



# BELT DRIVEN LIVE ROLLER CONVEYOR

## SECTION CONTENT

Straight  
Curve  
Straight and Curve Spur  
Optional Equipment and Devices

# BDLR **BELT DRIVEN LIVE ROLLER CONVEYOR**

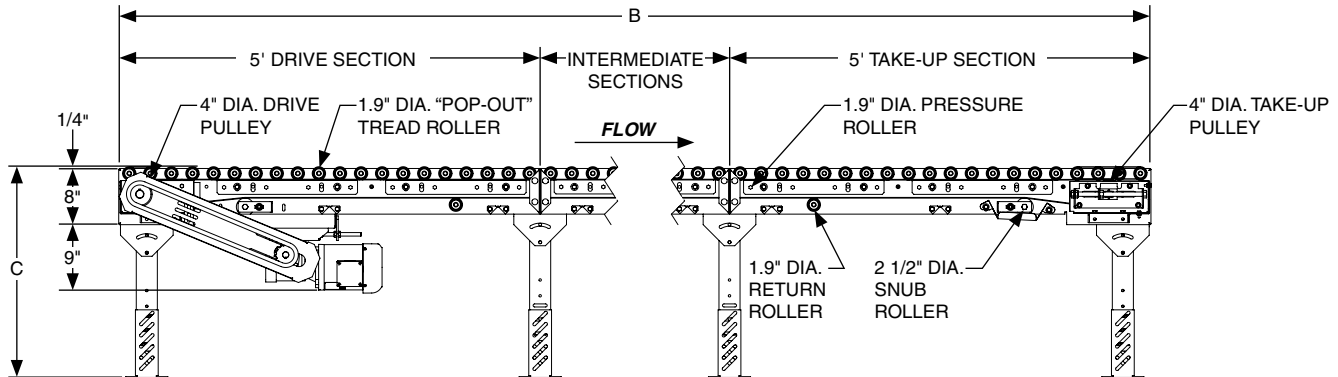


## WHY BDLR?

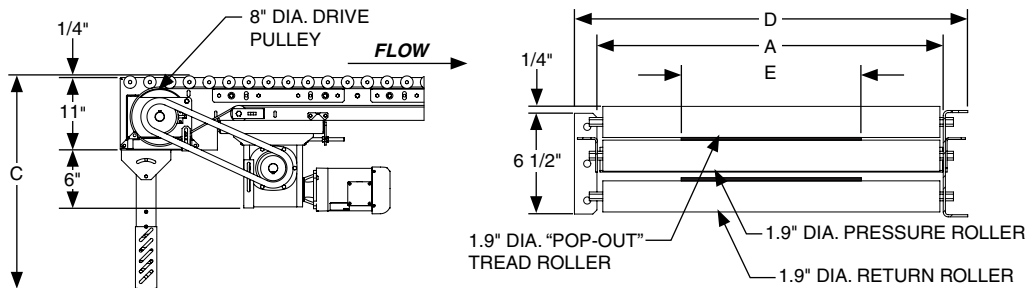
- Higher load capacities than typical lineshaft conveyor
- Capable of handling products wider than the frame width
- Minimum back pressure available
- Up to 102 linear feet using a single drive
- Close roller centers are easily achieved
- Common applications include accumulation to feed lanes for palletizing, packaging and assembly

## BELT DRIVEN LIVE ROLLER CONVEYOR - STRAIGHT

### 4" END DRIVE



### 8" END DRIVE



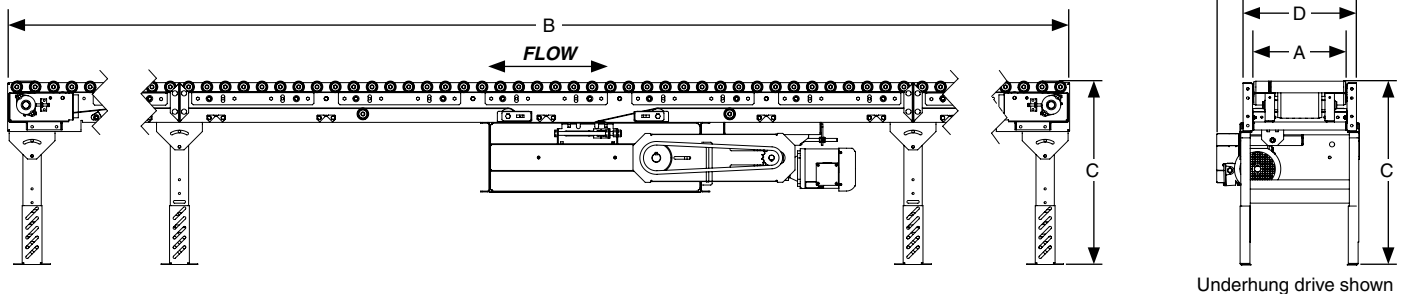
1.9"				
	End Drive			Center Drive
	4" Shaft Mount	8" Shaft Mount	4" and 8" Underhung	Underhung
A	13" - 39"			
B	5' - 102'			
C	15" - 89"	18" - 89"	21" - 89"	22.5" - 89"
D	A + 3"			
E	6", 12"			
F	A + 10 3/4" or 12 1/2"*** A + 7 1/2" A + 7 1/4"			

\*6" Belt on 13" - 30" BF and 12" Belt on 32" - 39" BF

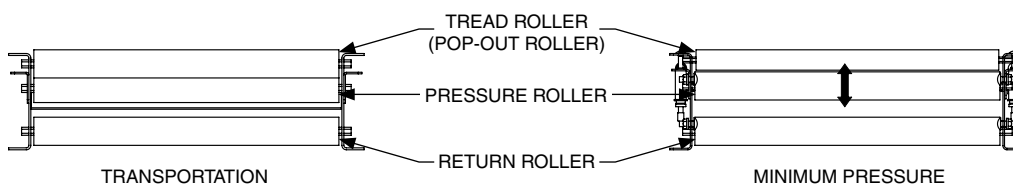
\*\*Dependent on reducer size

A = Between Frame (BF) (1" Increments)  
 B = Overall Length (OAL) (Any Increment)  
 C = Top of Roller (TOR)  
 D = Overall Width (OAW)  
 E = Belt Width  
 F = Overall Drive Width

### 8" CENTER DRIVE



## BELT DRIVEN LIVE ROLLER CONVEYOR - MINIMUM PRESSURE



Additional adjustment for transporting product and accumulating with minimum pressure between products

Thumb screw adjustment enables user to "fine-tune" pressure roller driving force and accumulate product with minimum back pressure

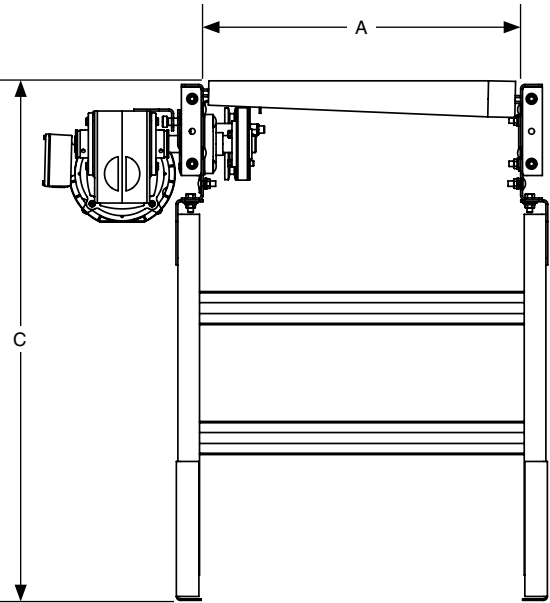
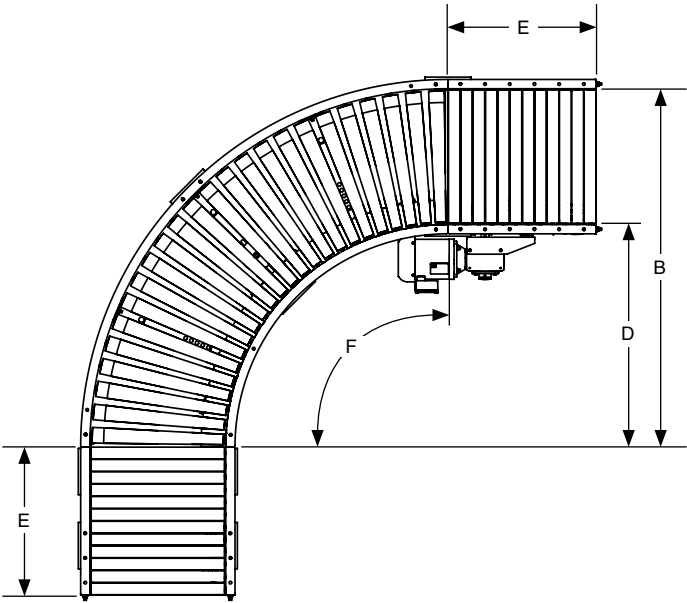
# V-BELT DRIVEN LIVE ROLLER - CURVE



	1.9"	
	Shaft Mount	Underhung
A	13" - 39"	
B	49" - 75"	
C	15" - 90 1/2"	21" - 90 1/2"
D	36"	
E	12" (60° and 90°)	
	18" (30° and 45°)	24" (30° and 45°)
F	30°, 45°, 60° and 90°	

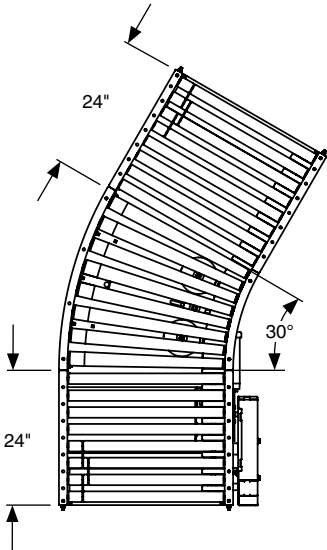
A = Between Frame (BF) (1" Increments)  
B = Outside Radius (OR)  
C = Top of Roller (TOR)  
D = Inside Radius (IR)  
E = Minimum Tangent Length  
F = Degrees

Taper and straight rollers available for curves

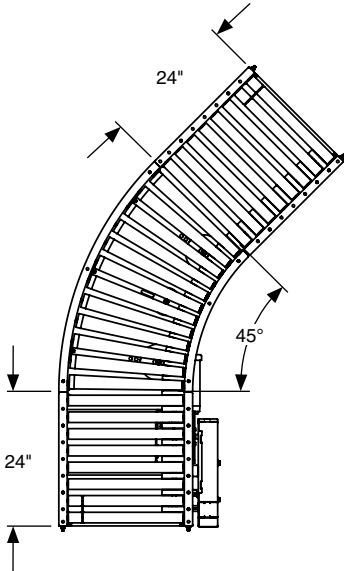


Shaft mount drive shown

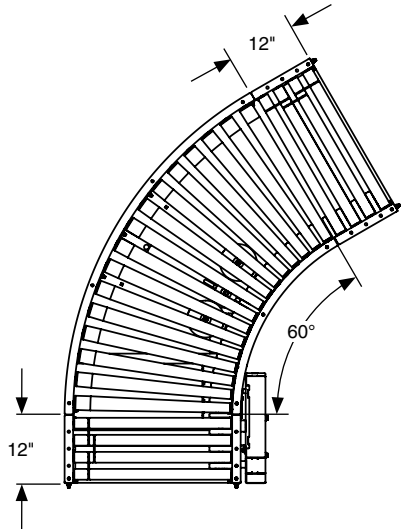
30° CURVE



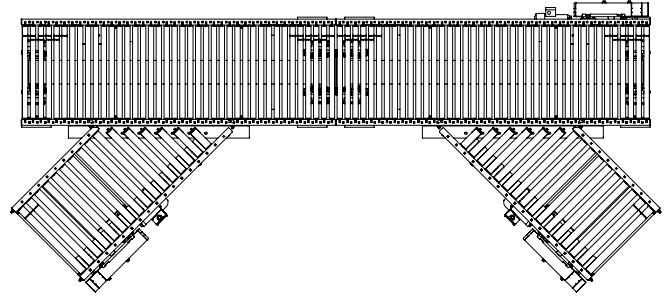
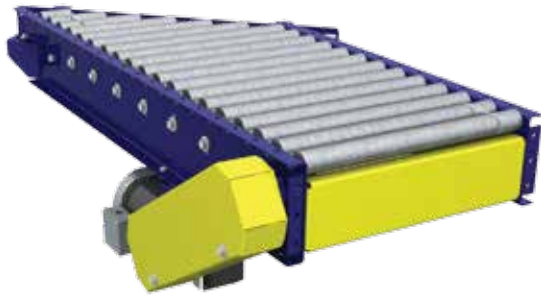
45° CURVE



60° CURVE

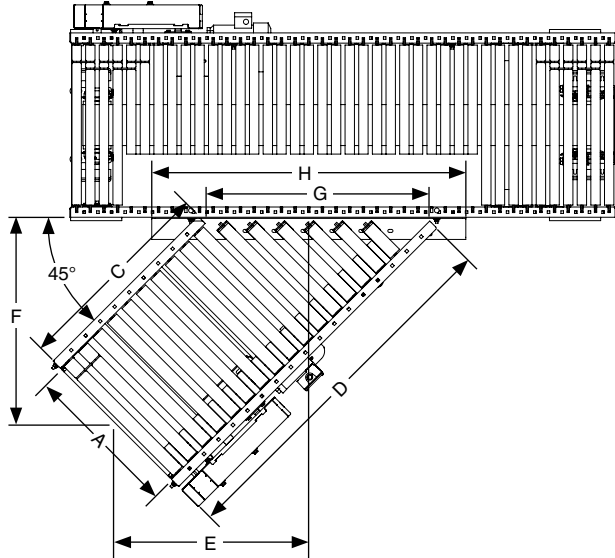


# BELT DRIVEN LIVE ROLLER CONVEYOR - STRAIGHT SPUR



RIGHT HAND

LEFT HAND

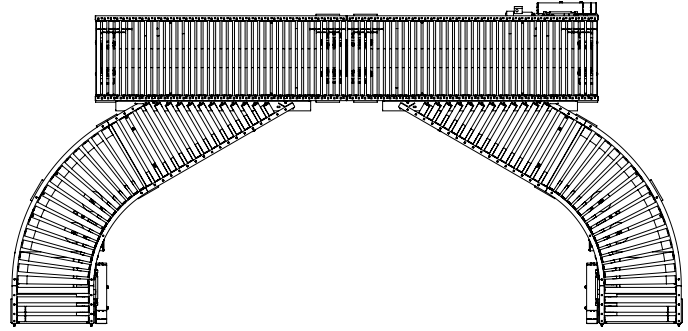


	1.9"
A	13" - 39"
B	22" - 90 1/2"

A = Between Frame (BF) (1" Increments)  
 B = Top of Roller (TOR)  
 C = Short Rail Length  
 D = Long Rail Length  
 E = Trunk Line Displacement  
 F = Take Off Displacement  
 G = Throat  
 H = Shelf Bracket Length

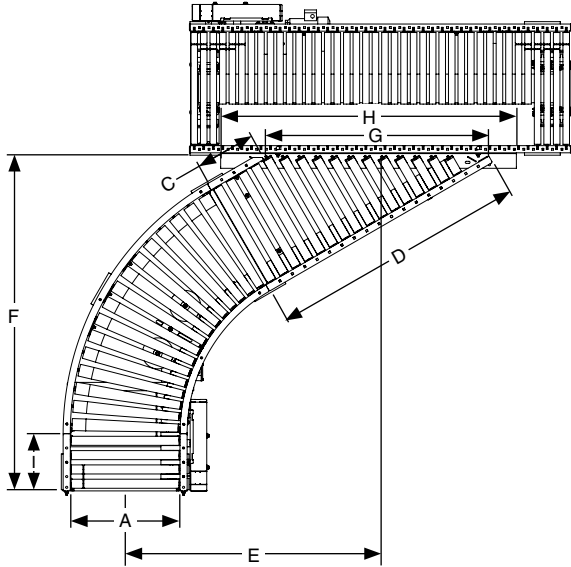
30° STRAIGHT SPUR CONVEYOR							45° STRAIGHT SPUR CONVEYOR					
A (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H (in.)
Between Frame Width	Short Rail Length	Long Rail Length	Trunk Line Displacement	Take Off Displacement	Throat	Shelf Bracket Length	Short Rail Length	Long Rail Length	Trunk Line Displacement	Take Off Displacement	Throat	Shelf Bracket Length
13	53 1/4	75 3/4	55 3/4	32 1/4	26	38	41 1/8	54 1/8	33 5/8	33 5/8	18 2/5	33 1/2
14	51 1/2		55	31 3/4	28	43 1/4	40 1/8		33 3/8	33 3/8	19 4/5	33 1/2
15	49 7/9		54 1/4	31 3/8	30	43 1/4	39 1/8		33	33	21 2/9	33 1/2
16	48		53 1/2	30 7/8	32	43 1/4	38 1/8		32 5/8	32 5/8	22 5/8	37 3/4
17	46 1/3		52 3/4	30 1/2	34	50 1/4	37 1/8		32 1/4	32 1/4	24	37 3/4
18	44 4/7		52	30	36	50 1/4	36 1/8		31 7/8	31 7/8	25 1/2	37 3/4
19	42 5/6		51 1/4	29 5/8	38	50 1/4	35 1/8		31 1/2	31 1/2	26 7/8	42
20	41 1/9	90 3/4	50 1/2	29 1/8	40	59	34 1/8	63 1/8	31 1/4	31 1/4	28 2/7	42
21	39 3/8		49 3/4	28 3/4	42	59	33 1/8		30 7/8	30 7/8	29 5/7	42
22	52 2/3		62	35 3/4	44	59	41 1/8		36 7/8	36 7/8	31 1/9	46 1/4
23	51		61 1/4	35 3/8	46	59	40 1/8		36 1/2	36 1/2	32 1/2	46 1/4
24	49 1/6		60 1/2	34 7/8	48	64	39 1/8		36 1/8	36 1/8	34	46 1/4
25	47 4/9		59 3/4	34 1/2	50	64	38 1/8		35 3/4	35 3/4	35 1/3	50 1/2
26	45 5/7		59	34 1/8	52	64	37 1/8		35 1/2	35 1/2	36 7/9	50 1/2
27	44		58 1/4	33 5/8	54	72 3/4	36 1/8		35 1/8	35 1/8	38 1/5	50 1/2
28	42 1/4		57 1/2	33 1/4	56	72 3/4	35 1/8		34 3/4	34 3/4	39 3/5	54 3/4
29	40 1/2		56 3/4	32 3/4	58	72 3/4	34 1/8		34 3/4	34 3/8	41	54 3/4
30	38 4/5	105 3/4	56	32 3/8	60	72 3/4	33 1/8	72 1/8	34	34	42 3/7	54 3/4
31	52		68 1/4	39 3/8	62	77 3/4	41 1/8		40	40	43 6/7	59
32	50 1/3		67 1/2	39	64	77 3/4	40 1/8		39 5/8	39 5/8	45 1/4	59
33	48 3/5		66 3/4	38 1/2	66	77 3/4	39 1/8		39 3/8	39 3/8	46 2/3	59
34	46 6/7		66	38 1/8	68	86 1/2	38 1/8		39	39	48	63 1/2
35	45 1/8		65 1/4	37 5/8	70	86 1/2	37 1/8		38 5/8	38 5/8	49 1/2	63 1/2
36	43 2/5		64 1/2	37 1/4	72	86 1/2	36 1/8		38 1/8	38 1/8	51	63 1/2
37	41 2/3		63 3/4	36 3/4	74	86 1/2	35 1/8		37 7/8	37 7/8	52 1/3	67 1/2
38	40		63	36 3/8	76	90	34 1/8		37 5/8	37 5/8	53 2/3	67 1/2
39	38 1/5		62 1/4	35 7/8	78	90	33 1/8		37 1/4	37 1/4	55 1/5	67 1/2

# BELT DRIVEN LIVE ROLLER CONVEYOR - CURVE SPUR



RIGHT HAND

LEFT HAND



	1.9"
A	13" - 39"
B	22" - 90 1/2"

A = Between Frame (BF) (1" Increments)  
 B = Top of Roller (TOR)  
 C = Short Rail Length  
 D = Long Rail Length  
 E = Trunk Line Displacement  
 F = Take Off Displacement  
 G = Throat  
 H = Shelf Bracket Length  
 I = Tangent

Taper and straight rollers available for curve spurs

30° STRAIGHT SPUR CONVEYOR								45° STRAIGHT SPUR CONVEYOR						
A (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H (in.)	I (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H (in.)	I (in.)
Between Frame Width	Short Rail Length	Long Rail Length	Trunk Line Displacement	Take Off Displacement	Throat	Shelf Bracket Length	Tangent	Short Rail Length	Long Rail Length	Trunk Line Displacement	Take Off Displacement	Throat	Shelf Bracket Length	Tangent
13	35 1/4	57 3/4	61 1/2	72	26	38	12	23 1/8	36 1/8	33 3/8	75	49 6/7	33 1/2	24
14	33 1/2		61		28	43 1/4		22 1/8		33 1/4		47 3/8	33 1/2	
15	31 7/9		60 1/2		30	43 1/4		21 1/8		33		45	33 1/2	
16	30		60		32	43 1/4		20 1/8		32 3/8		42 3/7	37 3/4	
17	28 1/3		59 1/2		34	50 1/4		19 1/8		32 5/8		40	37 3/4	
18	26 4/7		59		36	50 1/4		18 1/8		32 3/8		37 3/5	37 3/4	
19	24 5/6		58 1/2		38	50 1/4		17 1/8		32 1/8		35 1/8	42	
20	23 1/9		58		40	59		16 1/8		32		32 2/3	42	
21	21 3/8	72 3/4	57 1/2	79 1/2	42	59	12	15 1/8	48 1/8	31 3/4	83 1/2	30 1/4	42	24
22	34 2/3		70		44	59		26 1/8		40		49	46 1/4	
23	33		69 1/2		46	59		25 1/8		39 3/4		46 2/3	46 1/4	
24	31 1/6		69		48	64		24 1/8		39 5/8		44	46 1/4	
25	29 4/9		68 1/2		50	64		23 1/8		39 3/8		41 2/3	50 1/2	
26	27 5/7		68		52	64		22 1/8		39 1/4		39 1/5	50 1/2	
27	26		67 1/2		54	72 3/4		21 1/8		39		36 7/9	50 1/2	
28	24 1/4		67		56	72 3/4		20 1/8		38 3/4		34 2/7	54 3/4	
29	22 1/2		66 1/2		58	72 3/4		19 1/8		38 5/8		31 5/6	54 3/4	
30	20 4/5		66		60	72 3/4		18 1/8		38 3/8		29 3/7	54 3/4	
31	34	87 3/4	78 1/2	87	62	77 3/4	12	29 1/8	60 1/8	46 5/8	92	48	59	24
32	32 1/3		78		64	77 3/4		28 1/8		46 3/8		45 3/4	59	
33	30 3/5		77 1/2		66	77 3/4		27 1/8		46 1/4		43 2/7	59	
34	28 6/7		77		68	86 1/2		26 1/8		46		40 4/5	63 1/2	
35	27 1/8		76 1/2		70	86 1/2		25 1/8		45 3/8		38 3/8	63 1/2	
36	25 2/5		76		72	86 1/2		24 1/8		45 5/8		36	63 1/2	
37	23 2/3		75 1/2		74	86 1/2		23 1/8		45 3/8		33 1/2	67 1/2	
38	22		75		76	90		22 1/8		45 1/4		31 1/9	67 1/2	
39	20 1/5		74 1/2		78	90		21 1/8		45		28 4/7	67 1/2	

## ROLLER AND FRAME SPECIFICATIONS

STRAIGHT	ROLLER DIAMETER	BEARINGS	TUBE DETAIL		AXLE DETAIL			ROLLER SPACING	GALVANIZED FRAME
		Details	Wall Thickness	Material	Size	Type	Retention	Centers	12 Ga. Formed Channels
	1.9"	Non-Precision or ABEC Precision	16 Ga.	Galvanized	7/16"	Hex	Spring	3" and 6"	6 1/2" high x 1 1/2" flange*
CURVE	ROLLER DIAMETER	BEARINGS	TUBE DETAIL		AXLE DETAIL			ROLLER SPACING	GALVANIZED FRAME
		Details	Wall Thickness	Material	Size	Type	Retention	Centers	12 Ga. Formed Channels
	1.9"	Non-Precision or ABEC Precision	16 Ga.	Galvanized	7/16"	Hex	Spring	3"	8" high x 1 1/2" flange
	1.9" Tapered (2 1/2" - 1 11/16")	Non-Precision or ABEC Precision	14 Ga.	Zinc Plated	7/16"	Hex	Spring	3" Nominal	8" high x 1 1/2" flange

\*Drive and tail pulley sections have higher frames

## HORSEPOWER AND LOAD SPECIFICATIONS

MAXIMUM UNIFORMLY DISTRIBUTED LIVE LOAD						
BELT DRIVEN LIVE ROLLER CONVEYOR AT 60 FPM						
HP	13" - 18" BETWEEN FRAME		19" - 26" BETWEEN FRAME		27" - 39" BETWEEN FRAME	
	5' - 50'	51' - 100'	5' - 50'	51' - 100'	5' - 50'	51' - 100'
1/2	650	N/A	270	N/A	N/A	N/A
3/4	1510	510	1130	N/A	430	N/A
1	2460	1460	2100	670	1400	N/A
1 1/2	3760*	3100	3400*	2000	2780	750*
2	5400*	4300*	5000*	3600*	4400*	2370*

\*8" diameter drive pulley in lieu of 4" diameter drive pulley

## STANDARD SPECIFICATIONS

**BELT** - Trackmate 120, 6" wide, 12" wide for 32" between frame and wider

**ROLLERS** - 1.9" dia. x 16 ga. galvanized steel tubes, 7/16" spring retained hex axle, non-precision bearings with 3" and 6" roller centers

**CURVE ROLLERS** - 1.9" dia. taper (2 1/2" to 1 11/16" dia.) x 14 ga. zinc plated tube, 7/16" spring retained hex axle, non-precision bearings with 3" nominal roller centers

**FRAME** - 6 1/2" high x 1 1/2" flange x 12 ga. galvanized steel formed channel frames with bolt-on end couplers

**CONSTRUCTION** - Bolt-together frames, spreaders, end couplers and splice plates

**SQUARING BRACES** - Squaring braces are provided on conveyors over 30' in length to aid in belt tracking. Threaded rod, turn buckle and brackets are included.

**BETWEEN FRAME WIDTH** - 13" to 39" in 1" increments

**OVERALL LENGTH** - 5' to 102' in any increment

**CURVE DEGREES** - 30°, 45°, 60° and 90°

**DRIVE STYLE** - Straight - Underhung end drive or underhung center drive. Curve and Spur - Underhung end drive.

**SPEED** - 30 to 120 FPM

**MOTOR** - 1/2 HP through 2 HP, 1750 RPM, C-face, 208-230-460V/3PH/60Hz, TEFC

**REDUCER** - Sealed, worm gear, C-face

**DRIVE SPROCKETS** - #50, #60 or #80 series sprockets with keyed hub and set screws

**MOUNTED BEARINGS** - Precision, sealed, pre-lubricated, self-aligning, flange mount ball bearing units with cast iron housing

**DRIVE CHAIN** - #50, #60 or #80 series roller chain

**DRIVE PULLEY** - 4" dia. with 1 3/16" dia. shaft or 8" dia. with 1 7/16" dia. shaft, crowned, fully lagged

**TAIL PULLEY** - 4" dia. with 1 3/16" dia. shaft, crowned

**SNUB ROLLERS** - 2 1/2" dia. X 10 ga. galvanized steel tubes, 11/16" spring retained hex axle, non-precision grease packed bearings

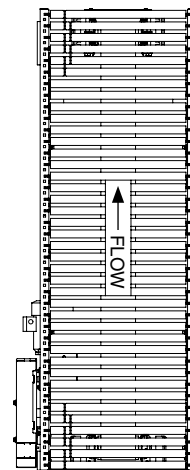
**RETURN ROLLERS** - 1.9" dia. X 16 ga. galvanized steel tubes, 7/16" spring retained hex axle, non-precision grease packed bearings

**TAKE-UP** - Screw type take-up assembly

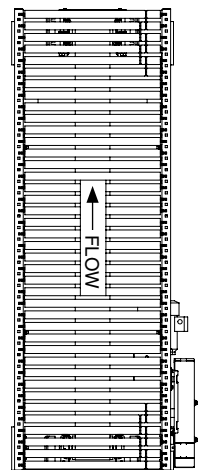
**SUPPORTS** - Adjustable H-style, bolted 15" to 89" from floor to top of roller. One support at every bed joint and at ends of conveyor. Supports are shipped loose.

**FINISHES** - Galvanized steel standard. Powder coat available.

Expanded product parameters available. For more information see Tech Handbook.



LEFT HAND DRIVE



RIGHT HAND DRIVE

## OPTIONAL EQUIPMENT AND DEVICES

**SIDE GUIDES** - Available in fixed or adjustable with multiple contact surfaces. Allows product to be guided and kept in place within the conveying surface. Side guides are bolted to the conveyor frame.

**Fixed Angle Side Guides** - Standard 2" high or 6" high, 12 ga. formed angle

**Fixed Channel Side Guides** - Standard 2 1/2" high or 3 1/2" high, 12 ga. formed channel

**Adjustable Channel Side Guides** - Standard 1 5/8" high x 1" high, 12 ga. formed channel, width and height adjustable

**Adjustable Angle Side Guides** - Angle guides typically formed angle, width adjustable

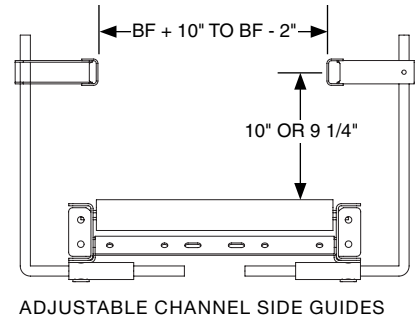
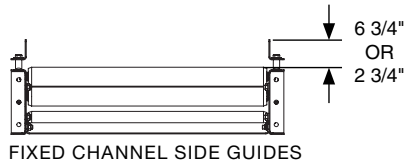
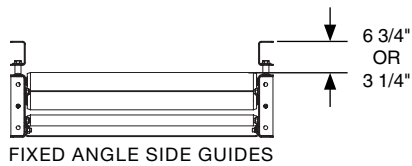
**UHMW Lined Fixed Angle Side Guides** - Replaceable UHMW face provides wear protection for angle guides

**Adjustable Rail UHMW Side Guides** - Replaceable UHMW face provides wear protection on rails, width and height adjustable

**Skatewheel Side Guides** - Vertically mounted skatewheels

**Bead Rail Side Guides** - Vertically mounted, tightly spaced small wheels supported by axles and a metal channel

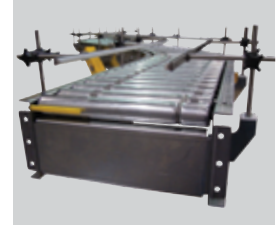
**Roller Side Guides** - Vertically mounted rollers



ADJUSTABLE ANGLE  
SIDE GUIDES



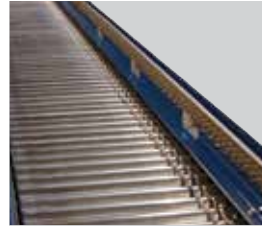
UHMW LINED FIXED ANGLE  
SIDE GUIDES



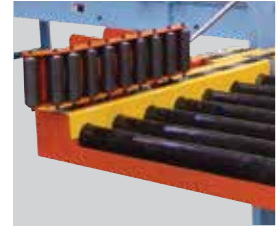
ADJUSTABLE RAIL UHMW  
SIDE GUIDES



SKATEWHEEL SIDE GUIDES



BEAD RAIL SIDE GUIDES



ROLLER SIDE GUIDES

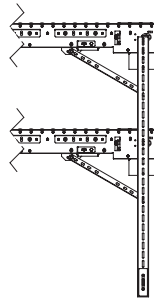
### SIDE GUIDES

**SUPPORTS** - Available in single or multi-tier and with caster options for portability. Supports are designed to be bolted to the conveyor frame. Supports are shipped loose.

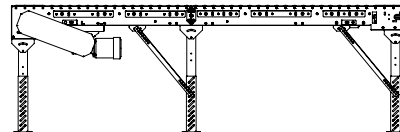
**Multi-Tier Supports** - 3" x 1 1/2" x 12 ga. formed channel leg uprights (1500 lbs. capacity)

**Knee Brace Supports** - Formed angle brace adds stability to conveyor and leg supports

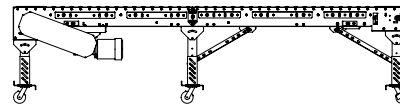
**Portable H-Stands** - 3" x 1 1/2" x 12 ga. formed channel leg uprights (800 lbs. capacity)



MULTI-TIER SUPPORTS



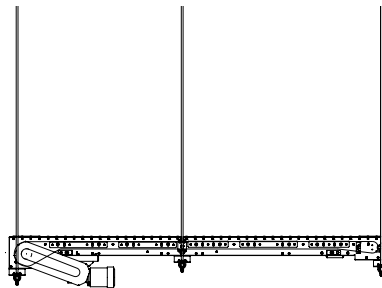
KNEE BRACE SUPPORTS



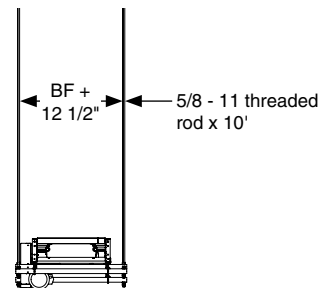
PORTABLE H-STANDS

### SUPPORTS

**CEILING HANGERS** - Allows conveyor to be suspended from the ceiling. Threaded rod is attached to support steel under the conveyor frame. Ceiling attachments to threaded rod by others.



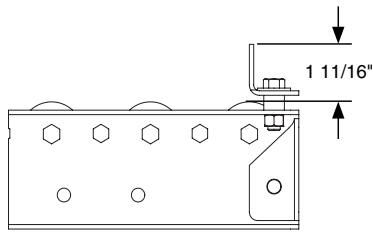
SIDE VIEW  
CEILING HANGERS



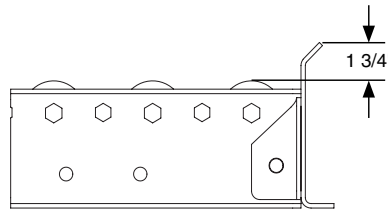
END VIEW



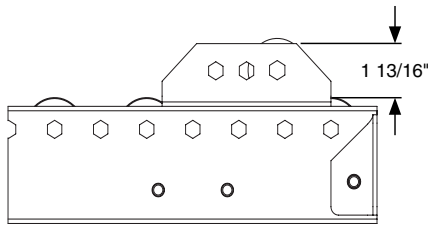
## OPTIONAL EQUIPMENT AND DEVICES



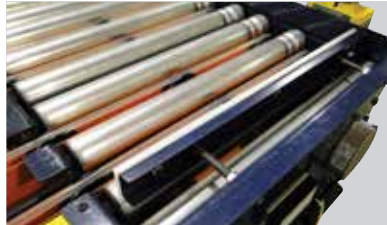
FIXED ANGLE STOP



FIXED CHANNEL STOP



FIXED ROLLER STOP



ADJUSTABLE END STOP

### END STOPS

**END STOPS** - Allows product to stop at the end of a conveyor line. Fixed and adjustable end stops are available.

**Fixed Angle Stop** - Formed angle end stop bolted to top flange of conveyor frame

**Fixed Channel Stop** - Formed channel end stop bolted to conveyor end coupling

**Fixed Roller Stop** - 1.9" dia. rollers mounted in formed angle brackets, bolted to the top flange of conveyor frame

**Adjustable End Stop** - Formed steel adjustable end stop bolted to conveyor frame with manually adjusted stop position. Height is not adjustable.



MANUAL POP-UP  
BLADE STOP



PNEUMATIC POP-UP BLADE STOP



PIN STOP

### PIN AND BLADE STOPS

**PIN AND BLADE STOPS** - Pneumatically or manually operated pin, blade and roller stop that pops up between rollers in order to accumulate product

**Manual Pop-Up Blade Stop** - Used to stop products in the conveying line. Mounted to underside of conveyor. Side handle for manually raising blade.

**Pneumatic Pop-Up Blade Stop** - Used to stop products in the conveying line. Mounted to underside of conveyor. Pneumatic cylinder raises blade.

**Pin Stop** - Mounted to underside of conveyor. Pneumatic cylinder raises blade. Typically utilized on round product.



ROLLER COATINGS OR SLEEVES

**ROLLER COATINGS OR SLEEVES** - Rollers available with urethane and vinyl sleeves. Coatings available in cast urethane, millable urethane, black rubber, food grade and other materials based on the application.

**ROLLER OPTIONS** - Non-precision, semi-precision and ABEC precision bearings available. Mild steel, galvanized steel, stainless steel, aluminum, industrial pipe and PVC tubes available. Zinc, chrome and nickel plating available.