



# LINESHAFT DRIVEN ROLLER CONVEYOR

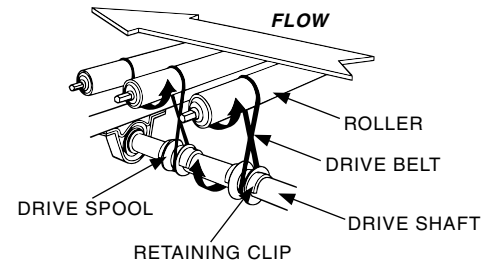
## SECTION CONTENT

Straight  
Curve  
Straight Spur  
Optional Equipment and Devices

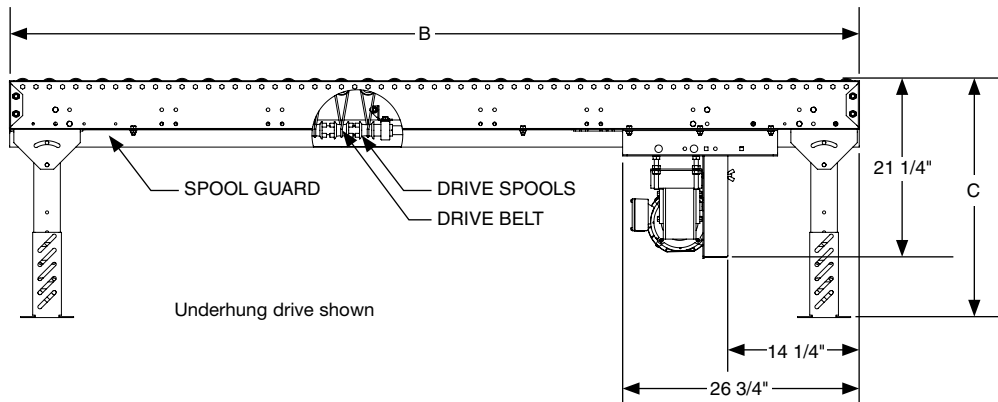


## WHY LS?

- Maximum conveyor length per AC drive available
- Economical conveyance of loads up to 75 lbs. or 15 lbs. per roller
- Easily add slaved components; curves, spurs and transfers
- Increased driving force with optional keyed spools and high tension bands
- Full line of standard modular accessories
- Common applications include box, tote or tray transportation and minimum pressure accumulation



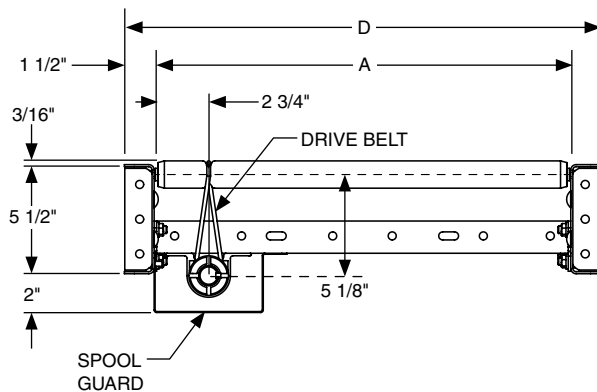
## LINESHAFT CONVEYOR - STRAIGHT



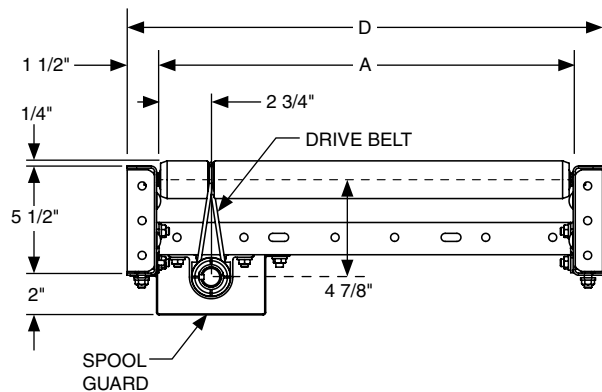
	1.4"	1.9"
A	10" - 28"	13" - 39"
B	3' - 70'	3' - 110'
C	11" - 88"	
D	A + 3"	

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

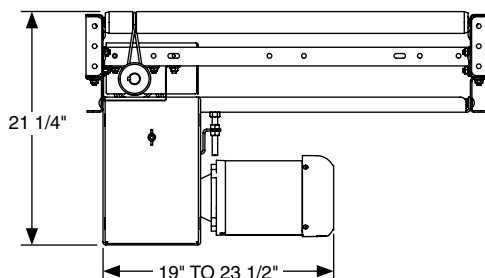
### 1.4 ROLLER



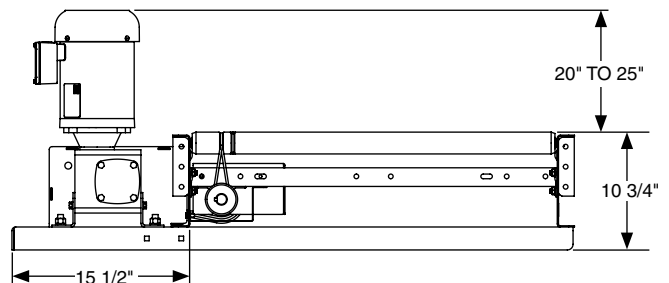
### 1.9 ROLLER



### UNDERHUNG DRIVE



### SIDE MOUNTED DRIVE



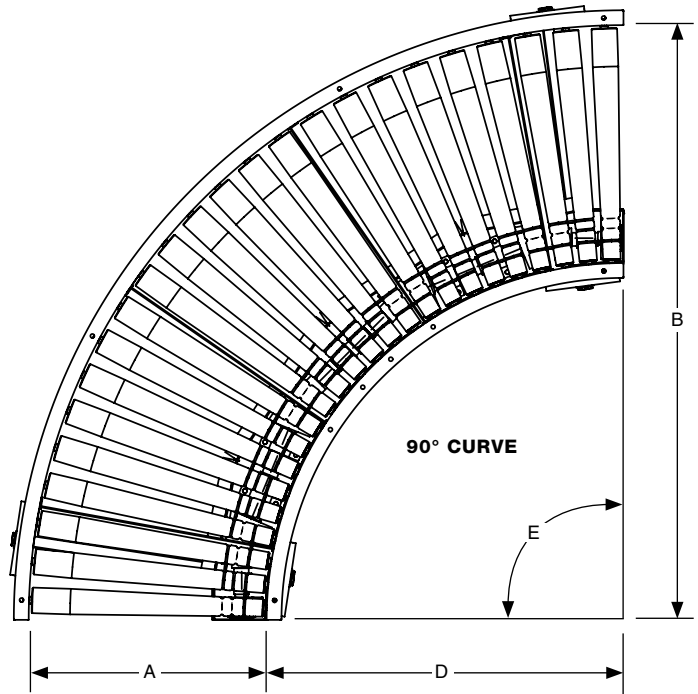
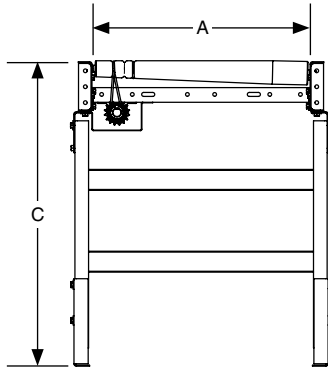
# **LINESHAFT CONVEYOR - CURVE**



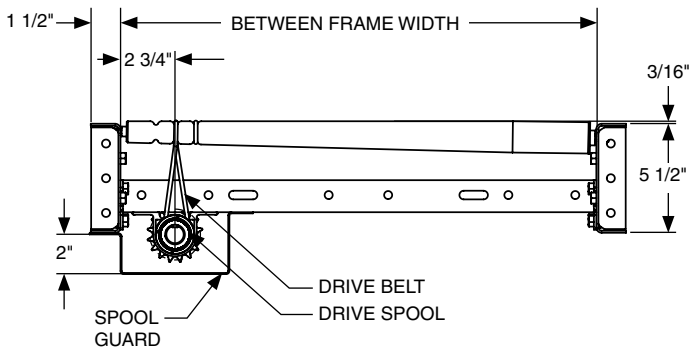
	1.4"	1.9"
<b>A</b>	10" - 28"	13" - 39"
<b>B</b>	46" - 64"	49" - 75"
<b>C</b>	11" - 88"	
<b>D</b>	36"	
<b>E</b>	30°, 45°, 60° and 90°	

**A** = Between Frame (BF) (1" Increments)  
**B** = Outside Radius (OR)  
**C** = Top of Roller (TOR)  
**D** = Inside Radius (IR)  
**E** = Degree

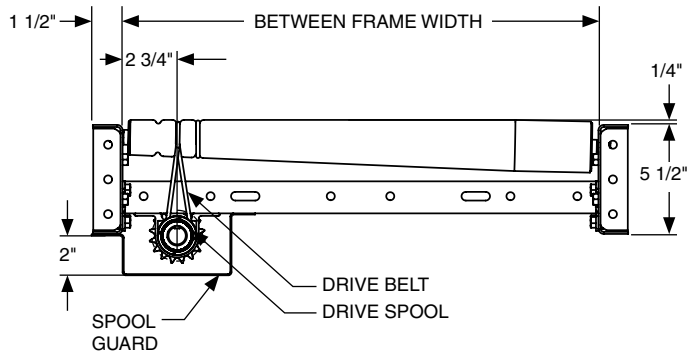
Taper and straight rollers available for curves



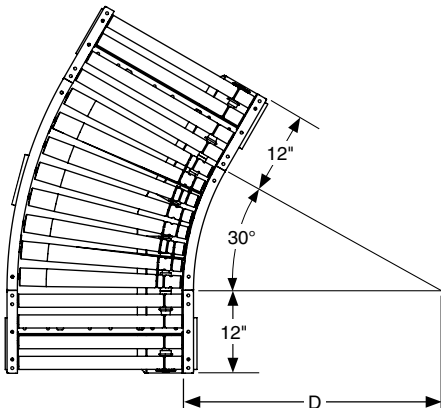
## 1.4 TAPERED ROLLER



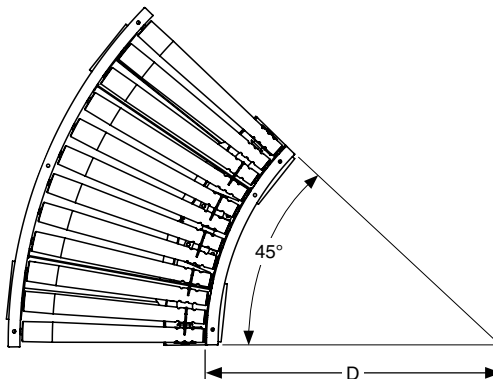
## 1.9 TAPERED ROLLER



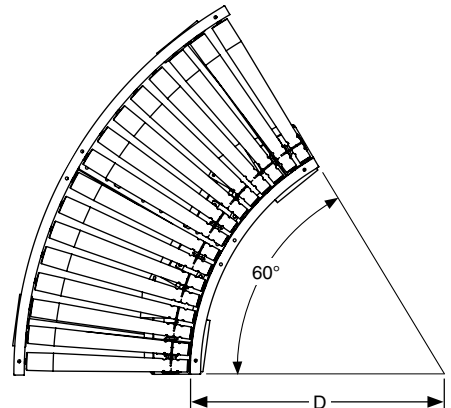
## 30° CURVE



## 45° CURVE

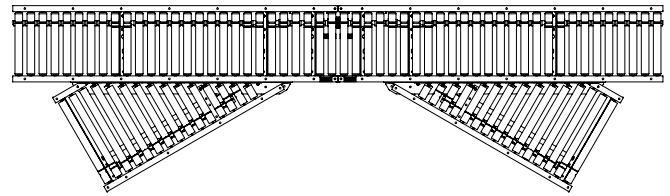
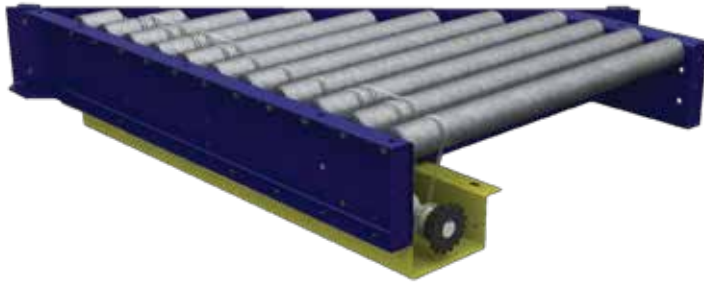


## 60° CURVE



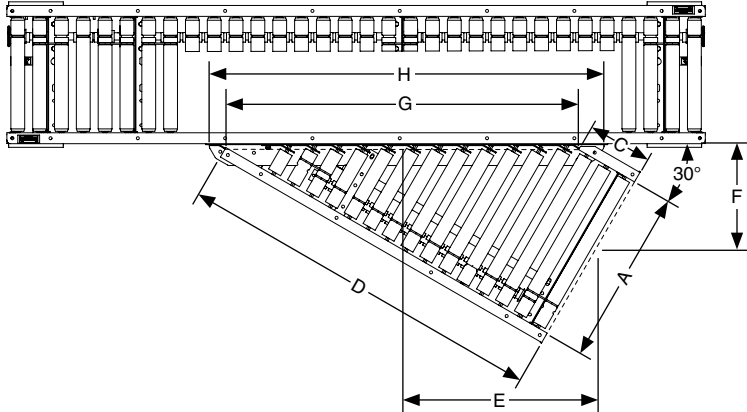
Note: 30° curves are supplied with 12" minimum tangents

# LINESHAFT CONVEYOR - STRAIGHT SPUR



RIGHT HAND

LEFT HAND



	1.4"	1.9"
A	10" - 28"	13" - 39"
B	11" - 88"	

A = Between Frame (BF)  
 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
10	15	36	23	10 15/16	23 1/4	30 13/16	24	36	23 1/16	19 3/16	15 5/8	23 7/8
11			22 9/16	11 13/16	23 11/16	30 13/16			22 1/8	20 1/4	16 1/4	
12			21 7/16	10 3/4	26 13/16	30 13/16			21 3/16	21 3/16	17	
13	12	36	21 1/8	11 7/16	27 5/16	30 13/16	21	36	21 9/16	18 11/16	19 7/8	28 1/8
14			30 5/8	15 7/8	30 7/16	37 3/4			20 13/16	19 7/16	20 1/2	
15	21	48	30 3/16	16 3/4	30 7/8	37 3/4	18	36	20 1/8	20 1/8	21 3/16	32 3/8
16			29 1/8	15 1/2	34	37 3/4			20 3/16	17 15/16	24 1/16	
17	15	48	28	14 7/16	37 1/8	44 11/16	15	36	19 5/8	18 9/16	24 3/4	36 9/16
18			27 5/8	15 1/16	37 9/16	44 11/16			19 1/16	19 1/16	25 7/16	
19	12	48	26 9/16	14	40 11/16	44 11/16	12	36	18 15/16	17 1/8	28 5/16	40 13/16
20			26 1/4	14 9/16	41 3/16	44 11/16			18 7/16	17 9/16	29	
21	21	60	35 11/16	19 3/16	44 5/16	53 1/2	21	48	18	18	29 11/16	45 1/16
22			34 9/16	18 1/8	47 7/16	53 1/2			17 11/16	16 3/16	32 9/16	
23	18	60	34 3/16	18 3/4	47 7/8	53 1/2	12	48	17 5/16	16 5/8	33 1/4	49 5/16
24			33 1/16	17 5/8	51	58 9/16			17	17	33 15/16	
25	15	60	32 3/4	18 3/16	51 1/2	58 9/16	21	48	25 5/16	23 7/16	36 13/16	57 7/8
26			31 5/8	17 1/8	54 9/16	58 9/16			24 7/8	23 15/16	37 1/2	
27	12	60	31 3/8	17 5/8	55 1/16	58 9/16	18	48	24 3/8	24 3/8	38 3/16	53 9/16
28			40 3/4	22 3/8	58 3/16	67 3/16			24 1/8	22 1/2	41 1/16	
29	21	72	39 5/8	21 5/16	61 5/16	67 3/16	15	48	23 3/4	22 15/16	41 3/4	62 1/16
30			39 5/16	21 7/8	61 3/4	67 3/16			23 5/16	23 5/16	42 7/16	
31	15	72	38 3/16	20 13/16	64 7/8	72 3/8	12	48	22 15/16	21 9/16	45 1/4	57 7/8
32			37 15/16	21 5/16	65 3/8	72 3/8			22 5/8	21 15/16	45 15/16	
33	12	72	36 13/16	20 1/4	68 1/2	72 3/8	21	60	22 1/4	22 1/4	46 11/16	53 9/16
34			36 9/16	20 11/16	68 15/16	72 3/8			21 13/16	20 5/8	49 1/2	
35	21	84	45 7/8	25 1/2	72 1/16	81 1/16	12	48	21 1/2	20 15/16	50 3/16	57 7/8
36			44 3/4	24 7/16	75 3/16	81 1/16			21 3/16	21 3/16	50 15/16	
37	18	84	44 1/2	24 15/16	75 11/16	81 1/16	21	60	29 3/8	27 7/8	53 3/4	62 1/16
38			43 3/8	23 7/8	78 3/4	84 1/2			29	28 1/4	54 7/16	
39	15	84	43 1/16	24 3/8	79 1/4	84 1/2			28 5/8	28 5/8	55 1/8	

1.4" ROLLER

1.9" ROLLER

## DRIVE SPECIFICATIONS

1.4" ROLLER											
SPEED (FPM)	MAXIMUM LENGTH (LINEAR FEET)										
	Roller Centers (in.)	HP (Drive at End)					HP (Drive at Center)				
		1/2	3/4	1	1 1/2	2	1/2	3/4	1	1 1/2	2
30	1 1/2	41	62	70	70	70	41	62	70	70	70
	2	55	83	93	93	93	55	83	93	93	93
	3	83	110	110	110	110	83	110	110	110	110
45	1 1/2	27	41	55	70	70	27	41	55	70	70
	2	36	55	73	93	93	36	55	73	93	93
	3	55	83	110	110	110	55	83	110	110	110
60	1 1/2	20	30	41	61	70	20	30	41	61	70
	2	27	41	55	82	93	27	41	55	82	93
	3	41	61	82	110	110	41	61	82	110	110
90	1 1/2	13	20	27	40	54	13	20	27	40	54
	2	18	27	36	54	72	18	27	36	54	72
	3	27	40	54	81	109	27	40	54	81	109
120	1 1/2	10	15	20	30	40	10	15	20	30	40
	2	13	20	27	40	54	13	20	27	40	54
	3	20	30	40	61	81	20	30	40	61	81

1.9" ROLLER											
SPEED (FPM)	MAXIMUM LENGTH (LINEAR FEET)										
	Roller Centers (in.)	HP (Drive at End)					HP (Drive at Center)				
		1/2	3/4	1	1 1/2	2	1/2	3/4	1	1 1/2	2
30	2	55	73	73	73	73	55	73	73	73	73
	3	83	110	110	110	110	83	110	110	110	110
	4	110	110	110	110	110	110	110	110	110	110
	6	110	110	110	110	110	110	110	110	110	110
45	2	36	55	73	73	73	36	55	73	73	73
	3	55	83	110	110	110	55	83	110	110	110
	4	73	110	110	110	110	73	110	110	110	110
	6	110	110	110	110	110	110	110	110	110	110
60	2	27	41	55	73	73	27	41	55	73	73
	3	41	61	82	110	110	41	61	82	110	110
	4	55	82	110	110	110	55	82	110	110	110
	6	82	110	110	110	110	82	110	110	110	110
90	2	18	27	36	54	72	18	27	36	54	72
	3	27	40	54	81	109	27	40	54	81	109
	4	36	54	72	109	110	36	54	72	109	110
	6	54	81	109	110	110	54	81	109	110	110
120	2	13	20	27	40	54	13	20	27	40	54
	3	20	30	40	61	81	20	30	40	61	81
	4	27	40	54	81	108	27	40	54	81	108
	6	40	61	81	110	110	40	61	81	110	110

## STANDARD SPECIFICATIONS

**ROLLERS** - 1.4" dia. x 18 ga. galvanized steel tubes, 5/16" spring retained hex axle, non-precision bearings with 1 1/2", 2" and 3" roller centers. 1.9" dia. x 16 ga. galvanized steel tubes, 7/16" spring retained hex axle, non-precision or precision bearings with 2", 3", 4" and 6" roller centers.

**CURVE ROLLERS** - 1.4" dia. taper (1 1/2" to 1" dia) x 18 ga. zinc plated tube, 5/16" spring retained hex axle, non-precision bearings with 1 1/2" nominal roller centers. 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 or precision bearings with 3" nominal roller centers.

**FRAME** - 5 1/2" high x 1 1/2" flange x 12 ga. galvanized formed channel frames with bolt-on end couplers

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

**BETWEEN FRAME WIDTHS** - 1.4" dia. roller 10" to 28" and 1.9" dia. roller 13" to 39", both in 1" increments

**OVERALL LENGTH** - 1.4" dia. roller 3' to 70' and 1.9" dia. roller 3' to 110', both in any increment

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

**DRIVE STYLE** - Straight - Underhung, side mount or slave driven. Curve - Underhung or slave driven.

**SPEED** - 25 to 120 FPM

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

**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 series sprockets with keyed hubs and set screws

**MOUNTED BEARINGS** - Precision, sealed, pre-lubricated, self-aligning, pillow block ball bearing units with stamped steel housing

**DRIVE CHAIN** - #50 series roller chain

**DRIVE SHAFT** - 1" dia. steel shaft full length of conveyor. Delrin chain coupling at bed joints.

**DRIVE SPOOLS** - 2" dia. Delrin spool held in place on shaft by snap on retaining clips

**DRIVE BELTS** - 3/16" dia. urethane belts from drive spools to rollers

**SPOOL GUARD** - Encloses underside of drive shaft, spools and drive belts for full length of conveyor

**SUPPORTS** - Adjustable H-style, bolted 12" to 88" 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.

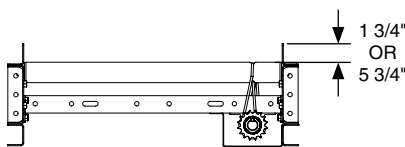
## ROLLER AND FRAME SPECIFICATIONS

STRAIGHT	ROLLER DIAMETER	BEARINGS	TUBE DETAIL		AXLE DETAIL			ROLLER SPACING	MAXIMUM LOAD PER ROLLER	GALVANIZED FRAME	MAXIMUM LOAD PER PRODUCT
		Details	Wall Thickness	Material	Size	Type	Retention	Centers	lbs.	12 Ga. Formed Channels	lbs.
	1.4"	Non-Precision	18 Ga.	Galvanized	5/16"	Hex	Spring	1 1/2", 2" and 3"	10	5 1/2" high x 1 1/2" flange	75
	1.9"	Non-Precision or ABEC Precision	16 Ga.	Galvanized	7/16"	Hex	Spring	2", 3", 4" and 6"	15	5 1/2" high x 1 1/2" flange	75

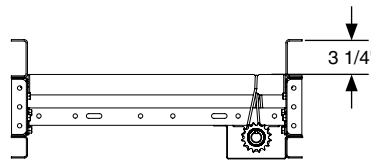
  

CURVE	CURVE TYPE	INSIDE RADIUS	ROLLER DIAMETER	BEARINGS	TUBE DETAIL		AXLE DETAIL			ROLLER SPACING	MAXIMUM LOAD PER ROLLER	MAXIMUM LOAD PER PRODUCT
				Details	Wall Thickness	Material	Size	Type	Retention	Centers	lbs.	lbs.
	30°, 45°, 60°, 90°	36"	1.4" Tapered (1 1/2" - 1")	Non-Precision	18 Ga.	Zinc Plated	5/16"	Hex	Spring	1 1/2" Nominal	10	75
		36"	1.9" Tapered (2 1/2" - 1 11/16")	Non-Precision or ABEC Precision	14 Ga.	Zinc Plated	7/16"	Hex	Spring	3" Nominal	15	75

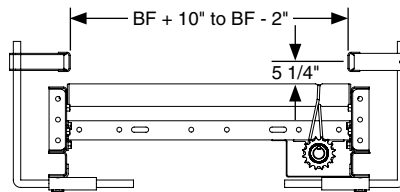
## OPTIONAL EQUIPMENT AND DEVICES



FIXED ANGLE SIDE GUIDES



FIXED CHANNEL SIDE GUIDES



ADJUSTABLE CHANNEL SIDE GUIDES



ADJUSTABLE ANGLE SIDE GUIDES



UHMW LINED FIXED ANGLE SIDE GUIDES



ADJUSTABLE RAIL UHMW SIDE GUIDES



SKATEWHEEL SIDE GUIDES



BEAD RAIL SIDE GUIDES

**SIDE GUIDES**

**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 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

**Skatwheels Side Guides** - Vertically mounted skatwheels

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

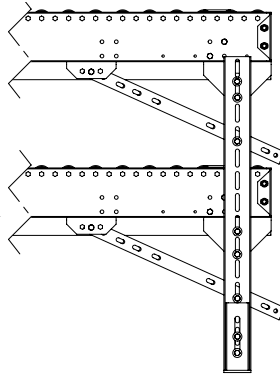
## OPTIONAL EQUIPMENT AND DEVICES

**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.

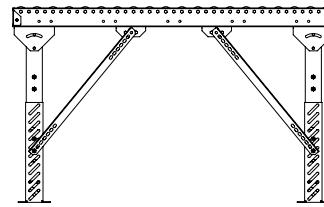
**Multi-Tier Supports** - 3" x 1 1/2" x 12 ga. formed channel leg uprights (1500 lbs. capacity)

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

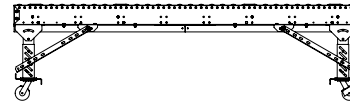
**Portable H-Stands** - 3" x 1 1/2" x 12 ga. formed channel leg uprights (800 lbs. capacity)



MULTI-TIER SUPPORTS  
**SUPPORTS**

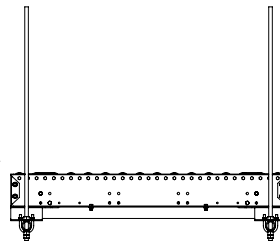


KNEE BRACE SUPPORTS

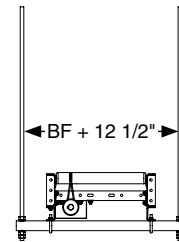


PORTABLE H-STANDS

**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

BF + 12 1/2" 5/8 - 11 threaded rod x 10'

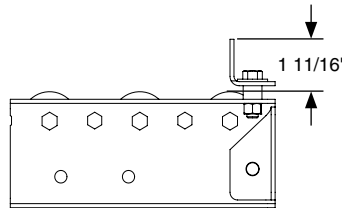
**END STOPS** - Allows product to stop at the end of a conveyor line. Fixed and adjustable end stops are available. Fixed stops can include fork cut outs for unloading.

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

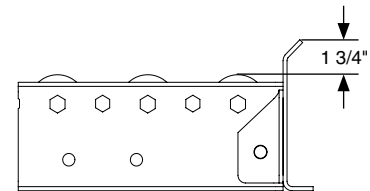
**Fixed Channel Stops** - Formed channel end stop bolted to conveyor end coupling

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

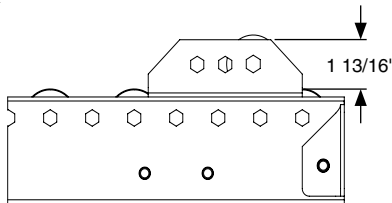
**Adjustable End Stops** - Formed steel adjustable end stop bolted to conveyor frame with manually adjusted stop position. Height is not adjustable.



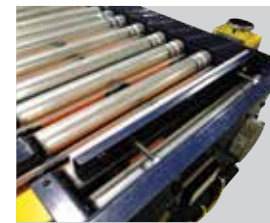
FIXED ANGLE STOPS



FIXED CHANNEL STOPS



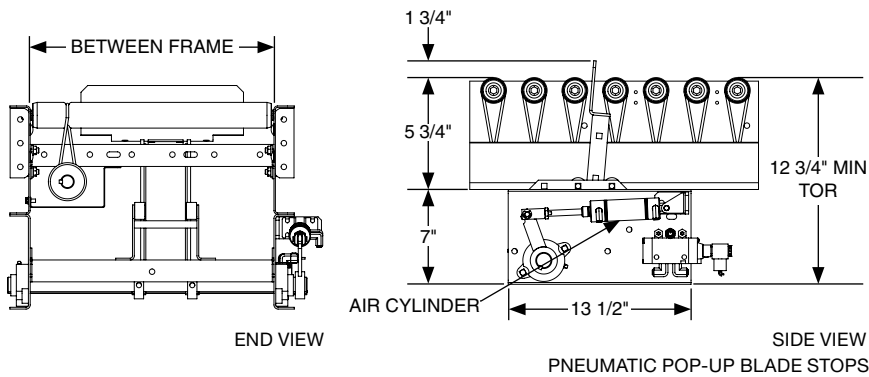
FIXED ROLLER STOPS  
**END STOPS**



ADJUSTABLE END STOPS



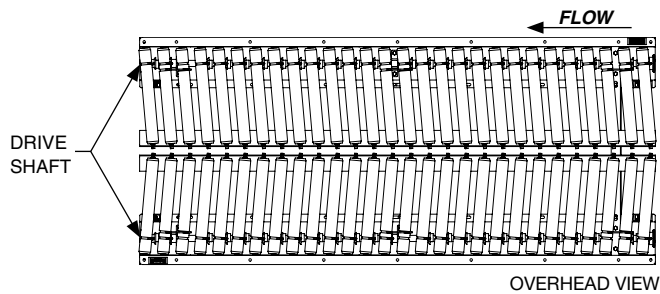
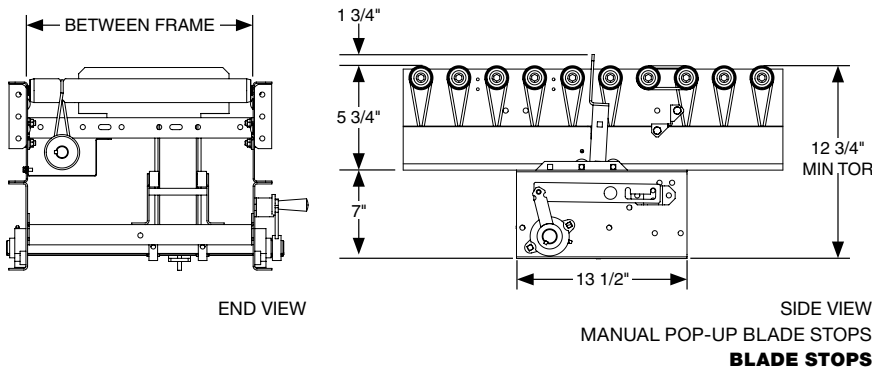
## OPTIONAL EQUIPMENT AND DEVICES



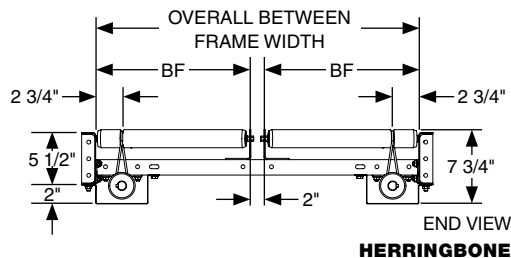
**BLADE STOPS** - Pneumatically or manually operated blade and roller stop that pops up between rollers in order to accumulate product

**Pneumatic Pop-Up Blade Stops** - Used to stop products in the conveying line. Mounted to underside of conveyor. Pneumatic cylinder raises blade. Load capacity is rated for maximum accumulated back pressure of 75 lbs.

**Manual Pop-Up Blade Stops** - Used to stop products in the conveying line. Mounted to underside of conveyor. Side handle for manually raising blade. Load capacity is rated for maximum accumulated back pressure of 75 lbs.

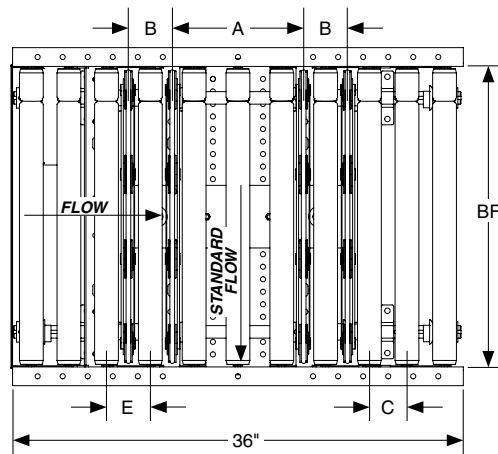


**HERRINGBONE** - Consists of 2 parallel lanes powered by a common drive. Rollers are skewed in order to center product. Products can infeed from parallel lanes and discharge into a single lane.

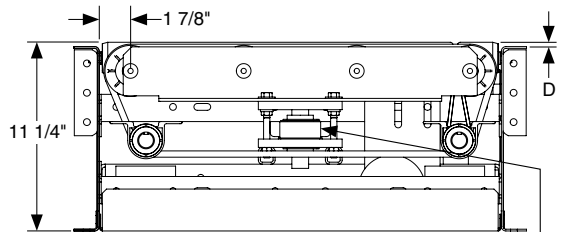




## OPTIONAL EQUIPMENT AND DEVICES



OVERHEAD VIEW



END VIEW  
STANDARD FLOW

### URETHANE BELT TRANSFER DEVICES

**Standard Flow** - Slaved from other lineshaft sections. Transfer belts are raised pneumatically above conveying surface to transfer product at 90° onto another conveyor line.

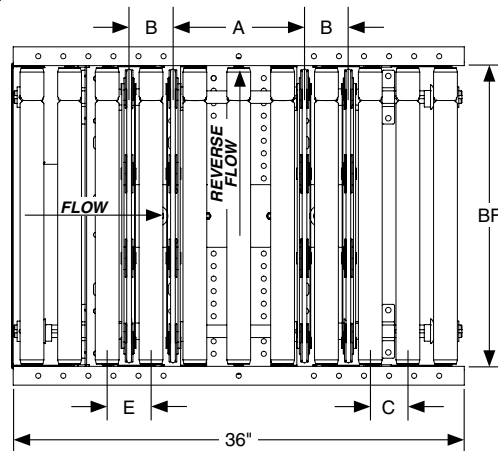
**Reverse Flow** - Slaved from other lineshaft sections. Transfer belts are raised pneumatically above conveying surface to transfer product at 90° onto another conveyor line. Product transfers opposite that of the standard flow device.

**Load Capacity** - Maximum package weight is 75 lbs.

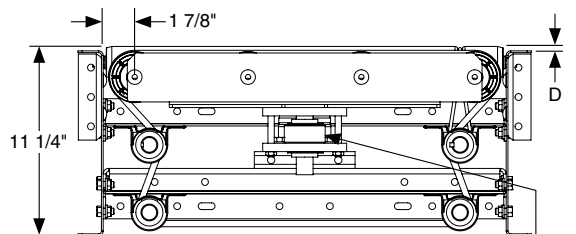
**Transfer Belts** - Four powered 3/8" dia. urethane belts are pneumatically lifted 3/4" above roller surface

BELT TRANSFER STANDARD BELT CENTERS					
ROLLER DIAMETER	A	B	C	D	E
1.4"	7 5/8"	4 1/2"	1 1/2"	1/4"	3"
1.9"	10 1/2"	3 1/2"	3"	1/4"	3 1/2"

**Urethane Belt Transfer Options** - Drive package, custom belt centers, fifth belt strand optional, timing belt in place of jump chain and end guard kit



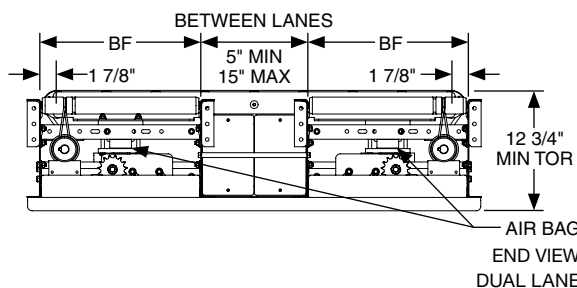
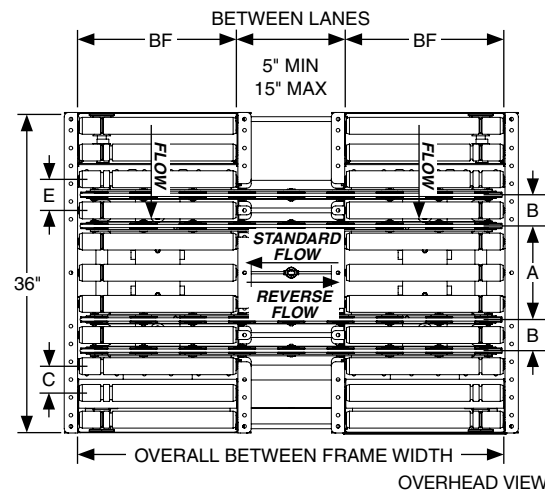
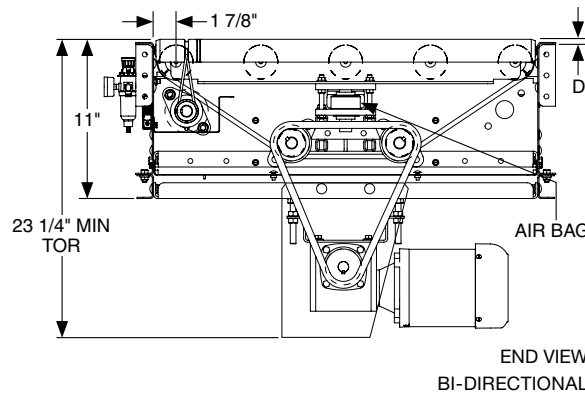
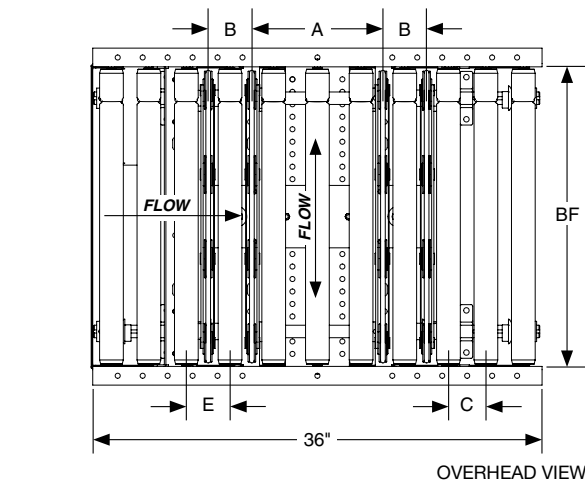
OVERHEAD VIEW



END VIEW  
REVERSE FLOW

### URETHANE BELT TRANSFER DEVICES

## OPTIONAL EQUIPMENT AND DEVICES



URETHANE BELT TRANSFER DEVICES

### URETHANE BELT TRANSFER DEVICES (CONTINUED)

**Bi-Directional** - Tread rollers are slaved from other lineshaft sections. Transfer belts are independently powered by a separate drive and are pneumatically raised above conveying surface to transfer products at 90°, in either direction, onto another conveyor line.

**Dual Lane** - Slaved from other lineshaft sections. Transfer belts are pneumatically raised above the conveying surface to transfer product at 90° onto another parallel conveying line. Available in split standard flow and reverse.

**Load Capacity** - Maximum package weight is 75 lbs.

**Transfer Belts** - Four powered 3/8" dia. urethane belts are pneumatically lifted 3/4" above roller surface

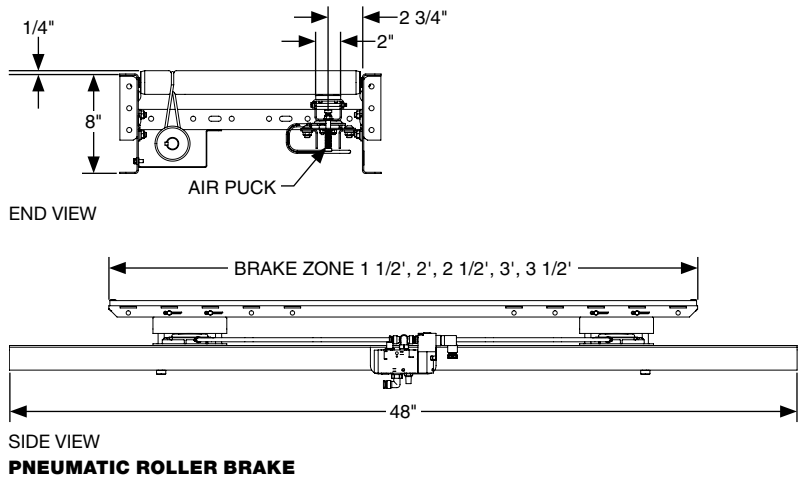
#### BELT TRANSFER STANDARD BELT CENTERS

ROLLER DIAMETER	A	B	C	D	E
1.4"	7 5/8"	4 1/2"	1 1/2"	1/4"	3"
1.9"	10 1/2"	3 1/2"	3"	1/4"	3 1/2"

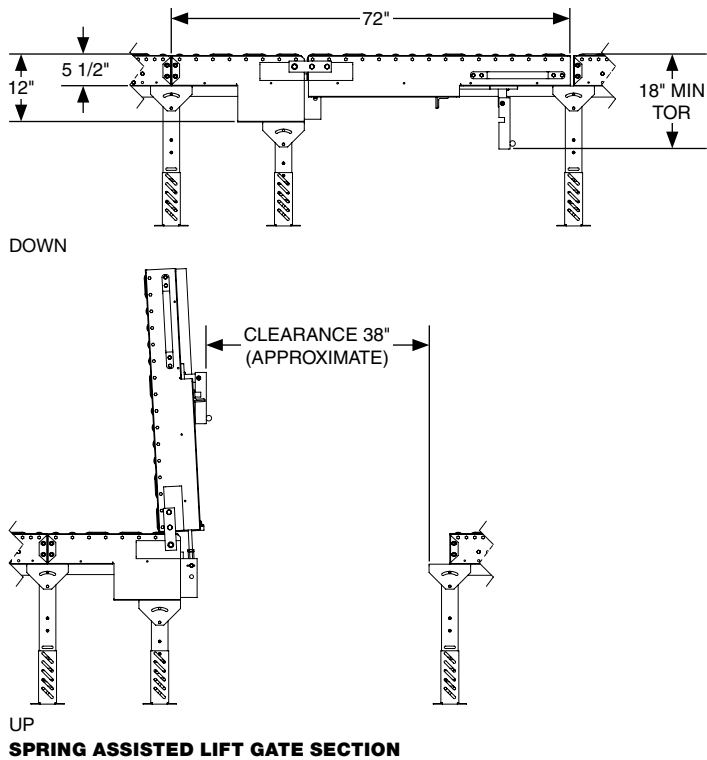
**Urethane Belt Transfer Options** - Drive package, custom belt centers, fifth belt strand optional, timing belt in place of jump chain and end guard kit

## OPTIONAL EQUIPMENT AND DEVICES

**PNEUMATIC ROLLER BRAKE** - Bolts to spreaders underneath standard lineshaft conveyor straight sections. It is used to stop all rollers in a specific area to halt or accumulate product. Load capacity is rated for maximum accumulated back pressure of 75 lbs.



**SPRING ASSISTED LIFT GATE SECTION** - Power transmitted from other lineshaft sections at the infeed end. Gate sections provide easy access for personnel and equipment. The gate rests against a support which is mounted to the next conveyor in line. Power cannot be transmitted through the end of the gate. Another power supply must be supplied for conveyors beyond the end of the gate section. Springs provide counter-balancing forces to assist in raising and lowering of the gate. Available with fold-away legs for a self supporting gate.



**SKewed ROLLERS** - Utilized to align products to one side of the conveyor

**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.



**ROLLER COATINGS OR SLEEVES**



**SKewed ROLLERS**