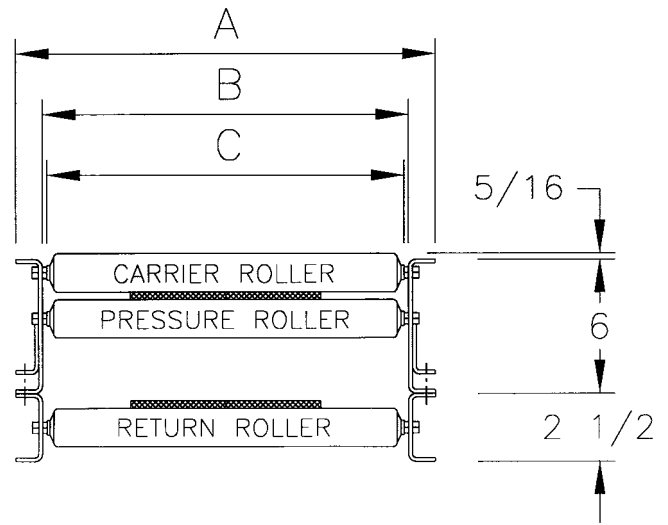
Speed of Unit:

Component	Part Number	Description
Drive		
Motor Horsepower		
Speed of Unit (FPM)		
Bed Construction		
Bottom Pans		
Feeders		
End Assembly		
Take-ups		
Connectors		
Belt type and length		
Accessories		
Guard Rails		
Trussing		
Controls		
Supports		
Finish	Metzgar Blue	



401 Belt Driven Live Roller Conveyor Specifications and Unit Model Number:

“A” Bed Width	“B” Between Frame	“C” Roller Width	Belt Width
12”	9 ½”	9 ¼”	6”
15”	12 ½”	12 ¼”	6”
18”	15 ½”	15 ¼”	6”
24”	21 ½”	21 ¼”	6”
30”	27 ½”	27 ¼”	12”
36”	33 ½”	33 ¼”	12”
42”	39 ½”	39 ¼”	12”
48”	45 ½”	45 ¼”	12”



Belt: 6” or 12” wide PVC Cover One Side x Slider Back with Cover Up.

Frame: 10 guage x 6” deep formed steel channel with 1 ¼” flange.

Frames are welded together using 1 ½” x 1 ½” x 3/16” structural steel crossmembers.

Carrier Rollers: Rollers are 1.9” diameter x 16 gauge steel with ball bearings and 7/16” hex axles. Axles are spring loaded for easy assembly or removal.

Carrier rollers are available on 2.4”, 3”, 4” or 6” Centers.

Drive Pulleys: Standard Drive pulleys are 6” or 9” diameter crowned and lagged.

Drive pulley shafts are 1 3/16” dia, or 1 7/16” dia.

End Pulleys and Take-up Pulleys: 4” diameter crowned with 1 3/16” dia. shaft.

Internal mounted bearings are standard.

Drive Snubber Roller: Rollers are 2 ½” diameter 11 gauge steel with ball bearings and 11/16” hex tube spanner and 7/16” diameter shaft.

Belt return Idler Rollers: Rollers are 1.9” diameter x 16 gauge steel with ball bearings and 7/16” hex axles. Axles are spring loaded for easy assembly or removal.

Belt Speed: 60 Feet Per Minute (FPM) is the most common. Other speeds and variable speed are available as options.

401 Belt Driven Conveyor Model Number:

401 - C - 18 - 3 - 25 - ¾

Conveyor Series

Drive Type E= End C=Center

Frame Bed Width

Carrier Roller Centers(2.4”,3”,4”or6”)

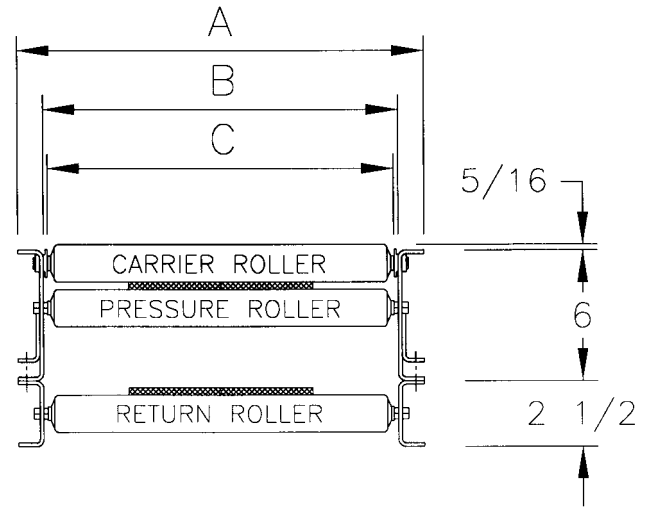
Overall Unit Length in Feet-Inches

Motor Horsepower



430 Belt Driven Live Roller Conveyor Specifications and Unit Model Number:

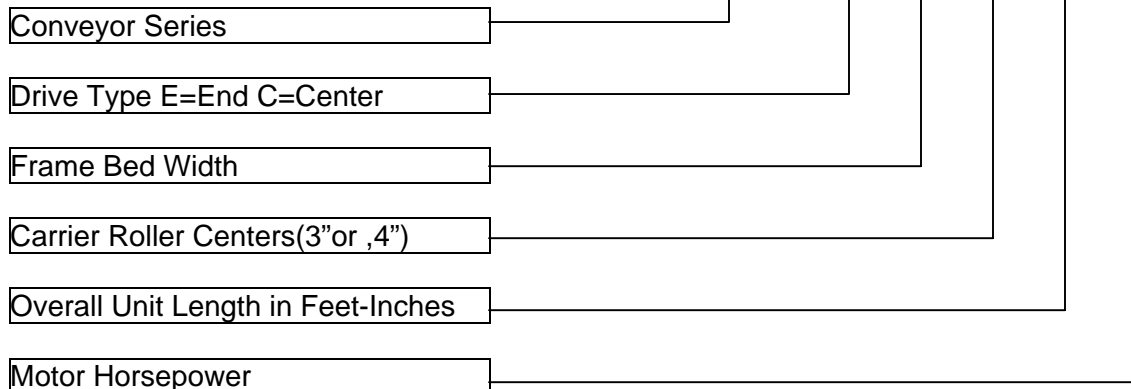
“A” Bed Width	“B” Between Frame	“C” Roller Width	Belt Width
12”	9 ½”	9”	6”
15”	12 ½”	12”	6”
18”	15 ½”	15”	6”
24”	21 ½”	21”	6”
30”	27 ½”	27”	12”
36”	33 ½”	33”	12”
42”	39 ½”	39”	12”
48”	45 ½”	45”	12”



- Belt: 6” or 12” wide PVC Cover One Side x Slider Back with Cover Down.
- Frame: 10 guage x 6” deep formed steel channel with 1 ¼” flange.
Frames are welded together using 1 ½” x 1 ½” x 3/16” structural steel crossmembers.
Frames have sloped slots for roll up accumulation on 3” or 4” roller centers.
- Carrier Rollers: Rollers are 1.9” diameter x 16 gauge steel with ball bearings and 7/16” hex axles. Axles are spring loaded for easy assembly or removal.
Carrier rollers are available on 3” or 4” Centers.
- Drive Pulleys: Standard Drive pulleys are 6” or 9” diameter crowned and lagged.
Drive pulley shafts are 1 3/16” dia, or 1 7/16” dia.
- End Pulleys and Take-up Pulleys: 4” diameter crowned with 1 3/16: dia. shaft.
Internal mounted bearings are standard.
- Drive Snubber Roller: Rollers are 2 ½” diameter 11 gauge steel with ball bearings and 11/16” hex tube spanner and 7/16” diameter shaft.
- Belt return Idler Rollers: Rollers are 1.9” diameter x 16 gauge steel with ball bearings and 7/16” hex axles. Axles are spring loaded for easy assembly or removal.
- Belt Speed: 60 Feet Per Minute (FPM) is the most common. Other speeds and variable speed are available as options.

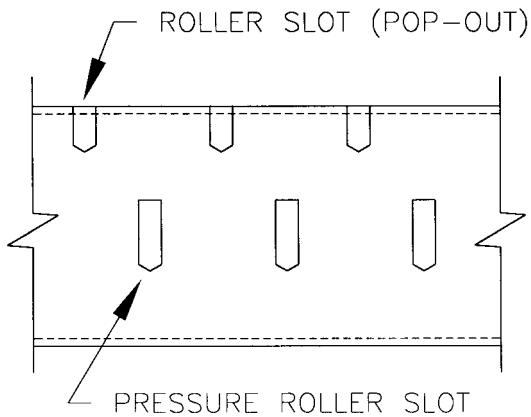
430 Belt Driven Conveyor Model Number:

430 - C - 18 - 3 - 25 - ¾





Belt Driven Live Roller Conveyor Bed Section Part Numbers:



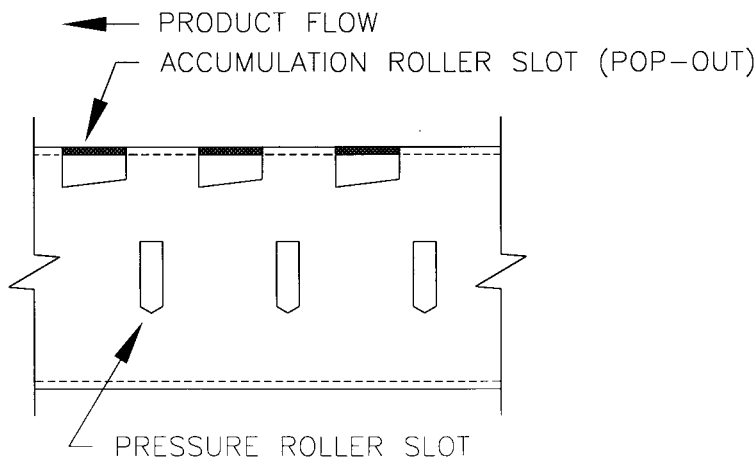
401 Bed Section Model Number:

401 - 15 - 3

Conveyor Series

Frame Bed Width

Roller Centers(2.4", 3", 4" or 6")



430 Bed Section Model Number:

430 - 15 - 3

Conveyor Series

Frame Bed Width

Roller Centers(3"or 4")

**Standard Bed Length 2'-6", 5'-0", 7'-6" and 10'-0".
Center Drives are assembled on 7'-6" bed sections.**

Order Separately the Belt, Guard Rail and Supports.



Conveyor Belt Selection Guide:

Belt Length Chart

Model	Equipment Description	Length of Belt Req'd
409	9" End Drive	2'-6"
409	9" Center Drive	3'-6"
406	6" End Drive	2'-4"
406	6" Center Drive	3'-1"
401	401 End Pulley Assembly	1'-3"
401	Horizontal Take-up	2'-10"
401	Vertical Take-up	1'-4"

Determining the length of the Belt for a particular unit:

- 1) Take the length of all bed sections and multiply by two.
- 2) Add the belt lengths for each assembly required (See above Chart).

Application Notes:

The Temperature range on the standard belting listed above is 32° F to 150° F. Consult the factory for low or high temperature applications.

430 Series Accumulation Operation:

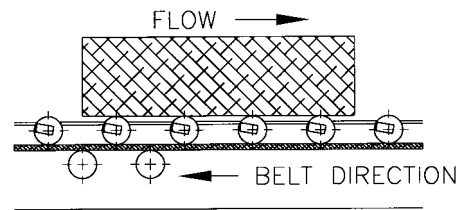


FIGURE 1

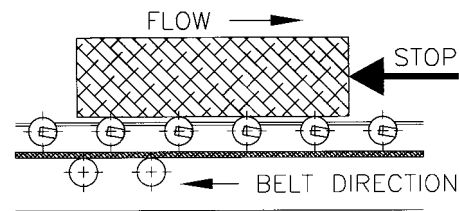


FIGURE 2

The axles of the carrier rollers are mounted in a sintered bushing positioned in the sloped slots of the accumulator frame (figure 1).

When forward motion of the product is stopped, the backward force of the belt causes the carrier rollers to travel up the sloped slots in the frame. As the carrier rollers roll up the slots, a floating effect is created, reducing the pressure to a minimum (figure 2).

When the holding force is removed, the carrier rollers proceed to roll down the slots and resume driving the product with positive force.

430 Series accumulating conveyor is designed for one direction only (non-reversing).



401 Horsepower Section:

To Determine the Horsepower required on a 401 Series BDLR Unit:

- 1) Determine the maximum weight of product that will be on the unit at any time.
- 2) Divide the maximum weight by the unit length to get weight per foot
- 3) Use Table 1 below to determine the estimated horsepower required at 60 FPM.

Table 1 – 401 Series Horsepower for Maximum Load in weight per foot.

Unit Width	HP	20'	30'	40'	50'	60'	70'	80'	90'	100'
12	½	82	52	36	27	21	17	13		
	¾	134	84	61	48	40	31	27	23	20
15	½	79	49	33	24	18	14	11		
	¾	130	81	58	45	37	28	24	20	17
	1		110	80	59	46	38	32	27	23
18	½	76	46	30	22	15	10	9		
	¾	126	78	55	42	34	25	21	17	14
	1		107	77	57	44	36	30	25	22
	1 ½			132	104	85	71	61	53	47
24	½	70	40	24	16	10				
	¾	118	72	49	36	28	19	15	11	8
	1		103	73	53	40	32	26	21	18
	1 ½			128	100	82	68	58	50	44
30	½	64	34	18	11	5				
	¾	110	66	43	30	22	13	9		
	1		98	68	49	36	28	22	17	14
	1 ½			126	97	79	65	55	46	40
36	½	59	28	12	6					
	¾	102	60	37	24	16	7			
	1		93	63	45	32	24	18	13	8
	1 ½			122	94	75	61	51	43	37
42	½	54	23	7						
	¾	97	55	32	19	11				
	1		88	58	40	27	19	13	8	
	1 ½			117	89	70	56	46	38	32
48	½	49	18							
	¾	92	50	27	14	6				
	1		83	53	35	22	14	8		
	1 ½			112	84	65	51	41	33	27

**For Loads that are greater than listed in this table consult the factory.
Tables are based on 60 Feet Per Minute with a 1.25 service factor.**



430 Horsepower Section:

To Determine the Horsepower required on a 430 Series BDLR Unit:

- 1) Determine the maximum weight of product that will be on the unit at any time.
- 2) Divide the maximum weight by the unit length to get weight per foot
- 3) Use Table 2 below to determine the estimated horsepower required at 60 FPM.

Table 2 – 430 Series Horsepower for Maximum Load in weight per foot.

Unit Width	HP	20'	30'	40'	50'	60'	70'	80'	90'	100'
12	½	70	41	29	17					
	¾	109	70	52	35	30	22	18	14	
15	½	66	37	25	14					
	¾	106	66	48	31	26	18	14	11	
	1		101	66	48	38	29	23	17	13
18	½	62	34	22	11					
	¾	102	62	44	28	23	14	12		
	1		97	62	44	35	25	19	13	
	1 ½					68	54	44	37	30
24	½	59	30	18	7					
	¾	100	59	42	24	19	12			
	1		94	59	42	31	22	16	11	
	1 ½					65	50	42	34	26
30	½	53	24	13						
	¾	94	53	36	18	13				
	1		88	53	36	25	16	11		
	1 ½					59	44	36	28	20
36	½	47	18							
	¾	88	47	30	13					
	1		82	47	30	19	11			
	1 ½					53	40	30	22	14
42	½	41	12							
	¾	82	41	24	7					
	1		76	41	24	12				
	1 ½					47	34	24	16	8
48	½	35	6							
	¾	76	35	18						
	1		70	35	18	6				
	1 ½					41	28	18	10	

For Loads that are greater than listed in this table consult the factory.

Tables are based on 60 Feet Per Minute with a 1.25 service factor.

430 series applications should not exceed 50 pounds per foot. Exceeding 50 pounds per foot will greatly increase line pressure.



401 and 430 Drives:

Horsepower / Reducer Availability 6” Drive Speed in FPM

30	40	50	60	70	80	90	100
1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
N/A	N/A	N/A	1	1	1	1	1

Horsepower / Reducer Availability 9” Drive Speed in FPM

30	40	50	60	70	80	90	100
1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
N/A	1	1	1	1	1	1	1
N/A	N/A	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
N/A	N/A	2	2	2	2	2	2

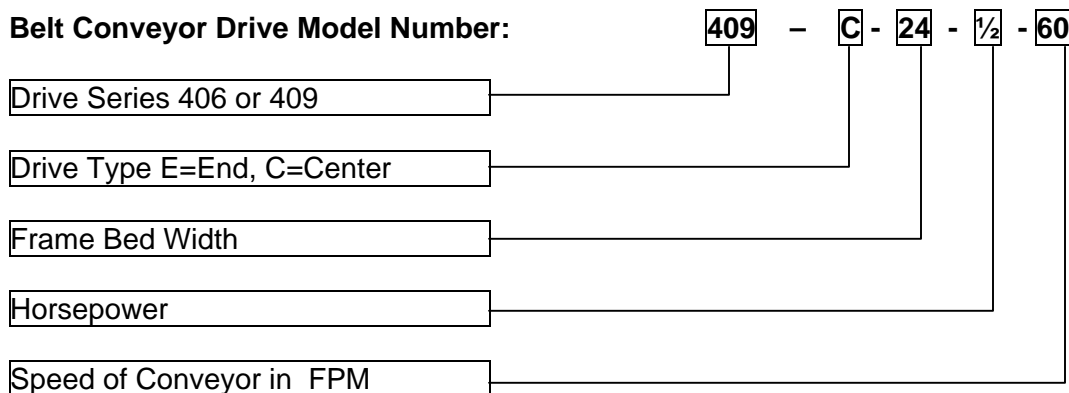
To Determine the part number for a drive the following information is required.

- 1) Frame Width
- 2) If a End Drive or Center Drive is Required.
- 3) The Horsepower of the motor (From Table 1 or 2)
- 4) Determine the drive size required based on the load of product in weight per foot(Table 3).

Table 3 - Drive Size

Drive Size	406 (30” wide Max)	409
401 Unit	975	1950
430 Unit	800	1600

Belt Conveyor Drive Model Number:

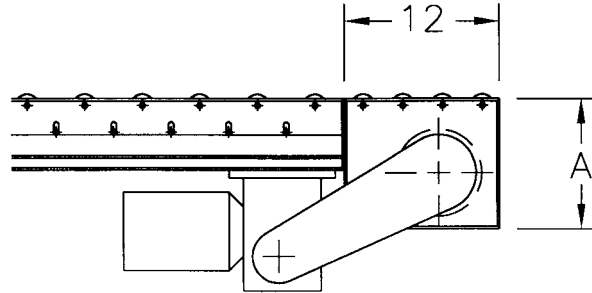




Drive Dimensions and End Pulley Part Numbers :

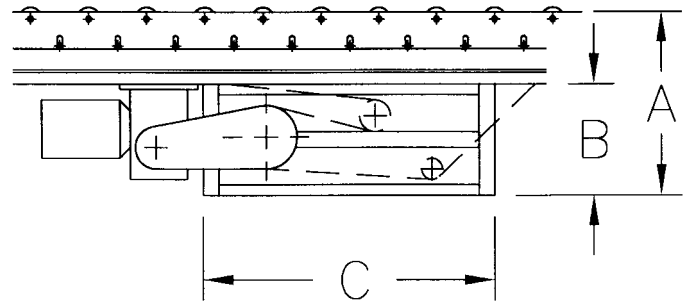
401/430 End Drives

Drive Pulley	"A" Dim.
6" Dia.	9
9" Dia.	12



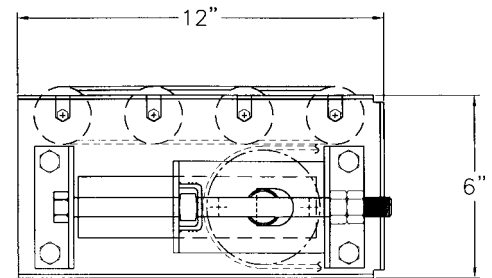
401/430 Center Drives:

Drive Pulley	"A" Dim.	"B" Dim.	"C" Dim.
6" Dia.	13"	7"	28"
9" Dia.	21 1/2"	13"	32"



401/430 End Pulley Assembly:

- Pulley Diameter: 4 inch
- Bearings: Internal to Pulley
- Shaft Diameter: 1 3/16"



One end pulley is required on an end drive conveyor.
Two end pulleys are required on a center drive unit.

End Pulley Model Number:

401EP - 24

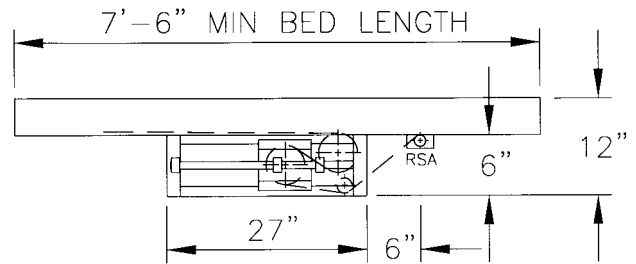
Conveyor Series End Pulley

Frame Bed Width



401/430 Belt Take-ups:

Horizontal Take-up:



A horizontal take-up should be used on end drives with one adjustable tail pulley on conveyors 40 feet in length up to 110 feet in length.

A horizontal take-up should be used on end drives without an adjustable tail pulley on conveyors 10 feet in length up to 75 feet in length.

Horizontal Take-up Model Number:

401 - HTU - 24

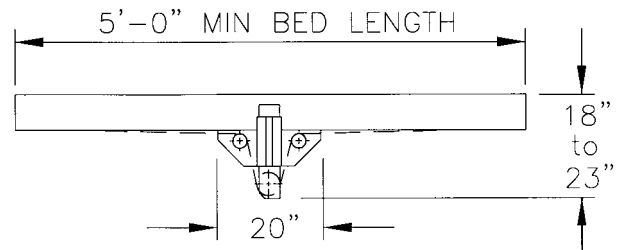
Conveyor Series

Horizontal Take-up

Frame Bed Width

Standard unit includes a take-up frame assembly with snubber roller, two 4" diameter pulleys with 1 3/16" diameter shafts and guards.

Vertical Take-up:



A vertical take-up should be used on end drives with one adjustable tail pulley on conveyors 40 feet in length up to 80 feet in length.

A vertical take-up should be used on end drives without an adjustable tail pulley on conveyors 10 feet in length up to 40 feet in length.

Vertical Take-up Model Number:

401 - VTU - 24

Conveyor Series

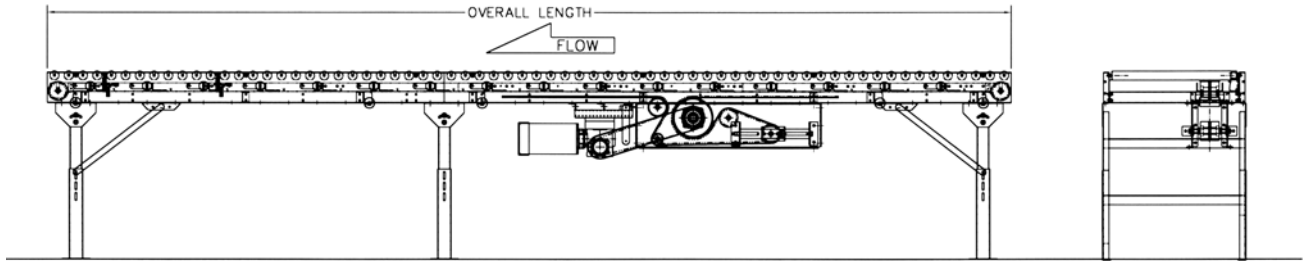
Vertical Take-up

Frame Bed Width

Standard unit includes a take-up frame assembly with two snubber rollers, one 4" diameter pulley with 1 3/16" diameter shafts and guards.



435 Zero Pressure Electronic Accumulating BDLR Elevation Example and Features:

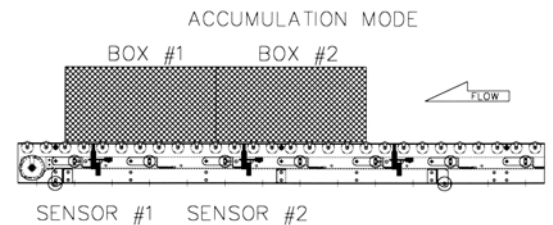


Features:

- Zero Pressure product accumulation.
- Efficient full-length accumulation without gaps between products regardless of variations in product lengths.
- End Pulley assemblies are integrated into the frame.
- Systems Require 24vdc and 20 PSI compressed air
- Electronic Sensors – no mechanical adjustments required.
- Drives have a standard three phase motor.
- Ability to slave drive a 450 Series V-Belt Driven Curve.
- Standard unit has Pressure/drive rollers on 12” centers with electronic sensors on 24” centers.
- Optional brake zones allow for positive stopping of rollers.

Accumulation:

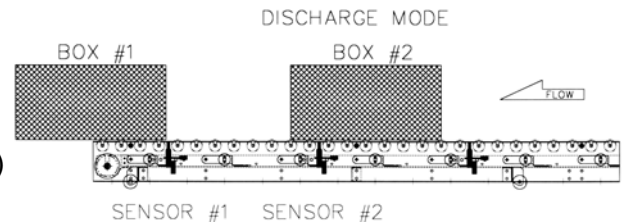
435 Series accumulation is accomplished using air pucks to raise the drive belt to contact the rollers for drive. Electronic sensors are used to sense the product and remove air from the puck, lowering the drive rollers. When two consecutive sensors are blocked the drive is removed from the upstream zone.



Discharge:

The discharge can be accomplished by two methods.

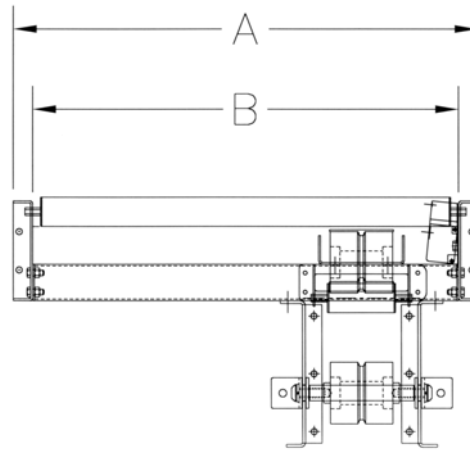
- 1) Singulation release, which the products are released one at a time with a gap between. (Shown in Example)
- 2) Slug release, which all the products are released creating a continuous flow of product.





435 Zero Pressure Electronic Accumulating BDLR Specifications and Unit Model Number:

“A” Bed Width	“B” Between Frame
18”	15 ½”
24”	21 ½”
30”	27 ½”
36”	33 ½”
42”	39 ½”
48”	45 ½”



Belt: 4” PVC Cover One Side x Slider Back with Cover Down, v-guide molded to back side.

Frame: 10 gauge x 6 1/2” deep formed steel channel with 1 ¼” flange.

Frames are bolted together using formed steel crossmembers.

Frames have hex slots for accumulation punched on 3” centers.

Carrier Rollers: Rollers are 1.9” diameter x 16 gauge steel with ball bearings and 7/16” hex axles. Axles are spring loaded for easy assembly or removal.

Carrier rollers are available on 3” or 6” Centers.

Drive Pulleys: Standard Drive pulley is 8” diameter with v-guide.

Drive pulley shafts are 1 3/16” dia for 8” drive.

End Pulleys and Take-up Pulleys: 4” diameter with v-guide.

Drive Snubber Roller: Rollers are 2 ½” diameter with ball bearings.

Belt return Idler Rollers: Rollers are 1.9” diameter x 16 gauge steel with ball bearings and 7/16” hex axles. Axles are spring loaded for easy assembly or removal.

Belt Speed: 60 Feet Per Minute (FPM) is the most common. Other speeds and variable speed are available as options.

435 Belt Driven Conveyor Model Number:

435 - C - 18 - 3 - 25 - ¾

Conveyor Series

Drive Type C=Center

Overall Frame Bed Width

Carrier Roller Centers(3”,6”)

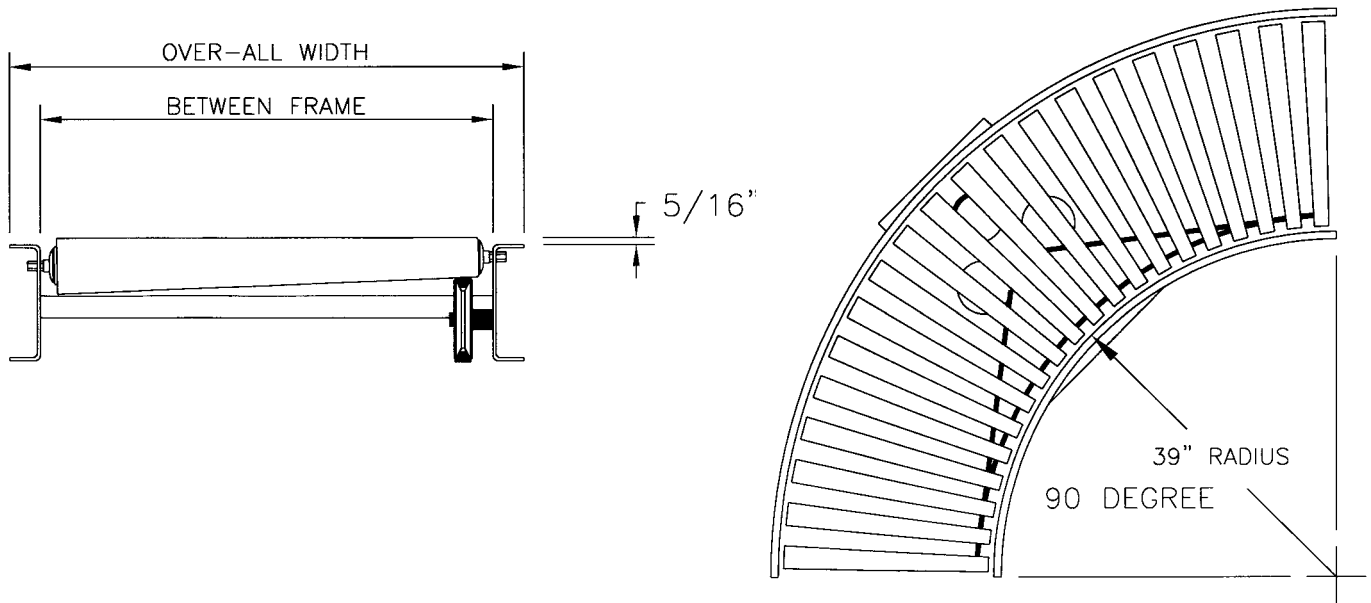
Overall Unit Length in Feet-Inches

Motor Horsepower

**Optional 8” wide belt is available for heavy load applications.
Order Separately: Brakes, Guard Rail, Supports and Controls.**

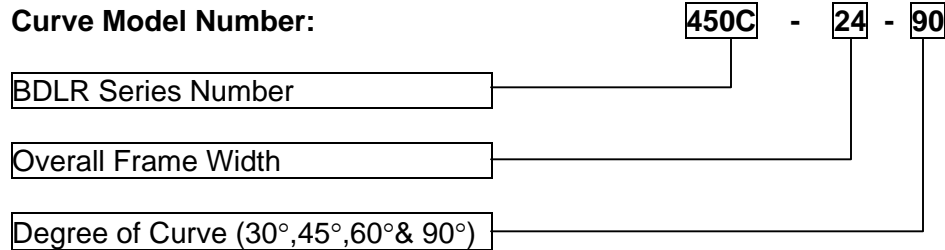


450 Series Tapered Roller Curves:



Maximum Drive per Roller is 13 pounds.
Maximum Weight of product on curve is 250 pounds.

450 Curves are available in 18", 24", 30", 36" and 42" OAW .



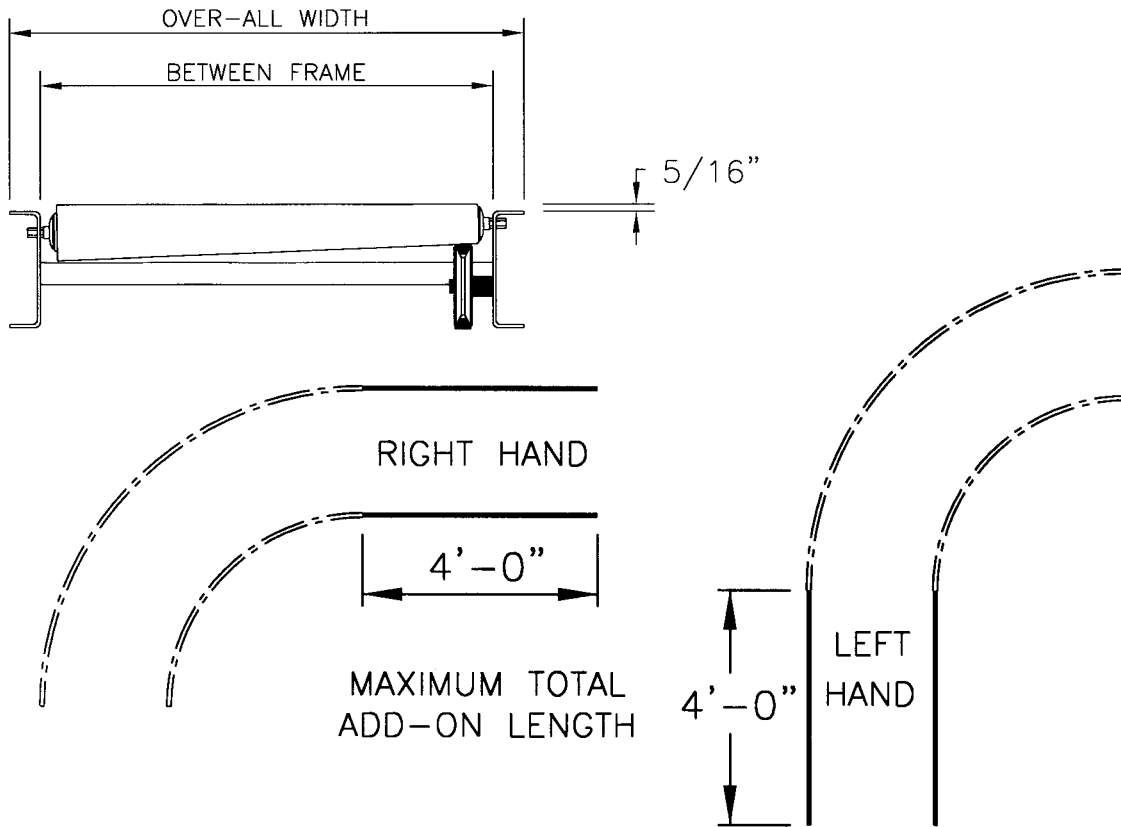
450 Series Tapered Roller Curve:

- Tapered Rollers: 1-5/8" Diameter on small end with 7/16" hex axle with ball bearings.
- Tapered Rollers have .042" of taper per inch of length to the large end.
- Roller ends are swaged over the bearings to provide a smooth, full length carrying surface.
- Roller axles are 7/16" hex stock spring loaded for easy removal and assembly.
- The top of the roller is 5/16" above the top flange of the frame.
- Frame: 10 gauge formed channel 4-1/2" deep with 1-1/4" flanges.
- Axle holes are 7/16" hex.
- Crossmembers are formed 10 gauge steel bolted to frames.
- Drive Belt: B-Section Endless V-Belt
- Motor/Drive: 1/2 Hp for 60 Feet Per Minute is standard.
- Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Standard Curves Contain 20 Rollers in a 90 Degree Curve.
30° and 45° Curves include a 12" tangent section as standard.
Order Separately: Guard Rail, Supports and Controls.
Standard Speed is 60 FPM consult factory for other speeds.



450 Series Curve Tangents:



Maximum Drive per Roller is 9 pounds with Tangent added.
Maximum Weight of product on curve and Tangent is 250 pounds.
450 Curve Tangents are available in 18", 24", 30", 36" and 42" OAW .

Curve Model Number:

450S - 24 - 4

BDLR Series Number

Overall Frame Width

Length of Tangent in Feet (4' max.)

450 Series Straight Roller Curve Tangent:

Straight Rollers: 1.9" Diameter x 16 gauge galvanized tube.

Roller ends are swaged over the bearings to provide a smooth, full length carrying surface.

Roller axles are 7/16" hex stock spring loaded for easy removal and assembly.

The top of the roller is 5/16" above the top flange of the frame.

Frame: 10 gauge formed channel 4-1/2" deep with 1-1/4" flanges.

Axle holes are 7/16" hex.

Crossmembers are formed 10 gauge steel bolted to frames.

Drive Belt: B-Section Endless V-Belt

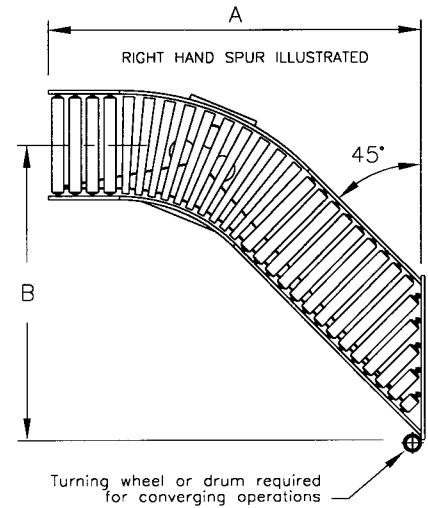
Motor/Drive: Included on Curve

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green



450 Series 90 Degree Spur/ Merge:

OAW	“A”	“B”
18”	67 ¼”	52
24”	72 ¼”	59 ½
30”	91 ¼”	73 ¼”
36”	103 ½”	83 ½”
42	115 ½”	94



Maximum Drive per Roller is 13 pounds.

Maximum Weight of product on Spur / Merge is 250 pounds.

450 90° Spur / Merges are available in 18” , 24” , 30” , 36”and 42” OAW .

Spur Model Number:

450-LRS - 24 - 90 - RH

BDLR Series Number

Frame Width

Degree of Curve

Right Hand or Left Hand (RH or LH)

450 Series 90 Degree Spur / Merge:

Tapered Rollers: 1-5/8” Diameter on small end with 7/16” hex axle with ball bearings.

Tapered Rollers have .042” of taper per inch of length to the large end.

Roller ends are swaged over the bearings to provide a smooth, full length carrying surface.

Roller axles are 7/16” hex stock spring loaded for easy removal and assembly.

The top of the roller is 5/16” above the top flange of the frame.

Straight Rollers: 1.9” diameter x 16 gauge galvanized tube with 7/16” hex axle with ball bearings.

Roller ends are swaged over the bearings to provide a smooth, full length carrying surface.

Roller grooves are cold formed in the roller shell.

Roller axles are 7/16” hex stock spring loaded for easy removal and assembly

Frame: 10 gauge formed channel 4-1/2” deep with 1-1/4” flanges.

Axle holes are 7/16” hex.

Crossmembers are formed 10 gauge steel bolted to frames.

Drive Belt: B-Section Endless V-Belt

Motor/Drive: ½ Hp for 60 Feet Per Minute is standard.

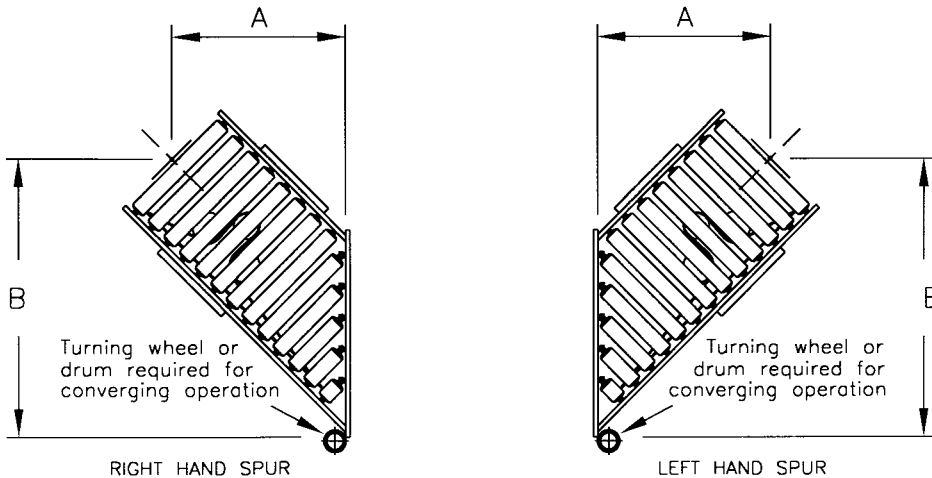
Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Order Separately: Guard Rail, Supports, Turning Wheel and Controls.

Standard Speed is 60 FPM consult factory for other speeds.



450 Series 45 Degree Spur/ Merge:



OAW	"A"	"B"
18"	27"	40 1/2"
24"	29 1/4"	38 1/4"
30"	31 1/4"	44 1/2"
36"	33 1/2"	51"
42"	35 1/2"	65 1/2"

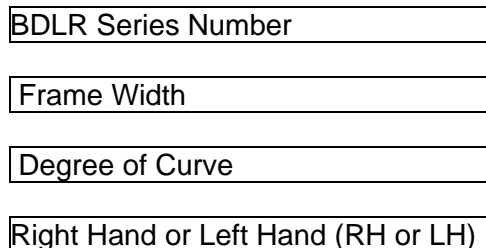
Maximum Drive per Roller is 13 pounds.

Maximum Weight of product on Spur / Merge is 250 pounds.

450 45° Spur / Merges are available in 18", 24", 30", 36"and 42" OAW .

Spur Model Number:

450-LRS - 24 - 45 - RH



450 Series 45 Degree Spur / Merge:

Straight Rollers: 1.9" diameter x 16 gauge galvanized tube with 7/16" hex axle with ball bearings.

Roller ends are swaged over the bearings to provide a smooth, full length carrying surface.

Roller grooves are cold formed in the roller shell.

Roller axles are 7/16" hex stock spring loaded for easy removal and assembly

Frame: 10 gauge formed channel 4-1/2" deep with 1-1/4" flanges.

Axle holes are 7/16" hex.

Crossmembers are formed 10 gauge steel bolted to frames

Drive Belt: B-Section Endless V-Belt

Motor/Drive: 1/2 Hp for 60 Feet Per Minute is standard.

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

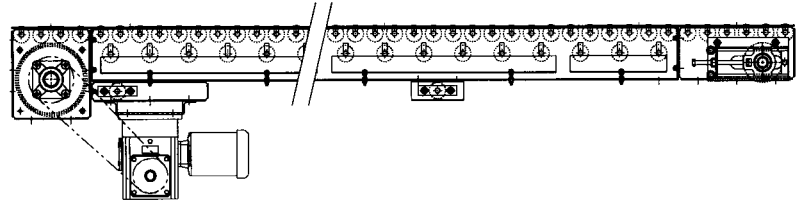
Order Separately: Guard Rail, Supports, Turning Wheel and Controls.

Standard Speed is 60 FPM consult factory for other speeds.



460 Heavy Duty Belt Driven Live Roller Conveyor Specifications and Unit Model Number:

“A” Bed Width	“B” Between Frame	“C” Roller Width
42 1/4”	39”	38 3/4”
46 1/4”	43”	42 3/4”
50 1/4”	47”	46 3/4”
54 1/4”	51”	50 3/4”
58 1/4”	55”	54 3/4”
62 1/4”	59”	58 3/4”
66 1/4”	63”	62 3/4”
70 1/4”	67”	66 3/4”
74 1/4”	71”	70 3/4”



Belt: 18” wide PVC Cover One Side x Slip Back with Cover Up.

Frame: 7 gauge x 8” deep formed steel channel with 1 5/8” flange.

Frames are welded together using 2” x 2” x 1/4” structural angle crossmembers.

Frames are slotted for pop-out roller safety feature.

Carrier Rollers: Rollers are 2 1/2” diameter x 11 gauge steel with ball bearings and 11/16” hex axles. Axles are spring loaded for easy assembly or removal.

Carrier rollers are available on 3” or 6” Centers. Roller capacity is 650 pounds each.

Drive Pulleys: Standard Drive pulleys come in 10” diameter crowned and lagged.

Drive pulley shaft is 1 15/16” dia.

Standard Drive motor is located on the Left side looking with the direction of flow.

End Pulleys and Take-up Pulleys: 6” diameter crowned with 1 7/16” dia. shaft.

External mounted bearings are standard.

Drive Snubber Roller: Rollers are 2 1/2” diameter 11 gauge steel with ball bearings and 11/16” hex tube spanner and 7/16” diameter shaft.

Belt return Idler Rollers: Rollers are 2 1/2” diameter x 11 gauge steel with ball bearings and 11/16” hex axles. Axles are spring loaded for easy assembly or removal.

Standard Speed: 30 Feet Per Minute (FPM). Other speeds and variable speed are available as options.

460 Belt Driven Conveyor Model Number:

460 - E - 50 - 3 - 25 - 3/4

Conveyor Series

Drive Type E= End C=Center

Frame Bed Width

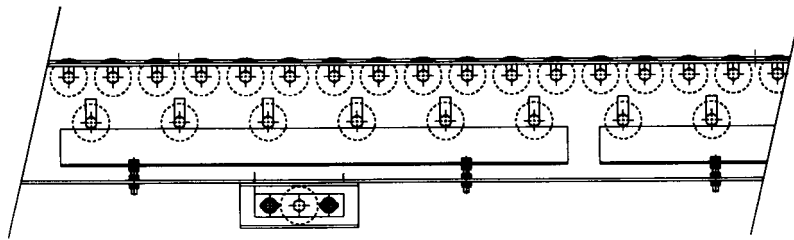
Carrier Roller Centers(3” or 6”)

Overall Unit Length in Feet-Inches

Motor Horsepower



460 Bed Selection, Belt Length and End Pulley



460 Bed Section Model Number:

460 - 50 - 3

Conveyor Series

Frame Bed Width

Roller Centers(2.4", 3", 4" or 6")

460 Belt Length Chart

Model	Equipment Description	Length of Belt Req'd
460	10" End Drive	2'-8"
460	6" Diameter End Pulley	2'-6"

Determining the length of the Belt for a particular unit:

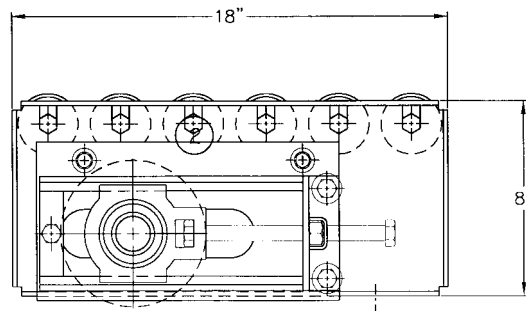
- 1) Take the length of all bed sections and multiply by two.
- 2) Add the length of the end assembly and drive.

460 End Pulley Assembly

Pulley Diameter: 6 inch

Bearings: External with 6" travel of take-up

Shaft Diameter: 1 7/16"



End Pulley Model Number:

460EP - 50

Conveyor Series End Pulley

Frame Bed Width



460 Horsepower Section:

To Determine the Horsepower required on a 460 Series BDLR Unit:

- 1) Determine the maximum weight of product that will be on the unit at any time.
- 2) Divide the maximum weight by the unit length to get weight per foot
- 3) Use Table 3 below to determine the estimated horsepower required at 40 FPM.

Table 3 – 460 Series Horsepower for Maximum Load in weight per foot Rollers on 3” Centers.

Unit Width	HP	20'	30'	40'	50'	60'	70'	80'	90'
42	$\frac{3}{4}$	119	35	22					
	1	179	94	52	26	9			
	1 ½	319	187	122	82	56	37	23	12
	2	428	260	176	126	92	68	51	37
46	$\frac{3}{4}$	113	48	15					
	1	172	88	45	20				
	1 ½	312	181	115	76	50	31	17	
	2	421	254	170	119	86	62	44	30
50	$\frac{3}{4}$	107	42	9					
	1	166	81	39	14				
	1 ½	306	175	109	70	43	25	11	
	2	415	247	164	113	80	56	38	24
54	$\frac{3}{4}$	100	36						
	1	160	75	33					
	1 ½	300	169	103	64	37	18		
	2	409	241	157	107	74	50	32	18
58	$\frac{3}{4}$	94	29						
	1	153	69	26					
	1 ½	293	162	96	57	31	12		
	2	402	235	151	101	67	43	25	11
62	$\frac{3}{4}$	88	23						
	1	147	63	20					
	1 ½	287	156	90	51	25			
	2	396	228	145	94	61	37	19	
66	$\frac{3}{4}$	82	17						
	1	141	56	14					
	1 ½	281	150	84	45	18			
	2	390	222	139	88	55	31	13	
70	$\frac{3}{4}$	76	11						
	1	135	50						
	1 ½	275	144	78	39	12			
	2	384	216	133	82	49	25		
74	$\frac{3}{4}$	69							
	1	129	44						
	1 ½	269	137	72	32				
	2	378	210	126	76	42	19		

**For Loads that are greater than listed in this table consult the factory.
Tables are based on 40 Feet Per Minute.**



460 Horsepower Section:

To Determine the Horsepower required on a 460 Series BDLR Unit:

- 1) Determine the maximum weight of product that will be on the unit at any time.
- 2) Divide the maximum weight by the unit length to get weight per foot
- 3) Use Table 4 below to determine the estimated horsepower required at 40 FPM.

Table 4 – 460 Series Horsepower for Maximum Load in weight per foot Rollers on 6” Centers.

Unit Width	HP	20'	30'	40'	50'	60'	70'	80'	90'
42	$\frac{3}{4}$	147	82	50	31	18	8		
	1	207	122	80	54	37	25	16	
	1 ½	347	215	150	110	84	65	51	40
	2	456	288	204	154	120	97	79	65
46	$\frac{3}{4}$	143	78	46	27	14			
	1	203	118	76	50	33	21	12	
	1 ½	343	211	146	106	80	61	47	36
	2	452	284	200	150	116	93	75	61
50	$\frac{3}{4}$	140	75	42	23	10			
	1	199	114	72	45	30	18	9	
	1 ½	339	208	142	103	76	58	44	33
	2	448	280	197	146	113	89	71	57
54	$\frac{3}{4}$	136	72	39	19				
	1	195	110	68	43	26	14		
	1 ½	335	204	138	99	73	54	40	29
	2	444	278	193	143	109	85	67	53
58	$\frac{3}{4}$	132	67	35	15				
	1	191	107	64	39	22	10		
	1 ½	331	200	134	95	69	50	36	25
	2	440	273	189	139	105	81	63	49
62	$\frac{3}{4}$	128	63	31	11				
	1	188	103	61	35	18	6		
	1 ½	328	196	131	91	65	46	32	21
	2	437	269	185	135	101	77	59	45
66	$\frac{3}{4}$	124	60	27	8				
	1	184	99	57	32	15			
	1 ½	324	193	127	88	61	42	28	17
	2	433	265	181	131	98	74	56	42
70	$\frac{3}{4}$	121	56	23					
	1	180	95	53	28	11			
	1 ½	320	189	123	84	57	39	25	14
	2	429	261	178	127	94	70	52	38
74	$\frac{3}{4}$	117	52	20					
	1	176	92	49	24	7			
	1 ½	316	185	119	80	54	35	21	10
	2	425	258	174	124	90	66	48	34

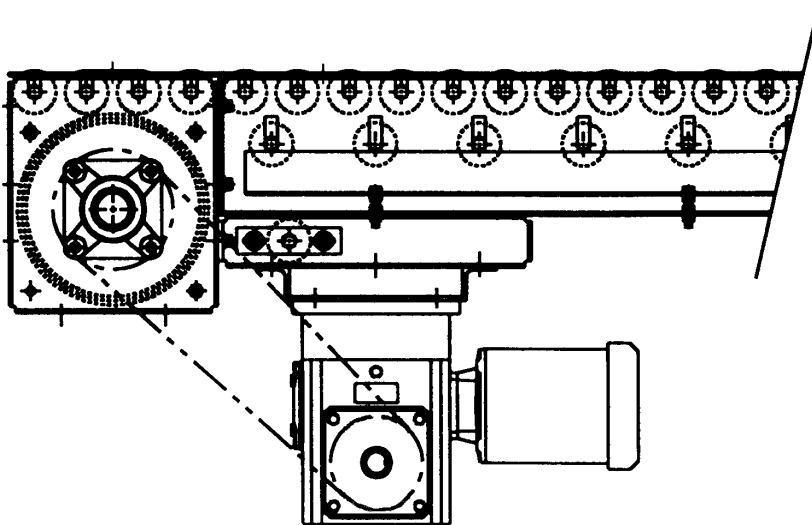
**For Loads that are greater than listed in this table consult the factory.
Tables are based on 40 Feet Per Minute.**



460 Belt Driven Live Roller Drive Model Number:

Horsepower / Reducer Availability 460 Drive Speed in FPM

30	35	40	45	50	55	60
¾	¾	¾	¾	¾	¾	¾
¾	¾	¾	¾	¾	¾	¾
1	1	1	1	1	1	1
1 ½	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½
2	2	2	2	2	2	2



Belt Driven Conveyor Drive Model Number:

460 - E - 2418 - ¾ - 30

Drive Series

Drive Type (see below)

Frame Bed Width

Horsepower

Speed of Conveyor in FPM



Belt Driven Live Roller Options:

Frame Options:

Butt Bolt Frame Connectors
Special Widths to match an Existing Conveyor
Special Degree Curves
Special Paint Colors
Powder Coated Frames
Bright Zinc Plating on Frames
Full Width End Covers
Full Width End Cover Stops

Roller Options:

Special Roller Lengths
Powder Coated Rollers
Bright Zinc Plating on Rollers
Semi Precision Roller Bearings
ABEC-1 Precision Roller Bearings

Drive Options:

Single or Three Phase Motors
Clutch/Brake Assemblies



BDLR Replacement Parts:

6" Drive Pulleys (5" Diameter plus Lagging) Includes 1 3/16" Diameter Shaft

Overall Width	Face Width	Pulley with 1 3/16" Bore
12"	7"	406-12Dpulley
15"	10"	406-15Dpulley
18"	13"	406-18Dpulley
24"	19"	406-24Dpulley
30"	25"	406-30Dpulley
36"	31"	406-36Dpulley
42"	37"	406-42Dpulley
48"	43"	406-48Dpulley

9" Drive Pulleys (8" Diameter plus Lagging) Includes 1 7/16" Diameter Shaft

Overall Width	Face Width	Pulley with 1 7/16" Bore
12"	7"	409-12Dpulley
15"	10"	409-18Dpulley
18"	13"	409-18Dpulley
24"	19"	409-24Dpulley
30"	25"	409-30Dpulley
36"	31"	409-36Dpulley
42"	37"	409-42Dpulley
48"	43"	409-48Dpulley

4" Take-up End Pulley (4" Diameter with Internal Bearings) Includes 1 3/16" Diameter Shaft

Overall Width	Face Width	Pulley with 1 3/16" Bore
12"	7"	401-12-419TUEpulley
15"	10"	401-15-419TUEpulley
18"	13"	401-18-419TUEpulley
24"	19"	401-24-419TUEpulley
30"	25"	401-30-419TUEpulley
36"	31"	401-36-419TUEpulley
42"	37"	401-42-419TUEpulley
48"	43"	401-48-419TUEpulley

401/430 Drive Snubber Roller

Overall Width	Snubber Rollers Steel
12 "	401-12SRS
15"	401-15SRS
18"	401-18SRS
24"	401-24SRS
30"	401-30SRS
36"	401-36SRS
42"	401-42SRS
48"	401-48SRS

401 and 430 Return Rollers and 401 Carrier Rollers with 7/16" Hex Shaft (Return Roller Bracket ordered Separate)

Overall Width	Return Rollers Steel
12"	401-12RRS
15"	401-15RRS
18"	401-18RRS
24"	401-24RRS
30"	401-30RRS
36"	401-36RRS
42"	401-42RRS
48"	401-48RRS

430 Carrier Rollers with 7/16" Hex Shaft

Overall Width	Carrier Rollers Steel
12"	430-12CRS
15"	430-15CRS
18"	430-18CRS
24"	430-24CRS
30"	430-30CRS
36"	430-36CRS
42"	430-42CRS
48"	430-48CRS



401/430 Misc Parts

BDLR Return Carrier Bracket	401-RCA
430 Accumulator Sintered Bushing	430-SAB

435 Carrier Rollers with 7/16" Hex Shaft

Overall Width	Carrier Rollers Steel
18"	435-18RS
24"	435-24RS
30"	435-30RS
36"	435-36RS
42"	435-42RS
48"	435-48RS

435 Misc Parts

Electronic Sensor Photoeye/Solenoid Valve	435-PESOL
435 Air Bladder/Puck	435-PUCK
435 4" Wide V-guide Belt x Length	435-Vbelt x _ft

450 Series Tapered Rollers:

Overall Width	Tapered Steel With No Grooves
18	450-18-TRS-NG
24	450-24-TRS-NG
30	450-30-TRS-NG
36	450-36-TRS-NG
42	450-42-TRS-NG

450 Misc Parts

450 End Drive Shive with Molded Tire	450-DSMT
450 Pressure Shive D-8040	450-PS
450 Reducer Mounted Drive Shive	450-RMDS
450 Idler Shive (All Sizes)	450-IS

460 Rollers 2 1/2" x 11 gauge with 11/16 hex Axles

Overall Width	Snubber Rollers Steel
42 1/4"	460-42SRS
46 1/4"	460-46SRS
50 1/4"	460-50SRS
54 1/4"	460-54SRS
58 1/4"	460-58SRS
62 1/4"	460-62SRS
66 1/4"	460-66SRS
70 1/4"	460-70SRS
74 1/4"	460-74SRS

460 10" Drive Pulleys (10" Diameter plus Lagging) Includes 1 15/16" Diameter Shaft

Overall Width	Face Width	Pulley with 1 15/16" Bore
42 1/4"	37"	460-42Dpulley
46 1/4"	41"	460-46Dpulley
50 1/4"	45"	460-50Dpulley
54 1/4"	49"	460-54Dpulley
58 1/4"	53"	460-58Dpulley
62 1/4"	57"	460-62Dpulley
66 1/4"	61"	460-66Dpulley
70 1/4"	65"	460-70Dpulley
74 1/4"	69"	460-74Dpulley

460 6" End Pulleys Includes 1 7/16" Diameter Shaft

Overall Width	Face Width	Pulley with 1 7/16" Bore
42 1/4"	37"	460-42TUEpulley
46 1/4"	41"	460-46TUEpulley
50 1/4"	45"	460-50TUEpulley
54 1/4"	49"	460-54TUEpulley
58 1/4"	53"	460-58TUEpulley
62 1/4"	57"	460-62TUEpulley
66 1/4"	61"	460-66TUEpulley
70 1/4"	65"	460-70TUEpulley
74 1/4"	69"	460-74TUEpulley



Bearings

ID of Bearing	Part Number
1 3/16"	406-4hole19
1 7/16"	409-4hole23
1 15/16"	460-4hole31
1 7/16"	460-ETU23

Chain Guards

Drive	Part Number
406 Plastic	406-PCG
409 Plastic	409-PCG
460-Steel	460-SCG

Chain Parts:

50B12T to 50B35T	Standard Sprockets for #50 Chain
50-Chain	Feet of #50 Roller Chain
60B11T to 60B36T	Standard Sprockets for #60 Chain
60-Chain	Feet of #60 Roller Chain
80B12T to 80B30T	Standard Sprockets for #80 Chain
80-Chain	Feet of #80 Roller Chain

Touch-Up Paint

MB-SPaint	Spray Can of Metzgar Blue Touch-up Paint
MB-1gCPaint	One Gallon Can of Metzgar Blue Touch-up Paint
VG-SPaint	Spray Can of Vista Green Touch-up Paint
VG-1gCPaint	One Gallon Can of Vista Green Touch-up Paint

Section 5 – Chain Driven Live Roller

Page	Description
5-1	CDLR Conveyor Index
5-2	Application and Unit Selection
5-3	470 Series Specifications (1.9" Dia. Rollers)
5-4	470 Drives and Horsepower Selection
5-5	470 Series 90 Degree Transfer Specifications
5-6	480 Series Specifications (2 ½" Dia. Rollers)
5-7	480 Drives and Horsepower Selection
5-8	480 Series 90 Degree Transfer Specifications
5-9	490 Series Specifications (3 ½" Dia. Rollers)
5-10	490 Drives and Horsepower Selection
5-11	Chain Driven Live Roller Conveyor Options
5-12	Replacement Parts

**Chain Driven Live Roller Application:**

Series 470 and 480 roller to roller chain driven live roller conveyor is designed with two sprockets welded to one end of each roller. Individual loops of chain connect one roller to the next roller, transmitting power to the total unit. Although chain drives are mechanically efficient, this type of conveyor multiplies the efficiency loss with each additional roller. Loads up to 1000 pounds per foot can be handled on 470/480 chain driven live roller equipment. Loads up to 2000 pounds per foot can be handled on 490 chain driven live roller equipment.

If a drive is placed in the center of a series 470/480 conveyor, 80 rollers can be driven in each direction for a total of 160 rollers per drive. If a drive is placed in the center of a series 490 conveyor, 46 rollers can be driven in each direction for a total of 92 rollers per drive.

This conveyor design is good for transmitting torque and can handle heavier loads with relative ease. It is also good when frequent starting, stopping or reversing is required, although operating the conveyor in this severe manner will reduce the life of the equipment.

Chain Driven Live Roller conveyor is often used to transport heavier loads at controlled speeds due to the positive drive feature.

Advantages of using Chain Driven Live Roller:

- 1) Space directly below the roller is clear for drainage or visibility.
- 2) Resistance to hot or cold temperatures that would damage other types of conveyors.
- 3) Resistance to contamination by oil, grease, dirt, ice, chemicals etc.
- 4) Strong positive force to drive heavy loads into a definite orientation or location.
- 5) Chain Driven rollers can take abuse of pallet bottoms when other types of conveyor fail.
- 6) Weighing, sorting and accumulating can be incorporated into the system.
- 7) CDLR can be placed on lifts to accomplish changes in elevation.

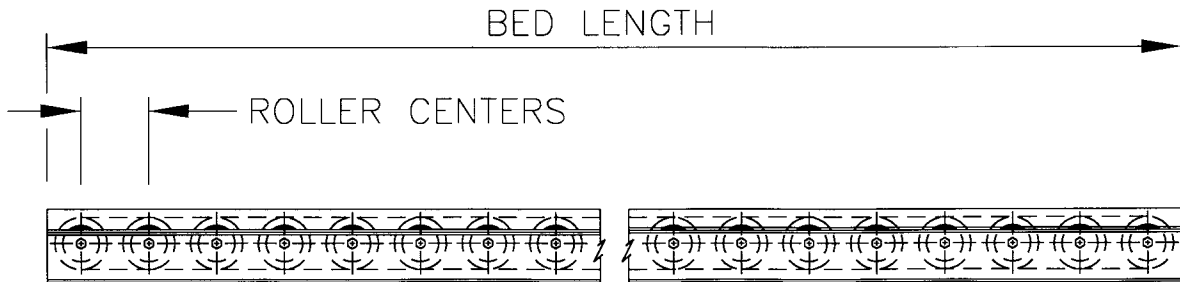
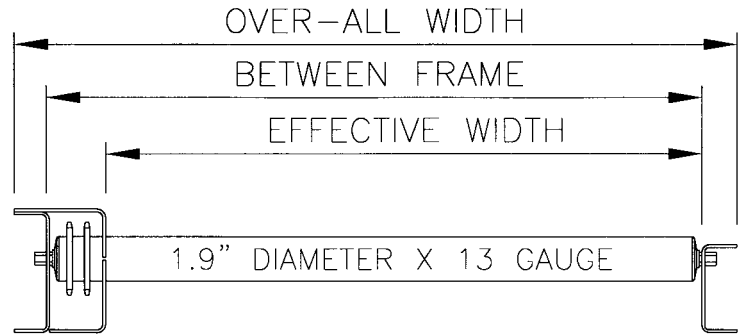
Complete Unit Component Selection

- 1) Determine the CDLR series required based on product size and weight.
- 2) Determine Effective Width (Conveying Surface) required based on widest product that will be conveyed on the unit
- 3) Determine the Overall Length of the unit.
- 4) Calculate the Horsepower based on load with charts provided.
- 5) Determine Roller Centers. (A minimum of three rollers under product at all times)
- 6) Select the desired Bed Sections.
- 7) Select the CDLR Drive Assembly.
- 8) Select Supports and Accessories to suit your application.



470 CDLR Specifications:

Effective Width	Between Frame	Overall Width
12"	14 1/2"	17"
15"	17 1/2"	20"
18"	20 1/2"	23"
21"	23 1/2"	26"
24"	26 1/2"	29"
27"	29 1/2"	32"
30"	32 1/2"	35"
33"	35 1/2"	38"
36"	38 1/2"	41"
42"	44 1/2"	47"
45"	47 1/2"	50"



470 Series Specifications

Rollers: 1.9" dia. x 13 gauge electric welded tube with 7/16" hex bore flanged ball bearings with Hardened steel raceways, cones and balls.

Load rating per roller is 260 lbs.

Standard Roller Centers are 4", 6" and 6/6.

6/6 Rollers are on 3" Centers with every other roller driven.

Sprockets: Two #40A18 tooth sprockets are welded to the roller at the drive end.

Axes: Roller axles are 7/16" hex stock spring loaded for easy removal and assembly.

The roller mounting location is 5/16" above the top flange of the idler side frame.

Frame: Idler side is 4 1/4" high channel with 1 1/4" flanges x 10 gauge formed steel.

Drive side is 5 3/4" high channel with 1 1/4" flanges x 10 gauge formed steel.

10 gauge steel top and bottom scalloped guard

Crossmembers: 3" x 1 1/2" x 10 gauge formed steel channel.

Frame Capacity: 1,500 lbs with supports on 10'-0" centers,

3,000 lbs with supports on 5'-0" centers.

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Straight Section Model Number:

470 - 12 - 6 - 10

CDLR Series

Effective Width

Roller Centers

Length of Section



470 CDLR Drive Specifications:

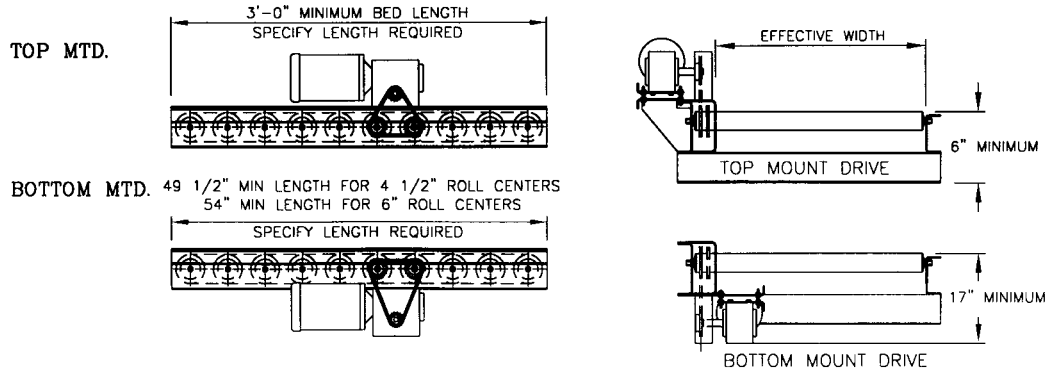
Table 1 – 470 Series 4” Centers Maximum Load in weight per foot.

Horsepower	Length of Unit					
	10'	20'	30'	40'	50'	60'
1/2 Hp	254	118	73	50	36	27
3/4 Hp	390	186	118	84	64	50
1 Hp	526	254	163	118	91	73

Table 2 – 470 Series 6” Centers Maximum Load in weight per foot.

Horsepower	Length of Unit					
	10'	20'	30'	40'	50'	60'
1/2 Hp	260	124	79	56	42	33
3/4 Hp	396	220	124	90	70	56
1 Hp	532	260	169	124	97	79

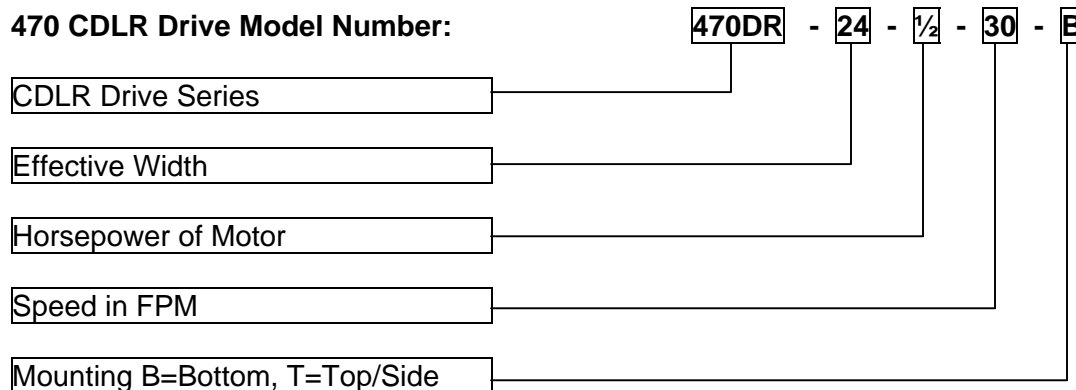
**Tables are based on speeds up to 40 Feet per Minute.
Heavier loads require supports on 5' centers.**



470 CDLR Drive Specifications:

Motor: Nema “C” face heavy-duty industrial type. Three phase is standard.
Single phase is available as an option.
Reducer: Heavy-duty right angle gear head reducer (worm gear type).
Drive Sprocket: Sized for speed with RC-40 chain.
Speed: Standard Speeds are 20, 30, and 40 Feet Per Minute.

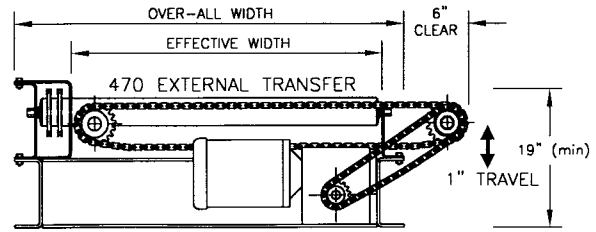
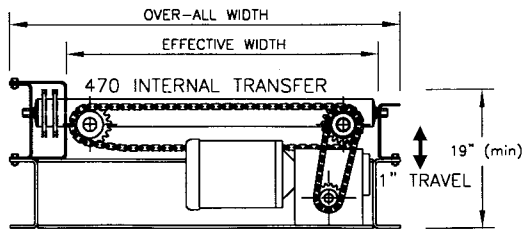
470 CDLR Drive Model Number:



**Order Separately: Conveyor Bed Section, Guard Rail, Supports and Controls.
Options include Brake Motors, Clutch/Brake Modules and Single Phase motors.**



470 CDLR Chain Transfer Specifications:



Motor: ½ HP Nema “C” face heavy-duty industrial type. Three phase is standard.

Single phase is available as an option.

Reducer: Heavy-duty right angle gear head reducer (worm gear type).

Frame: ¼” track welded to 3” structural channel.

Each rail contains a take-up plate for chain tension adjustment.

Rails are joined together for a unitized lifting mechanism.

Lift: Air cylinders and cam mechanism.

Transfer Chain: Number 40 or Optional 2040.

Speed: Standard Speed is 30 Feet Per Minute (consult factory for optional speeds).

Capacity: Maximum Product Weight is 1,500 pounds.

A 470 Transfer includes a 470 conveyor Bed 5'-0” long as standard.

Standard Transfer Chain Centers:

8” center to center for 12” and 15” Effective Widths.

16” center to center for 21” and 27” Effective Widths.

24” center to center for 33” and 39” Effective Widths

32” center to center for 45” Effective Width.

470 CDLR Transfer Model Number:

470T - 24 - ½ - 30 - I

CDLR Drive Series Transfer

Effective Width

Horsepower of Motor

Speed in FPM

Mounting I=Internal, E=External

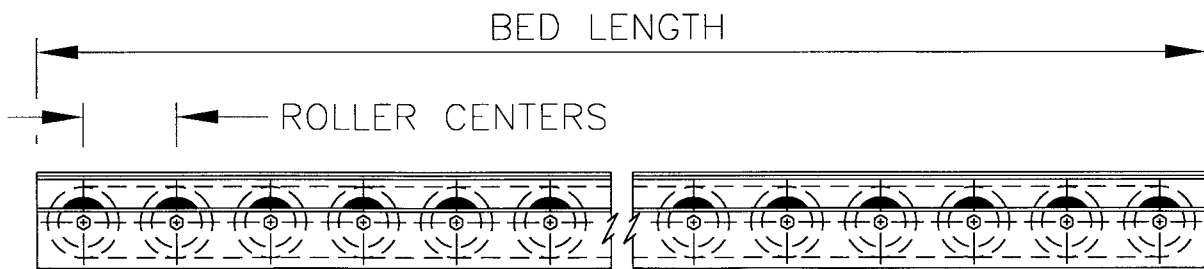
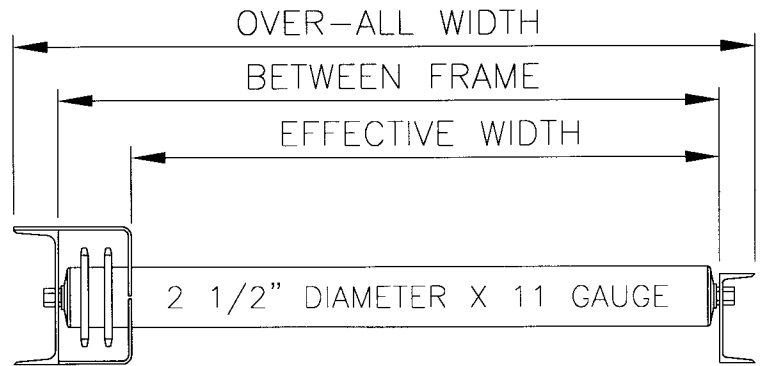
Included is a 120 vac 4-way single solenoid valve with poly-flow tubing and fittings.

Order Separately: Supports and Controls.



480 CDLR Specifications:

Effective Width	Between Frame	Overall Nominal Width
21"	24 1/2"	28"
27"	30 1/2"	34"
33"	36 1/2"	40"
39"	42 1/2"	46"
45"	48 1/2"	52"
51"	54 1/2"	58"
57"	60 1/2"	64"
63"	66 1/2"	70"



480 Series Specifications

Rollers: 2 1/2" dia. x 11 gauge electric welded tube with 11/16" hex bore flanged ball bearings with Hardened steel raceways, cones and balls outer teflon seal and inner shield.

Load rating per roller is 650 lbs.

Standard Roller Centers are 4 1/2", 6" and 6/6.

6/6 Rollers are on 3" Centers with every other roller driven.

Sprockets: Two #60A15 tooth sprockets are welded to the tube at the drive end.

Axles: Roller axles are 11/16" hex stock spring loaded for easy removal and assembly.

The roller mounting location is 5/16" above the top flange of the idler side frame.

Frame: Idler side is 4" high x 5.4# structural steel channel.

Drive side is 6" high x 8.2# structural steel channel.

10 gauge steel top and bottom scalloped guard (optional 7ga).

Crossmembers: 3" x 4.1# structural channel.

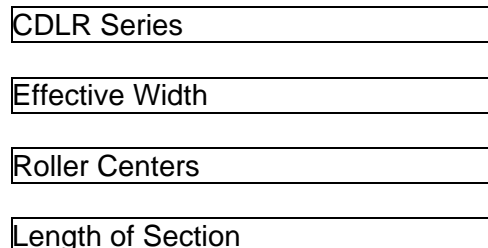
Frame capacity: 6,000 lbs with supports on 10'-0" centers

15,000 lbs with supports on 5'-0" centers.

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Straight Section Model Number:

480 - 21 - 6 - 10





480 CDLR Drive Specifications:

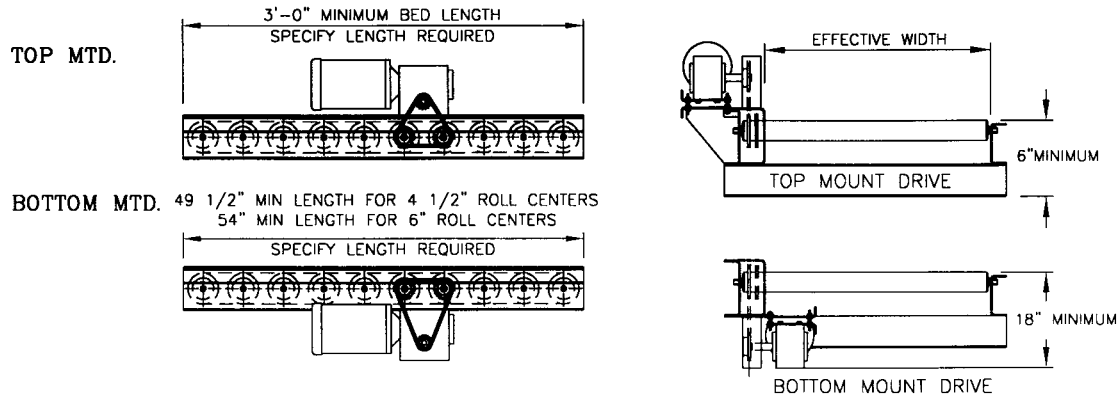
Table 1 – 480 Series 4 1/2” Centers Maximum Load in weight per foot.

Horsepower	Length of Unit					
	10'	20'	30'	40'	50'	60'
1/2 Hp	280	96	51	29	16	7
3/4 Hp	363	163	96	62	42	29
1 Hp	497	229	140	96	69	51

Table 2 – 480 Series 6” Centers Maximum Load in weight per foot.

Horsepower	Length of Unit					
	10'	20'	30'	40'	50'	60'
1/2 Hp	288	105	60	38	24	16
3/4 Hp	372	171	105	71	51	38
1 Hp	505	238	149	105	78	60

**Tables are based on speeds up to 40 Feet per Minute.
Heavier loads require supports on 5' centers.**



480 CDLR Drive Specifications:

Motor: Nema “C” face heavy-duty industrial type. Three phase is standard.

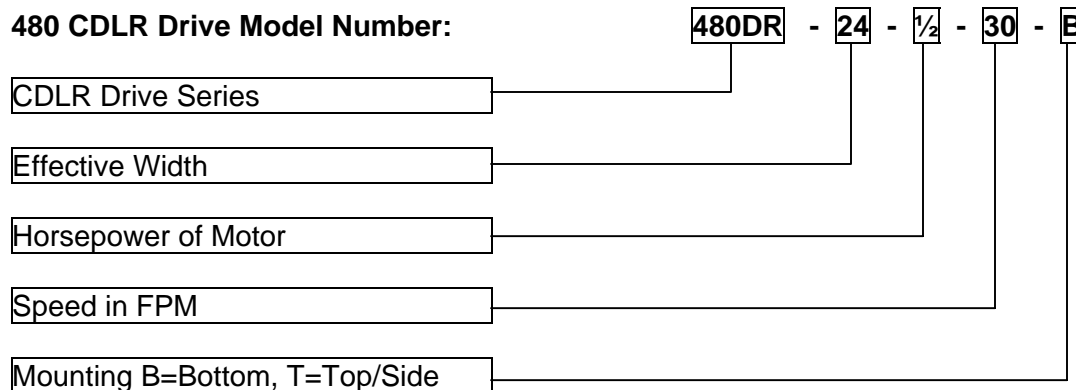
Single phase is available as an option.

Reducer: Heavy-duty right angle gear head reducer (worm gear type).

Drive Sprocket: Sized for speed with RC-60 chain.

Speed: Standard Speeds are 20, 30, and 40 Feet Per Minute.

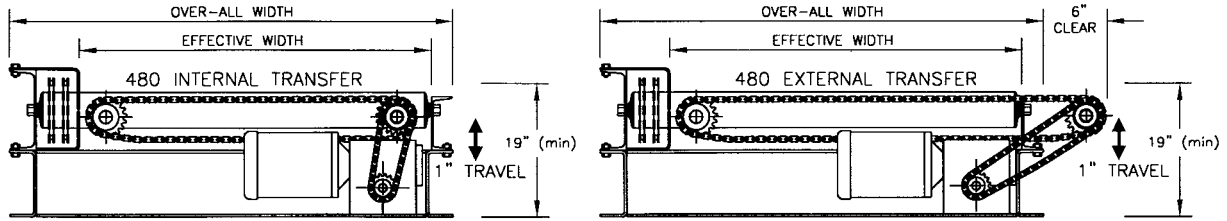
480 CDLR Drive Model Number:



Order Separately: Conveyor Bed Section, Guard Rail, Supports and Controls.
Options include Brake Motors, Clutch/Brake Modules and Single Phase motors.



480 CDLR Chain Transfer Specifications:



Motor: ½ HP Nema “C” face heavy-duty industrial type. Three phase is standard. Single phase is available as an option.

Reducer: Heavy-duty right angle gear head reducer (worm gear type).

Frame: 7 gauge track welded to 4” structural channel.

Each rail contains a take-up plate for chain tension adjustment.

Rails are joined together for a unitized lifting mechanism.

Lift: Air cylinders and cam mechanism.

Transfer Chain: Number 60 or Optional 2060.

Speed: Standard Speed is 30 Feet Per Minute (consult factory for optional speeds).

Capacity: Maximum Product Weight is 3,000 pounds.

A 480 Transfer includes a 480 conveyor Bed 5'-0" long as standard.

Standard Transfer Chain Centers:

8" center to center for 12" and 15" Effective Widths.

16" center to center for 21" and 27" Effective Widths.

24" center to center for 33" and 39" Effective Widths

32" center to center for 45" Effective Width.

480 CDLR Transfer Model Number:

480T - **45** - **1/2** - **30** - **I**

CDLR Drive Series Transfer

Effective Width

Horsepower of Motor

Speed in FPM

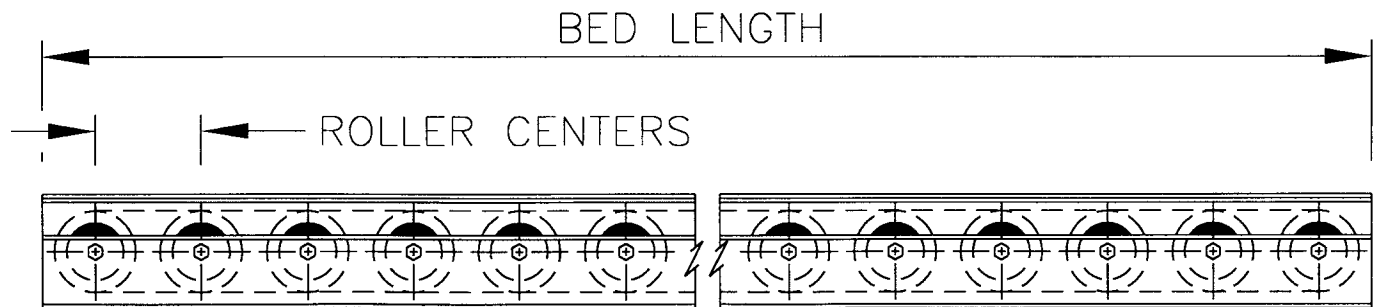
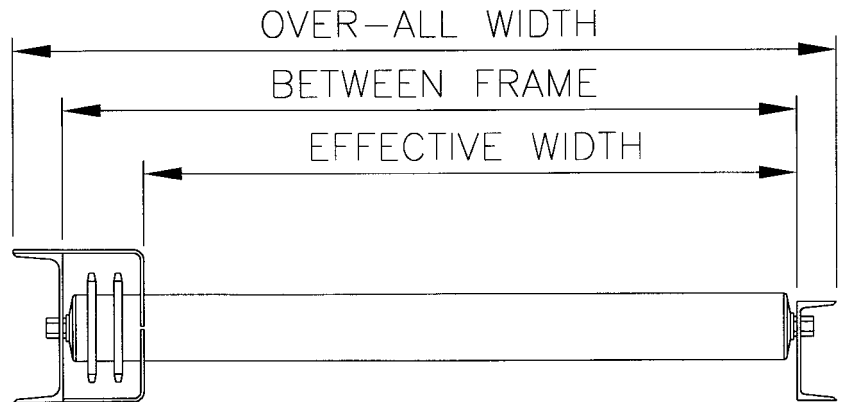
Mounting I=Internal, E=External

Included is a 120 vac 4-way single solenoid valve with poly-flow tubing and fittings. Order Separately: Supports and Controls.



490 CDLR Specifications:

Effective Width	Between Frame	Overall Nominal Width
30"	35"	39 3/16"
40"	45"	49 3/16"
50"	55"	59 3/16"
60"	65"	69 3/16"
70"	75"	79 3/16"
80"	85"	89 3/16"



490 Series Specifications

Rollers: 3 1/2" dia. x 0.300 wall electric welded tube with 1-1/16" hex bore flanged ball bearings with Hardened steel raceways, cones and balls sealed.
 Load rating per roller is 1040 lbs.
 Standard Roller Center is 6 1/2".

Sprockets: Two #80A16 tooth sprockets are welded to the tube at the drive end.

Axles: Roller axles are 1-1/16" hex stock, cotter pin retained.
 The roller mounting location is 3/8" above the top flange of the idler side frame.

Frame: Idler side is 6" high x 8.2# structural steel channel.
 Drive side is 8" high x 11.5# structural steel channel.
 7 gauge steel top and bottom scalloped guard

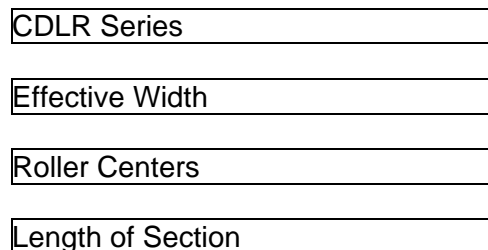
Crossmembers: 4" x 5.4# structural channel.

Frame capacity: 8,000 lbs with supports on 10'-0" centers
 20,000 lbs with supports on 5'-0" centers.

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Straight Section Model Number:

490 - 30 - 6.5 - 117"



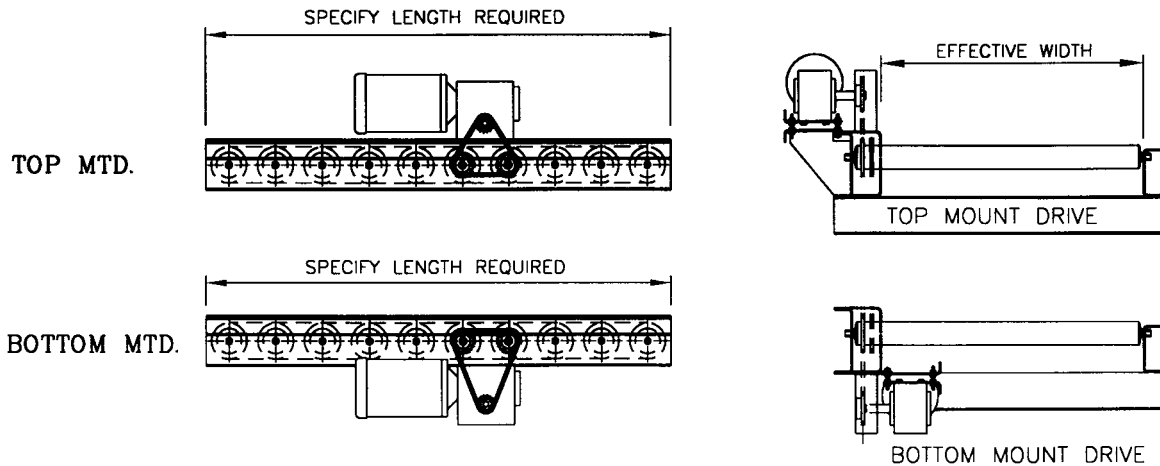


490 CDLR Drive Specifications:

Table 1 – 490 Series 6 1/2” Roller Centers Maximum Load in weight per foot.

Horsepower	Length of Unit	
	20'	50'
1 1/2 Hp	975	298
2 Hp	1350	448
3 Hp	2100	750

**Tables are based on speeds up to 30 Feet per Minute.
Heavier loads require supports on 5' centers.**



490 CDLR Drive Specifications:

Motor: Nema “C” face heavy-duty industrial type. Three phase is standard.

Single phase is available as an option.

Reducer: Heavy-duty right angle gear head reducer (worm gear type).

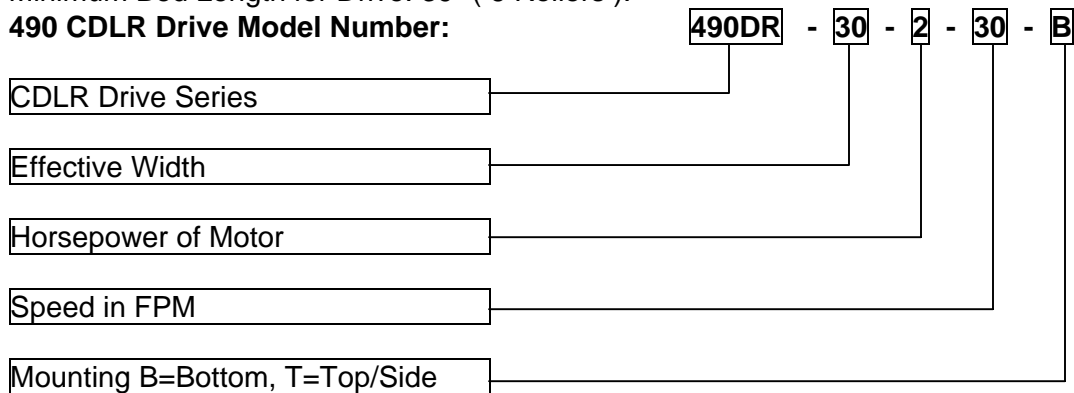
Drive Sprocket: Sized for speed with RC-80 chain.

Speed: Standard Speeds are 20 and 30 Feet Per Minute.

Minimum Top Of Roller Height: 7-13/16” for top mounted drive & 21” for bottom mounted drive.

Minimum Bed Length for Drive: 39” (6 Rollers).

490 CDLR Drive Model Number:



**Order Separately: Conveyor Bed Section, Guard Rail, Supports and Controls.
Options include Brake Motors, Clutch/Brake Modules and Single Phase motors.**



Chain Driven Live Roller Options:

Frame Options:

Butt Bolt Frame Connectors
Heavy Duty Scalloped Guards
Special Widths to match an Existing Conveyor
Special Paint Colors
Powder Coated Frames
Bright Zinc Plating on Frames

Roller Options:

Special Roller Lengths
Powder Coated Rollers
Bright Zinc Plating on Rollers
Pinned Roller Axles

Drive Options:

Single or Three Phase Motors
Clutch/Brake Assemblies
Brake Motors

Transfer Options:

Raised and Lowered Sensors



470 and 480 Replacement Parts:

470 Rollers 1.9" x 13 gauge with (2) 40A18 Sprockets welded

Effective Frame Width	1.9" Diameter 13 Ga. Steel Rollers 7/16" Hex Axle
12	470-12-RS
15	470-15-RS
18	470-18-RS
21	470-21-RS
24	470-24-RS
27	470-27-RS
30	470-30-RS
33	470-33-RS
36	470-36-RS
42	470-42-RS
45	470-45-RS

480 Rollers 2 1/2" x 11 gauge with (2) 60A15 Sprockets welded

Effective Frame Width	2.5" Diameter 11 Ga. Steel Rollers 11/16" Hex Axle
21	480-21-RS
27	480-27-RS
33	480-33-RS
39	480-39-RS
45	480-45-RS
51	480-51-RS
57	480-57-RS
63	480-63-RS

490 Rollers 3 1/2" x 0.300 wall with (2) 80A16 Sprockets welded

Effective Frame Width	3.5" Diameter x 0.300 Steel Rollers 1-1/16" Hex Axle
30	490-30-RS
40	490-40-RS
50	490-50-RS
60	490-60-RS
70	490-70-RS
80	490-80-RS

Chain Parts:

40B12T to 40B17T	Standard Sprockets for #40 Chain
40-Chain	Feet of #40 Roller Chain
60B12T to 60B17T	Standard Sprockets for #60 Chain
60-Chain	Feet of #60 Roller Chain
80B13T to 80B16T	Standard Sprockets for #80 Chain
80-Chain	Feet of #80 Roller Chain

Touch-Up Paint

MB-SPaint	Spray Can of Metzgar Blue Touch-up Paint
MB-1gCPaint	One Gallon Can of Metzgar Blue Touch-up Paint
VG-SPaint	Spray Can of Vista Green Touch-up Paint
VG-1gCPaint	One Gallon Can of Vista Green Touch-up Paint

Section 6 – Accessories

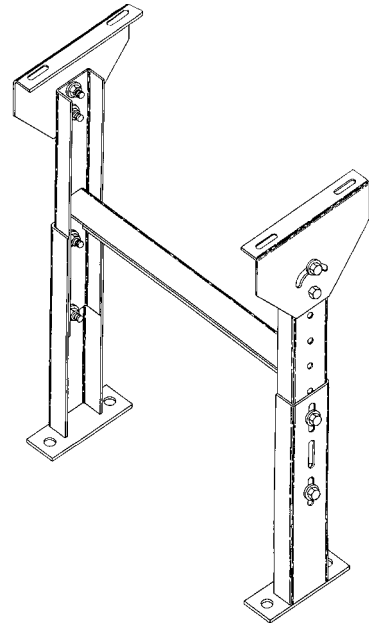
Page	Description
6-1	Accessories Index
6-2	A2000/C700 Standard and Curve Leg Supports
6-3	A2001 Heavy Duty Channel Supports
6-4	A2016 Structural Supports
6-5	A2002 Multi-Level Supports
6-6	C101 and C192 Low Elevation Supports
6-7	C219 and HDPP Portable Supports
6-8	Tripod Support and Roller Top Stands
6-9	Wall Bracket Supports and Ceiling Hangers
6-10	Turning Wheel and Traffic Controller
6-11	550 Series Turntable
6-12	Gravity Stops, Brakes, Connector Angle and Fixed End Stops
6-13	Straight Guard Rail
6-14	Flared Guard Rail
6-15	Curved Guard Rail
6-16	Bed Truss Support and Side Table Extensions



A2000/ C700 Standard Supports:

Note:

Start with the required carrying surface elevation the conveyor.
Deduct the amount in Table-1 on Page 6-3.
This is the Top of Support Elevation.
Order the support that includes that Elevation.



Maximum Capacity: 1200 pounds

Head: 10 gauge formed steel

Upright: 10 gauge formed steel

Foot Plate: 7 gauge formed steel

Hardware: 3/8 Nuts and Bolts

Top of Support Vertical Adjustment Range:

14"-18", 16"-21", 18"-25", 21"-29", 25"-39", 39"-66", 62"-90", 90"-117"

Available Widths: 12" to 48"

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

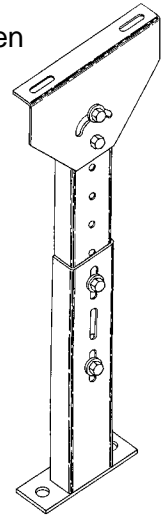
C700 Support Model Number:

C700 - 24 - 2539

Support Series

Conveyor Width

Range of Height Adjustment



Top of Support Vertical Adjustment Range: **14"-18", 16"-21", 18"-25", 21"-29", 25"-39", 39"-66"**

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

C700 Curve Leg Support Model Number:

C700 - CL - 2539

Support Series

Conveyor Width

Range of Height Adjustment

Order Separately: Diagonal Bracing

Hardware to anchor supports to the floor is not included.

All adjustment ranges are from the floor to top of support.

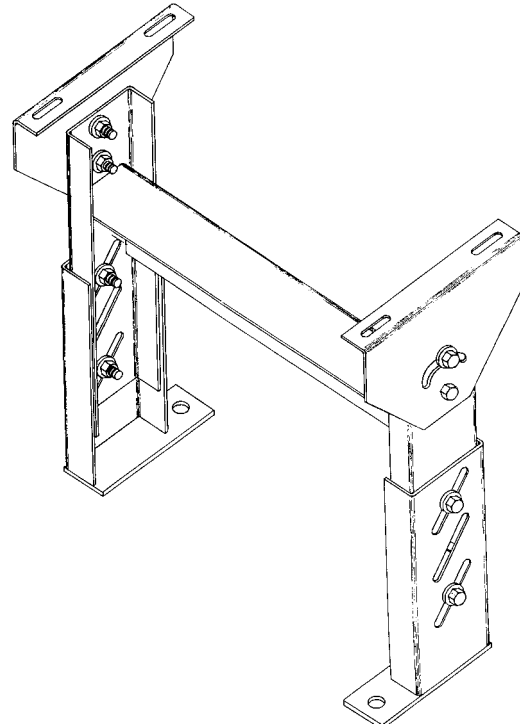


A2001 Heavy Duty Channel Supports:

Size the height of support by taking the top of roller / belt desired and deducting the amount in Table-1 to determine the elevation range of the support required.

Table-1: Height of Conveyor Series

Conveyor Series	Distance Top of Conveyor to Bottom of Frame
Wheel Gravity	2 29/32"
SD138 Gravity	2 3/4"
MD190 Gravity	3 13/16"
HD250 Gravity	4 5/16"
438 Lineshaft	4 9/16"
440 Lineshaft	4 13/16"
445 Lineshaft	9 5/16"
701 Belt	6 1/8"
801 Belt	6 1/8"
401 Belt Driven	8 15/16"
430 Belt Driven	8 15/16"
435 Belt Driven	6 13/16"
460 Belt Driven	8 1/8"
470 Chain Driven	4 9/16"
480 Chain Driven	4 5/16"
490 Chain Driven	6 3/8"



Maximum Capacity: 4000 pounds

Head: 10 gauge formed steel

Upright: 10 gauge formed steel

Foot Plate: 7 gauge steel

Hardware: 1/2" Nuts and Bolts

Top of Support Vertical Adjustment Range:

13"-16", 15"-21", 20"-28", 27"-35", 34"-46", 45"-57", 56"-80", 79"-103", 102"-143"

Available Widths:12" to 63"

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

HD Support Model Number:

A2004 - 24 - 2539

Support Series

Conveyor Width

Range of Height Adjustment

Order Separately: Diagonal Bracing

Hardware to anchor supports to the floor is not included.

All adjustment ranges are from the floor to top of support.

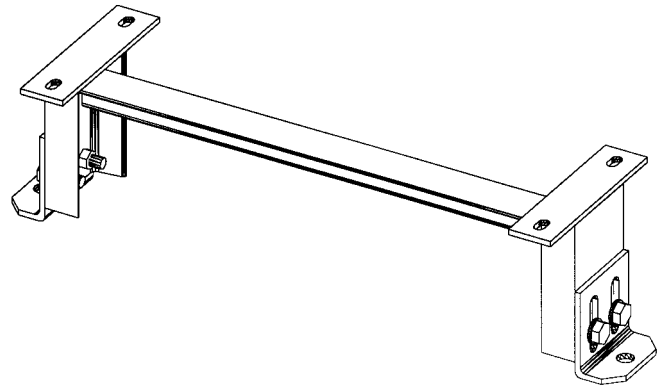


A2016 Structural Channel Supports:

Size the height of support by taking the top of roller / belt desired and deducting the amount in Table-1 to determine the elevation range of the support required.

Table-1: Height of Conveyor Series

Conveyor Series	Distance Top of Conveyor to Bottom of Frame
Wheel Gravity	2 29/32"
SD138 Gravity	2 3/4"
MD190 Gravity	3 13/16"
HD250 Gravity	4 5/16"
438 Lineshaft	4 9/16"
440 Lineshaft	4 13/16"
445 Lineshaft	9 5/16"
701 Belt	6 1/8"
801 Belt	6 1/8"
401 Belt Driven	8 15/16"
430 Belt Driven	8 15/16"
470 Chain Driven	4 9/16"
480 Chain Driven	4 5/16"



Maximum Capacity: 2000 pounds

Head: 1/4" flat steel

Upright: 4" Structural Channel

Foot Plate: 1/4" formed steel

Hardware: 1/2" Nuts and Bolts

Vertical Adjustment Range: Plus or Minus One Inch

Maximum Height of Support: 24"

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Structural Support Model Number:

A2016 - 36 - 24

Support Series

Conveyor Width

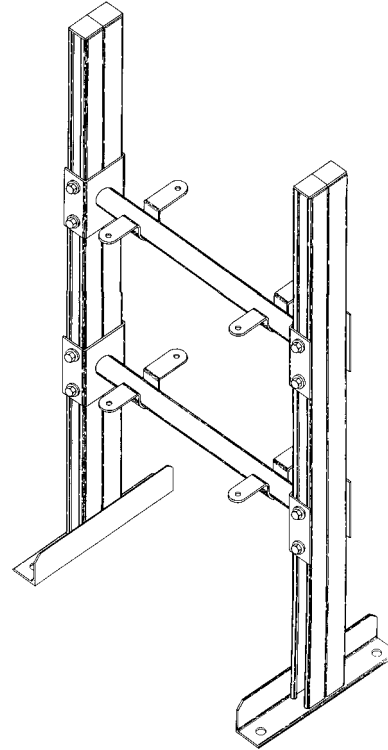
Range of Height Adjustment

Hardware to anchor supports to the floor is not included.



A2002 Multi-level Supports:

Multi-level supports are infinitely adjustable. They are designed for two or more lines of conveyor installed directly above one another. Multi-level supports have a standard three inch clearance between the conveyor frame and upright on each side of the conveyor. Standard upright heights are 48” and 72”. Minimum elevation is 5” for side frames.



- Maximum Capacity: 1200 pounds
- Cross Tube: 1 5/8” diameter x 13 gauge
- Upright: 1 5/8” x 1 5/8” back to back strut
- Foot Plate: 10 gauge formed steel
- Hardware: 3/8” Nuts and Bolts
- Height of Support: 48” or 72”
- Available Widths: 12”, 15”, 18”, 21”, 24”, 30”, 36”, 42”, or 48”
- Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Table-2: Conveyor Width vs. Between Upright Dimension

Conveyor Width	12”	15”	18”	24”	30”	36”	42”	48”
Between Upright	18”	21”	24”	30”	36”	42”	48”	54”

Multi-Level Support Model Number:

ML - 36 - 48

Support Series

Conveyor Frame Width

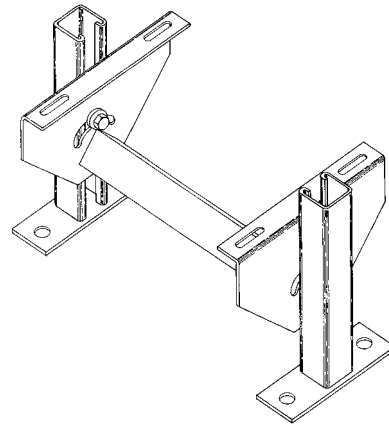
Range of Height Adjustment

Optional Spacer Channels required when used with lineshaft conveyor
Optional Multi-Level Diagonal Braces are available.
Hardware to anchor supports to the floor is not included.



C-101 Low Elevation Supports:

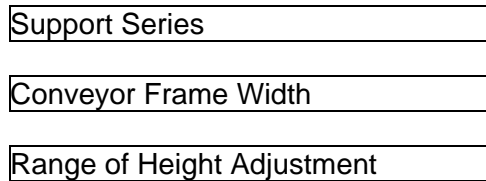
C-101 Supports low elevation supports are used when the bottom flange of the conveyor is 6” to 14” above the floor.



- Maximum Capacity: 1200 pounds
- Head: 10 gauge formed steel
- Cross Channel: 1 1/2” x 1 1/2” x 3/16” thick angle
- Upright: 1 5/8” x 1 5/8” strut
- Foot Plate: 7 gauge formed steel
- Hardware: 3/8” Nuts and Bolts
- Vertical Adjustment: 6” to 14” top of support
- Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

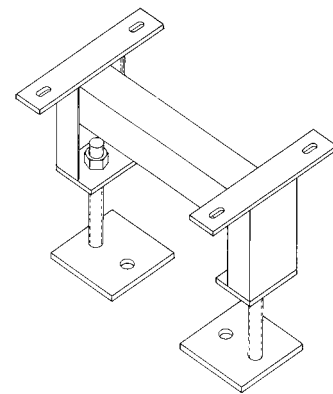
C-101 Support Model Number:

C-101 - 36 - 14



C-192 Heavy Duty Low Elevation Supports:

- Maximum Capacity: 2000 pounds
- Head: 10 gauge formed steel
- Cross Channel: 2” x 2” x 1/4” thick angle
- Upright: 3” Structural
- Adjustment: 3/4” Diameter Threaded Rod
- Foot Plate: 1/4” steel
- Vertical Adjustment: 4 3/4” – 6 3/4”, 6 3/4”-10”, 9 3/4”-13” top of support
- Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green



C-192 Support Model Number:

C-192 - 36 - 6.75-10



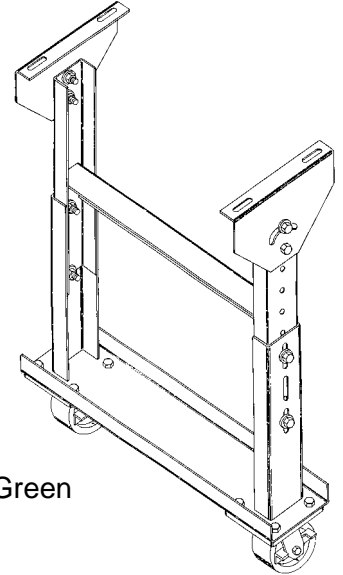
Hardware to anchor supports to the floor is not included.



C-219 Portable Supports for Horizontal Applications:

Constructed as our C700 style support with a 4” diameter swivel or rigid brake lock casters on a channel base. Two are recommended for a straight section. Three are recommended for a 90 degree curve application. The standard unit includes diagonal bracing.

- Maximum Capacity: 1200 pounds
- Head: 10 gauge formed steel
- Upright: 10 gauge formed steel
- Hardware: 3/8 Nuts and Bolts
- Bottom Channel: 10 gauge formed steel
- Casters: 4” diameter fixed with brake locks or swivel
- Top of Support Vertical Adjustment Range: 24”-31” and 31”-45” top of support
- Available Widths: 12”, 15”, 18”, 21”, 24”, 30” or 36”
- Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green



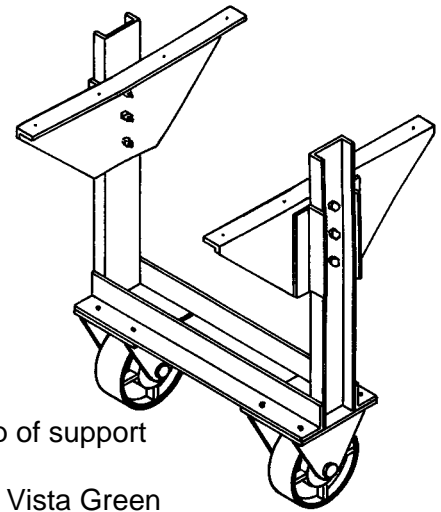
C-219 Support Model Number:

C-219 - 24 - 3145

- Support Series
- Conveyor Width
- Range of Height Adjustment

Heavy Duty Portable Supports:

- Maximum Capacity: 2000 pounds
- Head: 7 gauge formed steel
- Upright: 3” Structural Channel
- Hardware: 3/8 Nuts and Bolts
- Bottom Channel: Pair of 2” x 2” Angle
- Casters: 6” diameter fixed or swivel
- Top of Support Vertical Adjustment Range: 24”-30”, 30”-36” and 36”-42” top of support
- Available Widths: 12”, 15”, 18”, 21”, 24”, 30” or 36”
- Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green



Heavy Duty Portable Model Number:

HDPP - 24 - 2430

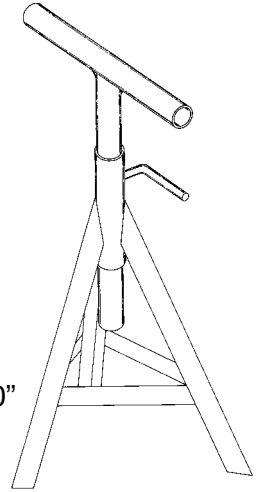
- Support Series
- Conveyor Width
- Range of Height Adjustment



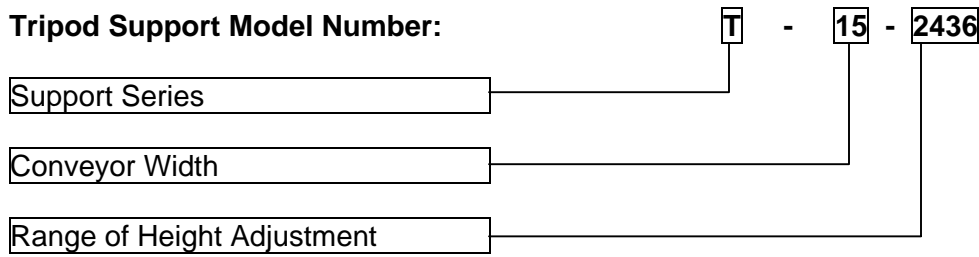
Tripod Supports:

Tri-pod supports are used with gravity wheel or LD gravity roller conveyor. Tri-pod supports can also be used as a stand-alone support for a drill press or other saw etc.

- Maximum Capacity: 125 pounds
- Top: 1 5/16" x 14 gauge steel tube
- Tube Upright: 1 5/8" x 13 gauge tube
- Legs: (3) 1" x 1" x 1/8" angle
- Horizontal Connector: 3/4" x 3/16" flat bar
- Hardware: 3/8 Nuts and Bolts
- Bottom Channel: 10 gauge formed steel
- Top of Support Vertical Adjustment Range: 17"-21", 20"-30", 24"-36", 30"-48" or 42"-70"
- Available Widths: 12", 15", 18"
- Finish: Standard finish is Metzgar Orange



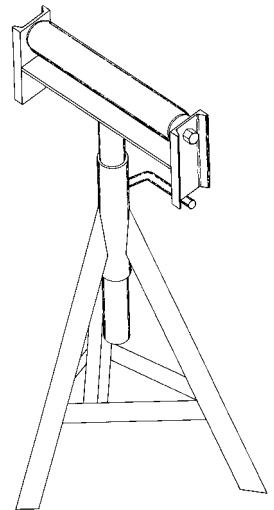
Tripod Support Model Number:



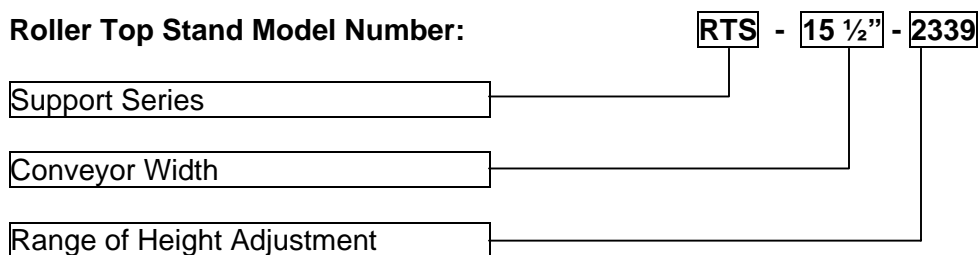
Roller Top Supports:

Roller Top supports can be used as a stand-alone support for a drill press, punch press, or saw.

- Maximum Capacity: 125 pounds
- Top: 1.9" diameter x 16 gauge steel roller with 7/16" hex axle
- Tube Upright: 1 5/8" x 13 gauge tube
- Legs: (3) 1" x 1" x 1/8" angle
- Horizontal Connector: 3/4" x 3/16" flat bar
- Hardware: 3/8 Nuts and Bolts
- Bottom Channel: 10 gauge formed steel
- Top of Roller Vertical Adjustment Range: 14"-23", 23"-39" and 28"-50" top of support
- Available Widths: 9 1/2", 15 1/2", 18 1/2", 21 1/2"
- Finish: Standard finish is Metzgar Orange



Roller Top Stand Model Number:





Wall Bracket Supports:

Wall bracket supports are used to mount conveyor running parallel to a wall where ceiling hangers or floor supports are not practical. The vertical member is bolted directly to the wall. A channel is bolted to the vertical member. A pair of U-clamps attaches the conveyor to the horizontal tube.

Maximum Capacity: 800 pounds (If Building Wall Can Support)

Upright: 1 5/8" x 1 5/8" Strut Channel

Hardware: 3/8 Nuts and Bolts

Attaching Plates: 7 gauge

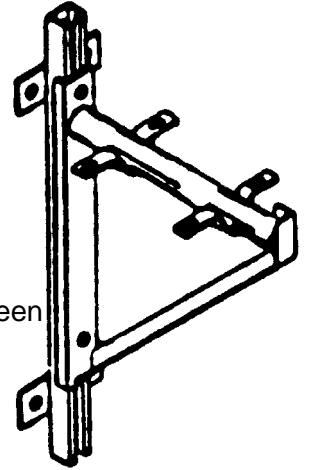
Slide Upright: 10 gauge formed channel

Top of Support Vertical Adjustment Range:6"

Available Conveyor Widths:12", 18", 24", 30", 36" or 48"

Horizontal Tube:1 5/8" x 13 gauge (6" wider than the conveyor width)

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green



Wall Bracket Model Number:

WB - **24**

Support Series

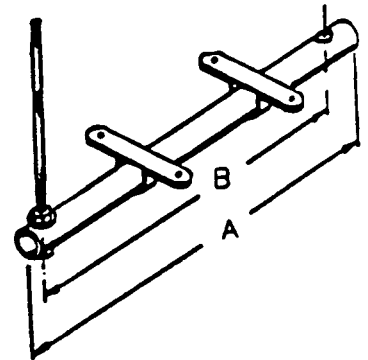
Conveyor Width

Ceiling Hangers:

Ceiling hangers are used to mount conveyor where floor supports or wall brackets would not be practical. A pair of U-clamps attaches the conveyor to the horizontal tube.

Horizontal Tube is 1 5/8" x 13 gauge (6" wider than the conveyor width)

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green



Ceiling Hanger Model Number:

CHS - **24** - **18**

Support Series

Saddle Width

Conveyor Width

Model Number	"A"	"B"	Saddle Capacity per Conveyor Frame Width									
			12	15	18	21	24	27	30	36	42	48
CHS2418	24	22	1400	2060	2400	-	-	-	-	-	-	-
CHS-2721	27	25	1060	1400	2600	2400	-	-	-	-	-	-
CHS-3024	30	28	860	1060	1400	2060	2400	-	-	-	-	-
CHS-3327	33	31	720	860	1060	1400	2060	2400	-	-	-	-
CHS-3630	36	34	620	720	860	1060	1400	2060	2400	-	-	-
CHS-3933	39	37	-	595	640	745	900	1180	1700	2400	-	-
CHS-4236	42	40	-	-	-	580	640	820	1080	2300	-	-
CHS-4842	48	46	-	-	-	-	-	-	580	920	2300	-
CHS-5448	54	52	-	-	-	-	-	-	-	-	820	2200

Drop rods are not included.

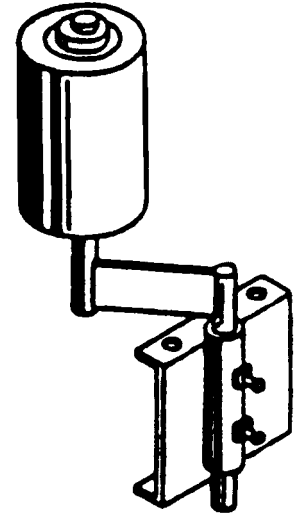
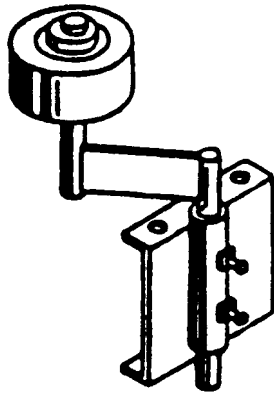
Optional 18" long x 5/8" threaded adjustment rod

Optional Spacer Channels required when used with lineshaft conveyor

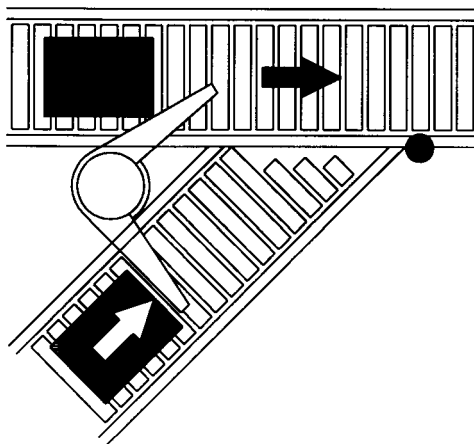
**Turning Wheel/Drum:**

Turning wheels are used for converging product from a spur onto a powered conveyor, directing the product to the center of the powered line. Turning wheels operate best with totes, cartons and similar items that have smooth sides that contact the wheel. A 4" diameter x 8" face Turning Drum is also available for products with irregular surfaces. The drum can be mounted on an angle to accommodate totes with angled sides.

Specify the type of conveyor the wheel/drum is being mounted on.

**Traffic Controller:**

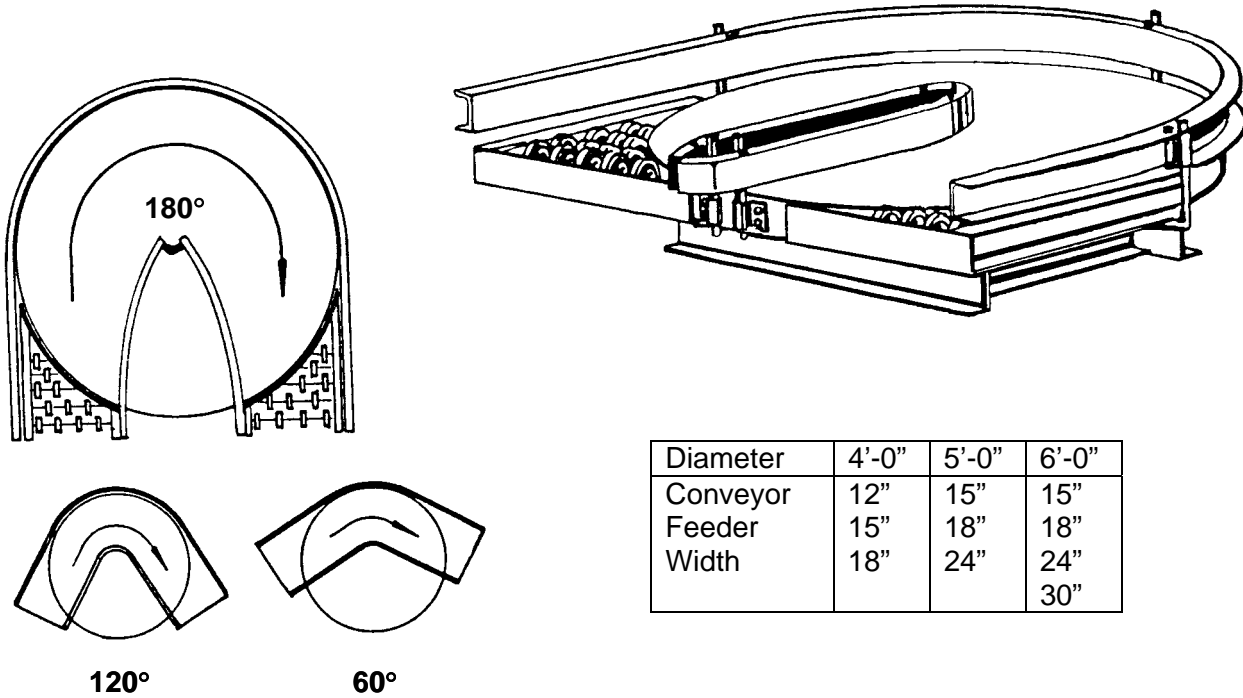
Use a traffic controller for product flow at merge areas where a collision of product can occur. Only one arm is allowed to operate at a time. This prevents the other product from being released until the other part has cleared the merge area.



Specify the merge degree and conveyor type when ordering. Traffic Controller is for use with **positively driven** conveyor.



550 Series Powered Turntable Specifications:



550 Series Turntables are designed to turn goods up to 180 degrees on a flat round table. Its purpose is to change directions of product flow in the smallest diameter. Turntables are not restricted to 180 degree applications although they are best suited for turns ranging from 90° to 180° turns.

550 Series Specifications:

Size: 4', 5, or 6' Diameter

Construction: 3/16" thick steel with 1 7/16" Diameter steel shaft. Outer edge of table rides on casters for support.

Drive: 3/4 Hp minimum with Reducer to #50 Chain and Sprockets.

Minimum Elevation: 24" top of table.

Speed: Standard Speed is 100 FPM at the centerline of the carrying surface.

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Soft Start Controls are Required on 550 Series Turntables (Order Separately).

550 Turntable Model Number:

550TT - 6' - 180 - 18

Conveyor Series

Diameter of Turntable (4', 5', or 6')

Degree of Turn

Width of Conveyor Feeding Table

Order Controls and Supports Separately.



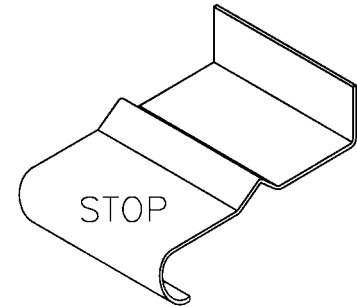
Gravity Stops:

Gravity stops are used to stop the flow of product on gravity conveyor. Stops are formed pieces of 12 gauge galvanized steel.

Add “M” to the model number for use with midget roller series Example: ST-M12.

Add “LD” to Model Number for use with LD Series.

Conveyor Width	12"-15"	18"-21"	24"-27"	30"
Model Number	ST-12	ST-18	ST-24	ST-30

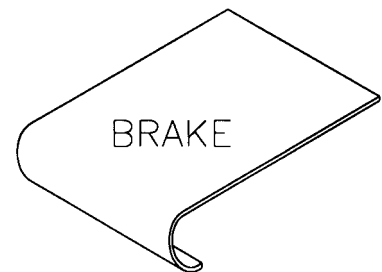


Gravity Brakes:

Gravity brakes are used to slow the flow of product on gravity conveyor. Stops are formed pieces of 12 gauge galvanized steel.

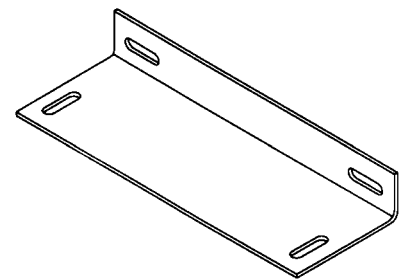
Add an “M” to the model number for use with midget roller series.

Conveyor Width	12"-15"	18"-21"	24"-27"	30"
Model Number	BR-12	BR-18	BR-24	BR-30



Gravity Connector Angles:

Gravity connector angles are designed for use with power conveyors that require a permanent connection to adjacent gravity sections. Gravity connector angles are recommended on all overhead applications where gravity connects to powered conveyor. Gravity connectors include all required mounting hardware.



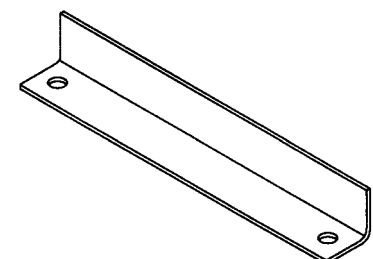
Fixed Angle End Stops:

Fixed angle end stops are made from 2" x 2" x 1/8" steel.

Fixed angle end stops are available in 12" to 48" widths.

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Optional heavy duty end stop is 2" x 2" x 1/4" steel





Straight Guard Rails:

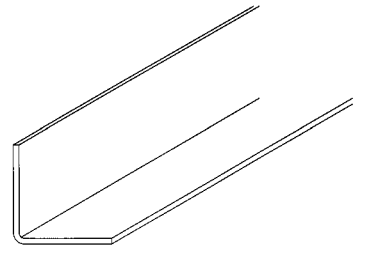
Angle Guard Rail:

Available Heights: 1", 2", 3", 4", or 6"

Material: 12 gauge galvanized Steel

AGR can be mounted toes in or toes out.

Optional low friction surfaces can be added to guard rail.



Angle Guard Rail Model Number:

2 - AGR - 1 - 10

Height of Rail 1", 2", 3", 4" or 6"

Guard Rail Series

Number of Sides (1 or 2)

Length in feet (10ft Standard)

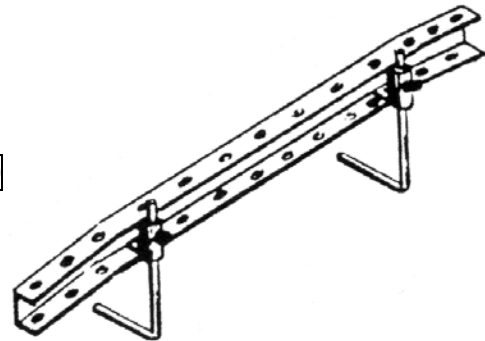
Channel Guard Rail:

Channel: 2" face with 15/16" flanges

Channel Material: 12 gauge galvanized Steel

Adjustable Rods: 9/16" diameter

Requires an adapter if used with lineshaft.



Channel Guard Rail Model Number:

CGR - 1 - 10

Guard Rail Series

Number of Sides (1 or 2)

Length in feet (10ft Standard)

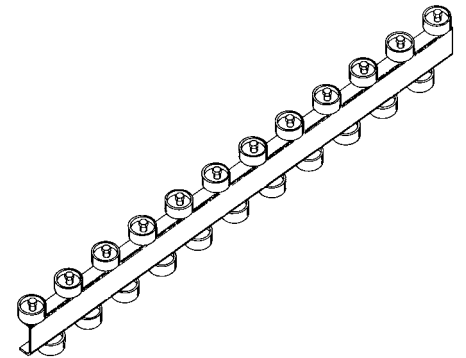
Wheel Lined Channel Guard Rail:

Channel: 2" face with 15/16" flanges

Wheels: 1 15/16" diameter on 1 1/2" staggered centers

Channel Material: 12 gauge galvanized Steel

Requires an adapter if used with lineshaft conveyor.



Wheel Lined Guard Rail Model Number:

WLGR - 1 - 10

Guard Rail Series

Number of Sides (1 or 2)

Length in feet (10ft Standard)



Straight Guard Rails Continued:

Flared Angle Guard Rail:

Available Heights: 6” or 12”

Material: 12 gauge galvanized Steel

AGR can be mounted toes in or toes out.

Flared Angle Guard Rail Model Number:

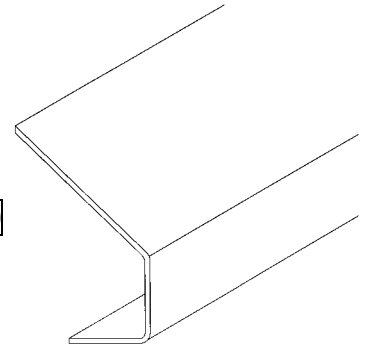
6 - FAGR - 1 - 10

Height of Rail 6” or 12”

Guard Rail Series

Number of Sides (1 or 2)

Length in feet (10ft Standard)





Curved Guard Rails:

Angle Guard Rail:

Available Heights: 1", 2", 3", 4", or 6"
Material: 12 gauge galvanized Steel
AGR can be mounted toes in or toes out.

Curve Angle Guard Rail Model Number:

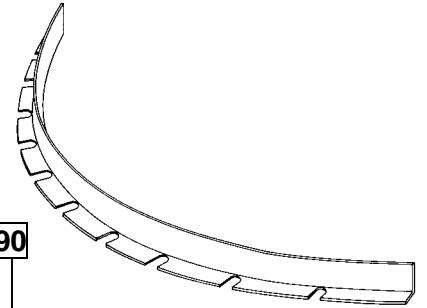
2 - **CAGR** - **24** - **90**

Height of Rail 1", 2", 3", 4" or 6"

Guard Rail Series

Width of Conveyor

Degree of Curve



Channel Guard Rail:

Channel: 2" face with 15/16" flanges
Channel Material: 12 gauge galvanized Steel
Adjustable Rods: 9/16" diameter
Requires an adapter if used with lineshaft.

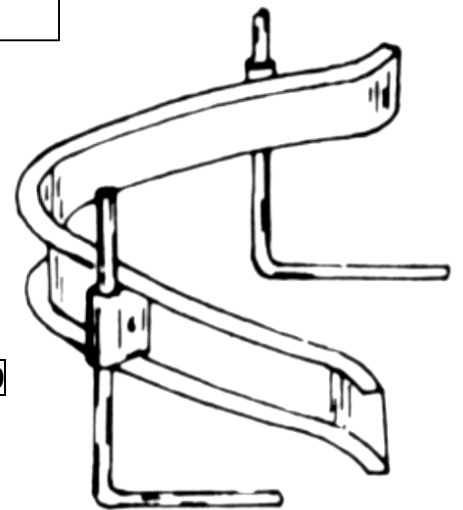
Curve Channel Guard Rail Model Number:

CCGR - **24** - **90**

Guard Rail Series

Width of Conveyor

Degree of Curve



Wheel Lined Channel Guard Rail:

Channel: 2" face with 15/16" flanges
Wheels: 1 15/16" diameter on 1 1/2" staggered centers
Channel Material: 12 gauge galvanized Steel
Requires a spacer channel adapter if used with lineshaft conveyor.

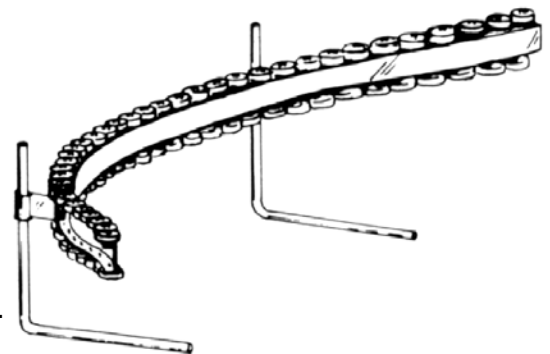
Curve Wheel Lined Guard Rail Model Number:

CWLGR - **24** - **90**

Guard Rail Series

Width of Conveyor

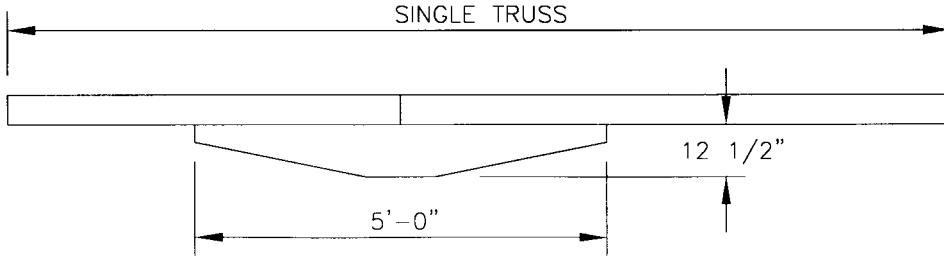
Degree of Curve





Bed Truss:

Trussing is used to reinforce spliced joints where conditions do not permit the use of floor supports, ceiling hangers or wall brackets at bed joints. Bed capacities increase if supports are placed as close as possible to the trussing ends.



Truss Side Plates: 12 gauge galvanized

Bottom plate: 10 gauge steel

Available Conveyor Widths: 12", 15", 18", 21", 24", 27", 30", 36", 42" or 48"

Finish: Standard finish for painted components is Metzgar Medium Blue or Vista Green

Bed Truss Model Number:

BTS - 12 - 15

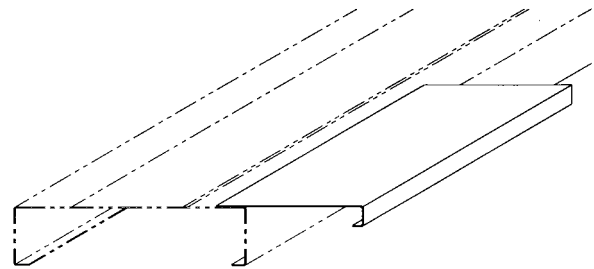
Support Series

Conveyor Width

Length to Span (15', 17'-6" or 20')

Side Table Extensions:

Side tables provide a large continuous working surface for operations such as assembly or order picking. Items being conveyed can be pulled from the conveying surface and allowed to wait for processing while other articles are conveyed past. Widths of side tables are measured from inner to outer edge of the table. Side table extensions are normally shipped unmounted. When ordering specify length, width and one side or both sides.



Material: 12 gauge galvanized

Available Table Widths: 9", 12", or 18"

Side Table Extensions Model Number:

STE - 18 - 10

Support Series

Table Width (9", 12" or 18")

Length of Table in Feet

Section 7 – Controls

Page	Description
7-1	Controls Index
7-2	Motor Data, Enclosure Rating and Abbreviations
7-3	Controls Safety Guidelines
7-4	Fixed Speed Controls Packages
7-5	Three Phase AC Variable Speed Packages
7-6	AC vs DC Variable Speed Application Information
7-7	DC Variable Speed Packages and Accessories



Motor Data

Table 1- Estimated Full Load Amps of Motors

Horsepower	110v Single ϕ	220v Single ϕ	208v Three ϕ	230v Three ϕ	460v Three ϕ
1/3	5.8	2.9	1.4	1.3	0.65
1/2	8.8	4.4	2.0	1.8	0.9
1	10.8	5.4	3.0	2.8	1.4
1 1/2	17.2	8.6	5.2	5.0	2.5
2	20.0	10.0	6.5	6.2	3.1

Industry Standard Enclosure Ratings:

- NEMA1** Enclosures rated for indoor use primarily to provide a degree of protection against contact with the equipment in the enclosure.
- NEMA4** Enclosures rated for indoor use primarily to provide a degree of protection against wind blown dust and rain, splashing water and hose directed water.
- NEMA12** Enclosures rated for indoor use primarily to provide a degree of protection against dust, falling dirt, dripping non-corrosive liquids.
- NEMA13** Enclosures rated for indoor use primarily to provide a degree of protection against dust, spraying water, oil and non-corrosive coolant.

Controls Glossary:

- Control Panel – A control enclosure that could contain motor starters, relays, fuses, Control transformers, programmable logic controllers and terminal
- Control Station - A Control Enclosure containing pushbuttons.
- Control Transformer – A device used to convert high voltage to a lower level where it is used to power pushbuttons, photoeyes, motor starters and solenoids.
- Emergency Stop – A device that stops the equipment in the event of an emergency. Common types include pushbuttons and pull cord switches.
- Magnetic Starter – A electromechanical device which when activated applies power to motors.
- Motor Safety Switch – A lockout device that inhibits a motor from being run when maintenance personnel are working on the conveyor.
- Overload Relay – A device that detects if a motor is drawing too much current and stops the motor before damage occurs.
- PC – Personal Computer
- PLC – Programmable Logic Controller
- Solenoid Valve 3-way – An electrically operated pneumatic valve commonly used to operate brakes on line shaft conveyor.
- Solenoid Valve 4-way – An electrically operated pneumatic valve commonly used to operate transfers and pop-up stops with double acting cylinders.
- Variable Speed DC – (Direct Current)
An operator can vary the speed of the conveyor with a DC motor and DC SCR speed controller. Power Source required 110vac or 220vac single phase.
- Variable Speed AC – (Alternating Current)
An operator can vary the speed of the conveyor with a three phase AC motor and AC variable frequency drive speed controller.

**Controls Safety Guidelines:**

This section is provided to give you basic conveyor safety guidelines in addition to giving information on which controls accessories should be used in a particular application. For Safety considerations and applications not listed below consult the factory or a qualified source (OSHA, state or Local codes) to determine the safety requirements for your application.

Lockout Safety Switches or Disconnect Switches:

All control cabinets and motors should be provided with a safety switch. These completely remove the power from the conveyor. These switches have provisions for locking in the off position for any personnel working on the conveyor.

Start-up Warning Horns:

All conveyors should be within sight of the operator pushing the start pushbutton. If the operator cannot see the entire conveyor being started some type of audible device is required. The time delay would allow personnel to activate a emergency stop or become clear before motion begins.

Emergency Stops:

At each location where operators are working at or on the conveyor, an emergency stop should be located. An operator working directly at the conveyor should not be required to move to actuate an emergency stop. If several operators are working along the conveyor a cable operated switch is the most cost effective means for providing an emergency stop. Manual reset of the emergency stop that was activated is required before the system can be restarted.

For instances which the operators are not working at or on the conveyor, stop buttons should be provided so an operator can stop the system without having to cross any obstructions. In this instance the stop would be used to protect the equipment from damage rather than personal safety.

Air Pressure Actuated Switches:

Air pressure switches should be used on systems using air operated devices. The conveyor should stop rather than cause damage to personnel or product.

Controls Logic and Start Circuits:

Start-up circuits and emergency stop circuits should be configured using control relays and hard-wired devices.

Foot Switches:

Foot Switches can be dangerous operator controls when not applied correctly. A footswitch should be used in a application when accidental actuation will not cause harm to the operator.

Safety Codes:

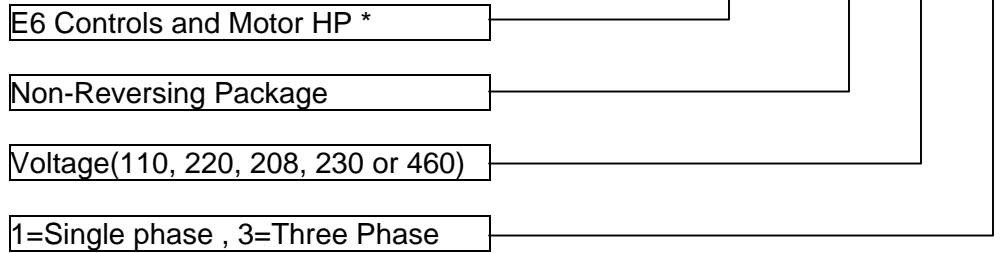
State and Local codes may require additional safety devices not covered in this section. Consult your local or state OSHA office for additional information.

METZGAR CONVEYOR COMPANY ASSUMES NO LIABILITY TO THE INCLUSION OF ALL FEDERAL, STATE, LOCAL OR PLANT SAFETY DEPARTMENT REQUIREMENTS. IF METZGAR CONVEYOR IS MADE AWARE OF SUCH REQUIREMENTS AT THE TIME OF BID, WE WILL INCORPORATE THEM AS PART OF OUR PROPOSAL.



Controls Packages – Fixed Speed:

Non-UL Non-Reversing Package Model Number: E605 - N - 460 - 3

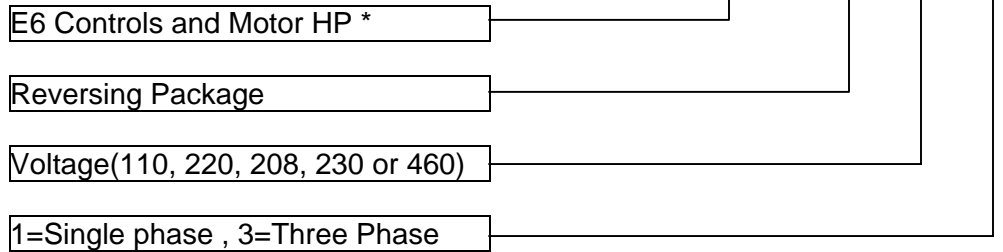


Non-Reversing Equipment List:

- (1)- Control Enclosure
- 1- Disconnect Switch
- 1- IEC Style Magnetic Motor Starter
- 1- IEC Style Overload Relay
- 1- Control Transformer (3 Phase Only)
- 1- “Start Conveyor” Pushbutton
- 1- “Stop Conveyor” Pushbutton

(1)- Standard Enclosure Mounting Bracket

Non-UL Reversing Package Model Number: E605 - R - 460 - 3



Reversing Equipment List:

- (1)- Control Enclosure
- 1- Disconnect Switch
- 1- IEC Style Reversing Magnetic Motor Starter
- 1- IEC Style Overload Relay
- 1- Control Transformer (3 Phase Only)

(1)- Standard Enclosure Mounting Bracket

(2)- “Forward/Reverse/Stop” Control Stations

* Motor Sizes – ½ = 05, ¾ =75, 1=10, 1 ½ = 15 and 2=20

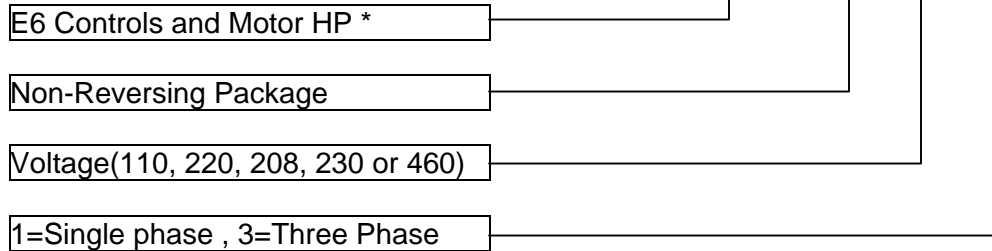
Refer to Controls safety guidelines for your application to determine if any additional accessories are required.

All controls packages are shipped loose unless factory rewiring is purchased. Consult factory if specific brands or parts are required.



Controls Packages – AC Three Phase Variable Speed:

Non-UL Non-Reversing Package Model Number: **E605** - **N** - **460** - **3VS**

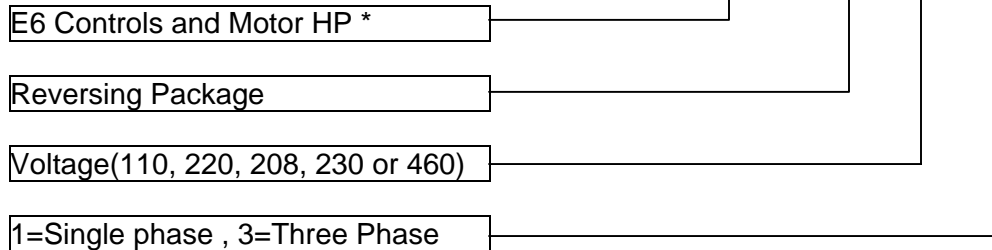


Three Phase Variable Speed Non-Reversing Equipment List:

- (1)- Control Enclosure
- 1- Disconnect Switch
- 1- AC Variable Frequency Drive
- 1- Control Transformer
- 1- Door mounted Speed control knob
- 1- “Start Conveyor” Pushbutton
- 1- “Stop Conveyor” Pushbutton

(1)- Standard Enclosure Mounting Bracket

Non-UL Reversing Package Model Number: **E605** - **R** - **460** - **3VS**



Three Phase Variable Speed Reversing Equipment List:

- (1)- Control Enclosure
- 1- Disconnect Switch
- 1- AC Variable Frequency Drive
- 1- Control Transformer
- 1- Door mounted Speed control knob

(1)- Standard Enclosure Mounting Bracket

(2)- “Forward/Reverse/Stop” Control Stations

* Motor Sizes – ½ = 05, ¾ =75, 1=10, 1 ½ = 15 and 2=20

Refer to Controls safety guidelines for your application to determine if any additional accessories are required.

All controls packages are shipped loose unless factory prewiring is purchased.

Consult factory if specific brands or parts are required.

Order Separately: Inverter Duty Motor



AC vs DC Variable Speed Application Information:

DC Variable Speed:

Power Requirements: 110 or 220 volts Single Phase.

Motor: 90 volt DC Motor for 110v input, 180 volt DC Motor for 220v input.

Speed Controller: DC SCR Speed Controller

Advantages:

- Low Cost
- Constant Torque
- Allows for slow speeds
- Plug into wall power
- Easy to make portable

Disadvantages:

- Motor cost above 1 hp increases significantly.
- Motors have brushes that eventually will wear out.

Table-1 DC Speed Chart

Speed of Conveyor Drive FPM	Minimum Speed FPM	Maximum Speed FPM
20	2	20
30	3	30
40	4	40
50	5	50
60	6	60
70	7	70
80	8	80
90	9	90
100	10	100

AC Variable Speed:

Power Requirements: Three Phase (Special Drives can use Single phase for small motors).

Motor: AC three Phase Motor

Speed Controller: AC Drive also Referred to as an Inverter

Advantages:

- Uses Common Three Phase Motor
- Allows for Over Speeding of the Motor
- Is More Energy Efficient

Disadvantages:

- Three Phase Power Required
- Higher Initial Cost

Table-1 AC Speed Chart

Speed of Conveyor Drive FPM	Minimum Speed FPM	Maximum Speed FPM
20	7	30
30	10	45
40	14	60
50	17	75
60	20	90
70	24	105
80	27	120
90	30	135
100	33	150

* Conveyor Speeds over 100FPM require Special Mechanical Components



Controls Packages – DC Variable Speed:

DC Variable Speed (Requires 110 vac Power)	
E6DC-09005	½ HP DC Adder – Includes 3 Phase to 90 VDC motor upgrade and SCR controller
E6DC-09075	¾ HP DC Adder – Includes 3 Phase to 90 VDC motor upgrade and SCR controller
E6DC-09010	1 HP DC Adder – Includes 3 Phase to 90 VDC motor upgrade and SCR controller

Controls Accessories:

Pull Cord	
E6ES-000001	Emergency Stop Pull Cord Switch and Mounting Bracket
E6CK-000025	25' Red Plastic Coated Cable and Mounting Hardware
E6CK-000050	50' Red Plastic Coated Cable and Mounting Hardware
E6CK-000100	100' Red Plastic Coated Cable and Mounting Hardware
E6CK-000150	150' Red Plastic Coated Cable and Mounting Hardware
Control Stations	
E6CS-ES0001	Emergency Stop Pushbutton Control station
E6CS-SS0001	Start-Stop Pushbutton Control Station
E6CS-FRS001	Forward-Reverse-Stop Pushbutton Control Station
E6CS-UDS001	Up-Down-Stop Pushbutton Control Station
Safety Switch	
E6SW-NF0100	Non-Fused Motor Safety Switch with Mounting Bracket

Controls Prewiring:

E6PW-K003PH	Wiring Three Phase Package to the Motor
E6PW-K003PH	Wiring Three Phase Package to the Motor
E6PW-K001PH	Wiring Single Phase Package to the Motor
E6PW-K001PH	Wiring Single Phase Package to the Motor
E6PW-K001DC	Wiring DC SCR Speed Controller to the Motor and 15' cord and Plug



Notes:



Section 8 – Forms

Page	Description
8-1	Forms Index
8-2	Quotation Information Sheet
8-3	Power Conveyor Data Sheet
8-4	Spare Parts Order Form



Quotation Information Sheet:

Product to be Conveyed:

Product #	Length	Width	Height	Weight Maximum	Weight Minimum
1					
2					
3					
4					
5					

Type of Product to be Conveyed: Corrugated Boxes, Pallets, Plastic Totes or Etc.

Rate of Product Flow:

Per Minute:	Per Hour:	Per 8 hr Shift:
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Speed of Conveyor in Feet per Minute:

100	90	80	70	60	50	40	30	20	10
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Elevation of Conveyor: (Top of Roller or Top of Belt or Use Sketch) ?

Controls: Yes / No (If Yes is Conveyor Reversing, Variable Speed etc.)?

Available Power Source for Conveyor:

Three Phase	460-3ph-60hz	230-3ph-60hz	208-3ph-60hz
Single Phase	220-1ph-60hz	110-1ph-60hz	Other

Operating Conditions:

Hot	Cold	Wet	Dusty/Oily	Other
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Specifications: Yes / No If Yes Include a Copy.

Description of Product Flow (What is the end result the customer wants to accomplish):

Sketch of Conveyor / System:



Belt Conveyor Power Conveyor Data Sheet:

Unit Model Number:

Overall Unit Length:

Speed of Unit:

Component	Part Number	Description
Drive		
Motor Horsepower		
Speed of Unit (FPM)		
Bed Construction		
Bottom Pans		
Feeders		
End Assembly		
Take-ups		
Connectors		
Belt type and length		
Accessories		
Guard Rails		
Trussing		
Controls		
Supports		
Finish:	Metzgar Blue	

