



## **FabLink®-EC50.8.TR**

### **Meat Applications**

Spiral Freezer

### **Poultry Applications**

Spiral Freezer

### **Seafood Applications**

Freezing Lines, Spiral

### **Bakery Applications**

Spiral, Proofing, Cooling, Freezing Lines, Pan Handling

### **Fruits and Vegetables Applications**

Container Conveyence

# FabLink® EC50.8.TR\_Tightradius



Pitch	50.8 mm / 2 inch
Belt surface	Open, Smooth Surface
Minimum width	508 mm / 3.94 inch
Open Area (%)	58% (Biggest opening 15 x 17mm)
Contact Area (%)	85% Open Contact Area
Cleat	No
Divider	Yes (h=25mm)
Pin	Ø 6 mm / 0,236 inch – Self lock
Approved	FDA and EU
Curve	Yes
Color	Additional colors available
Cleanability	Excellent
Application	Straight and side flexing
Collapse Factor:	1.5 -1.7 (please check page 185 to see Collapse Factors-Width Table)
Belt thickness	16 mm / 0.630 inch

## Product Features and Functional Benefits

- Belt designed for tight radius applications.
- Available for medium and high load capacity.
- Stainless steel pins option for high temperature applications.
- Stainless steel pins option reduce belt elongation for high temperature application.
- High temperature and wear resistance. Unique locking system.
- Belt provides optimal open area for drainage and airflow.
- Suitable for proofer-cooling-freezing spiral towers.

## Available Moulded Module Sizes

- 203,2 mm / 4 inch module
- 184 mm / 7.24 inch module
- 172 mm / 6.76 inch module

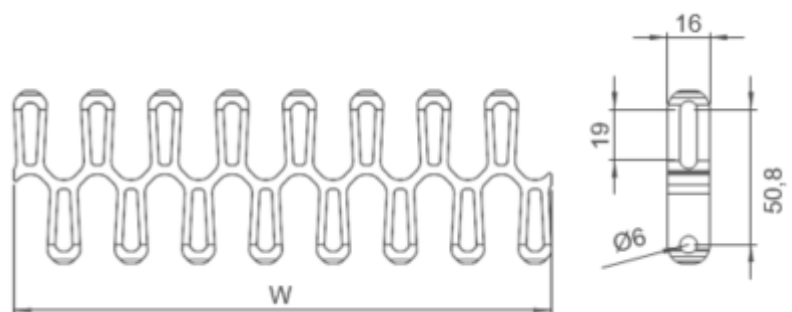
## Technical Information

BELT MATERIAL	BELT STRENGTH				TEMPERATURE		BELT WEIGHT Kg/m <sup>2</sup> / lb/ft <sup>2</sup>
	Straight		Curve		°C / ° F (min.)	°C / ° F (max.)	
	N/mm	lb/ft	N/mm	lb/ft			
PP (Polypropylene)	16500	1131	2560	568	+5 / +42	+90 / +194	5,2 - 1.07
PE (Polyethylene)	-	-	-	-	-	-	-
Acetal	23100	1583	3520	792	-43 / -45	+110 / +230	7,5 - 1.54

Belt strength and temperature values are maximum on the table

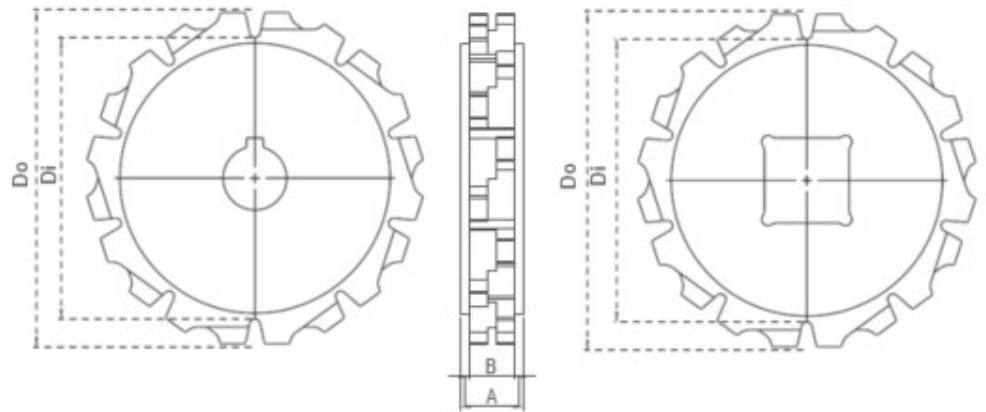
## Standard Belt Widths

WIDTH (W)				BELT WIDTH TOLERANCE (max.)
PP-PE		POM		
mm	inch	mm	inch	
508,0	20.0	508,0	20.0	± 0,5 mm
558,8	22.0	558,8	22.0	± 2 mm
609,6	24.0	609,6	24.0	± 2 mm
660,4	26.0	660,4	26.0	± 3 mm
711,2	28.0	711,2	28.0	± 3 mm
762,0	30.0	762,0	30.0	± 3 mm
812,8	32.0	812,8	32.0	± 3 mm
863,6	34.0	863,6	34.0	± 4 mm
914,4	36.0	914,4	36.0	± 4 mm
965,2	38.0	965,2	38.0	± 4 mm
1016,0	40.0	1016,0	40.0	± 4 mm
1066,8	42.0	1066,8	42.0	± 4 mm
1117,6	44.0	1117,6	44.0	± 4 mm
1168,4	46.0	1168,4	46.0	± 4 mm



- Standard belt increments 100 mm
  - Non-standard belt increments 20mm
- Please contact with customer service for precise belt measurements

## Sprockets and Technical Specifications

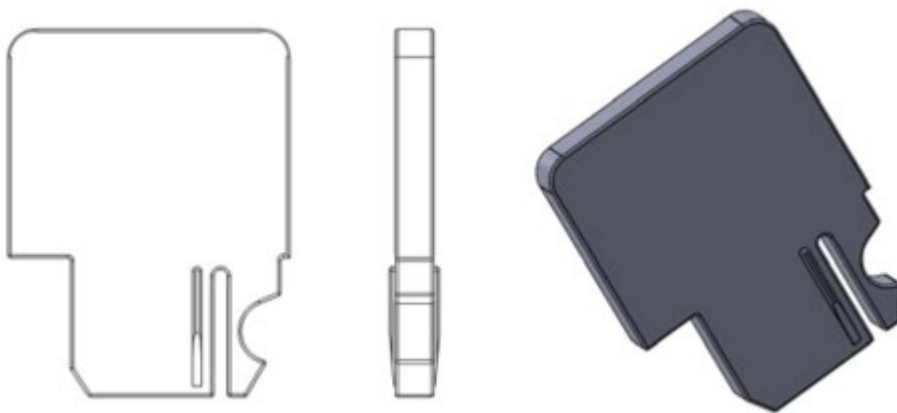


## Standard Sprocket Dimensions

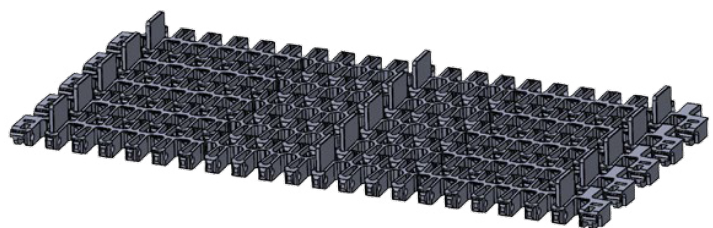
NUMBER OF TEETH	Di mm / inch	Do mm / inch	B mm / inch	A mm / inch	Square Bore (Q) mm / inch	Round Bore (R) mm / inch	PRODUCT CODE	
							Square Type (Q)	Round Type (R)
Z8	99,7 / 3.93	127,3 / 5.01	22 / 0.87	30 / 1.18	40 / 1.5	25-30 / 1-1.25	FL-EC-508TRSQZ8	FL-EC-508TRSRZ8
Z10	133,6 / 5.26	160,4 / 6.31	22 / 0.87	30 / 1.18	40 / 1.5	25-30 / 1-1.25	FL-EC 508TRSQZ10	FL-EC-508TRSRZ10
Z12	167,1 / 6.58	193,2 / 7.61	22 / 0.87	30 / 1.18	40 / 1.5	25-30 / 1-1.25	FL-EC-508TRSQZ12	FL-EC-508TRSRZ12

- \* Other sprockets and hub sizes are manufactured upon request
- \* POM (Acetal) and PP (Polypropylene) sprockets are available upon request

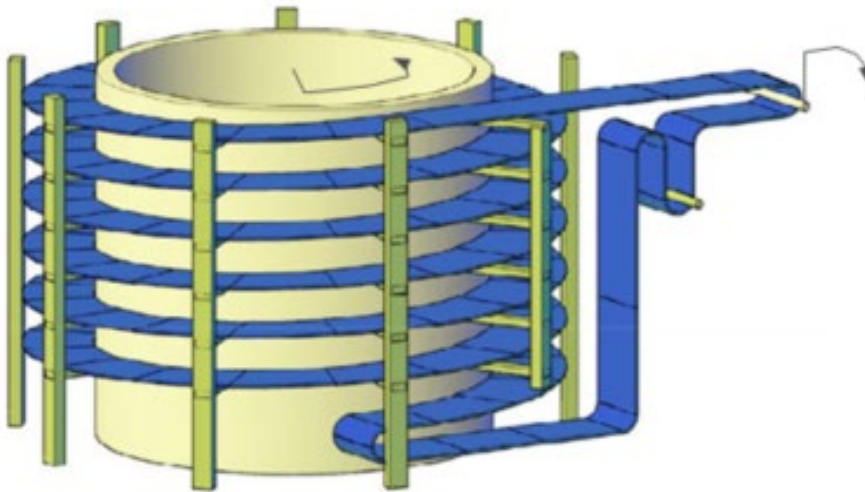
\*Machined Split Sprockets are available for each size size.



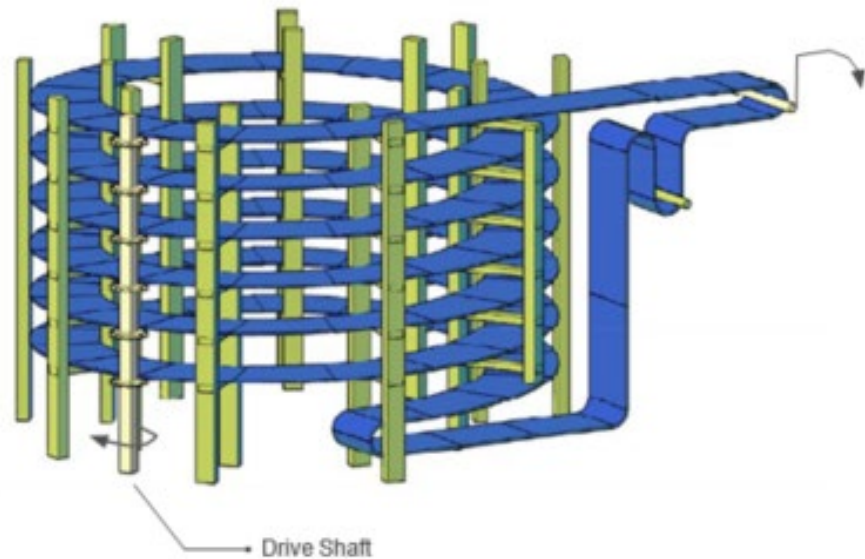
Divider	-	
	mm	inch
Standard	35,9	1.41
Standard	61,3	2.41
Standard	86,7	3.41
Standard	112,1	4.41



## Accessories and Technical Specifications



Spiral conveyor of this kind is made of modular belt that twisted around of special drum structure in the center. The belt is sliding on rails with plastic profile with low friction. The rails are fixed on external vertical support columns. The drive drum has a cylindrical shape and made of profiled pipes or plates, forming a continuous or rarefied surface.



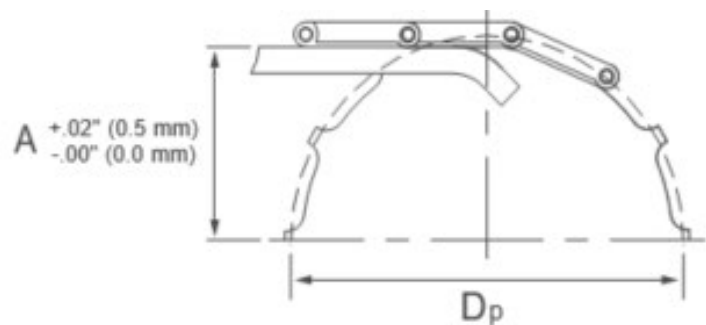
Lateral drive system has been implemented as a stainless steel structure with a gear motor located in a bottom part and connected with a vertical shaft that has driving sprockets, the number of which equals the number of tiers on the spiral conveyor. Belt received the teeth on the outer contour and through which carried out the movement from the sprockets, thus forming a multilevel gear transmission.

**Wear Strip Placement Calculation**

This formula is a general guideline and does not take into consideration belts traveling at speeds greater than 75 ft/min. (23 m/minute). For high speed applications, Modutech recommends increasing the height of "A" and shortening the wear strips as much as one belt pitch in length.

$$A = \frac{1}{2} \times (D_p - BT)$$

- A = Calculated Height
- D<sub>p</sub> = Sprocket Pitch Diameter
- BT = Belt Thickness

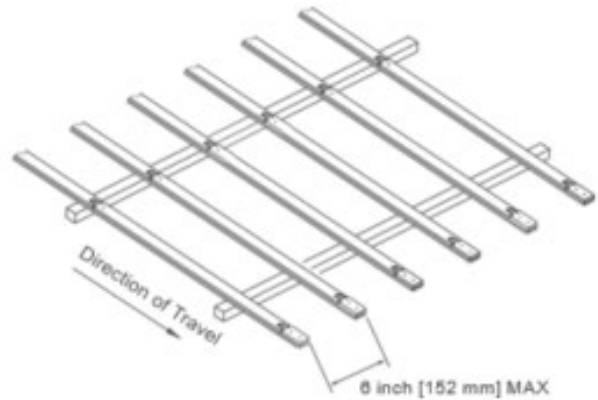
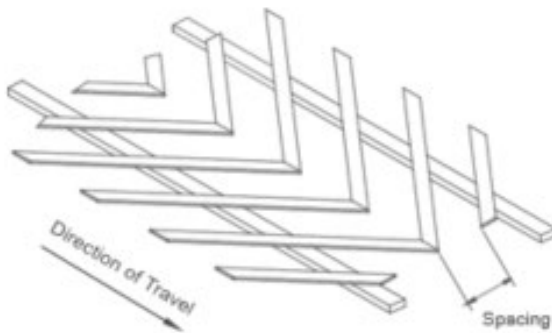
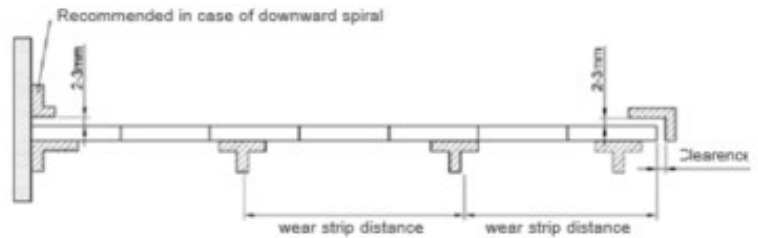
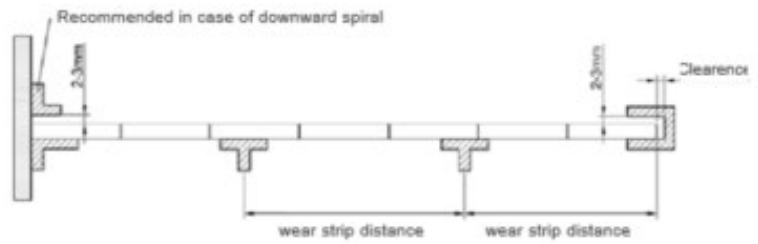


Due to the strength and rigidity of the stainless steel pins the number of wear strip can be largely reduced compared to other belts with plastic pin.

The wear strip distance is based on the product weight and how is distributed on the belt. a range between 250 and 400 mm is covering most of the case. on the return path the guides can be spaced up 1 meter apart.

Due to excellent belt width tolerance the lateral gap between belt and guides can be few mm, anyhow it is important to keep into firm consideration the thermal dilatation of the belt that corresponds exactly to the dilatation of the stainless steel pin.

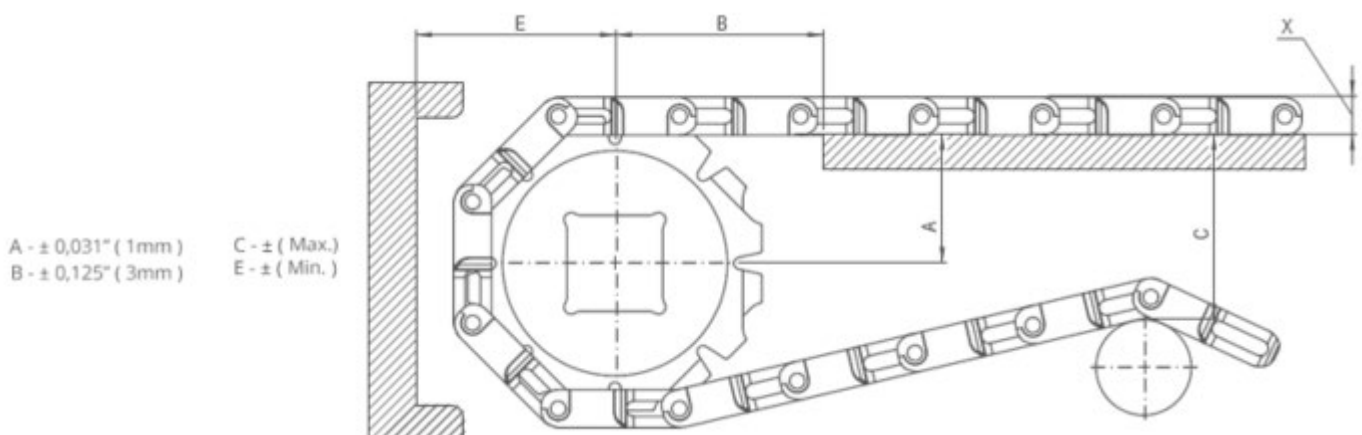
**Note:** Please contact with your sales representative for suitable wear strip types and location for spiral towers.



**Herringbone rails:** Modutech recommended. Flat wear strips in a "V" configuration with the point of the "V" pointing in the direction of travel. Low friction wear strip material preferred to minimize belt wear. Recommended spacing between rails of 100–300mm depending on belt type, load, and other factors. This configuration distributes the wear over the entire belt width.

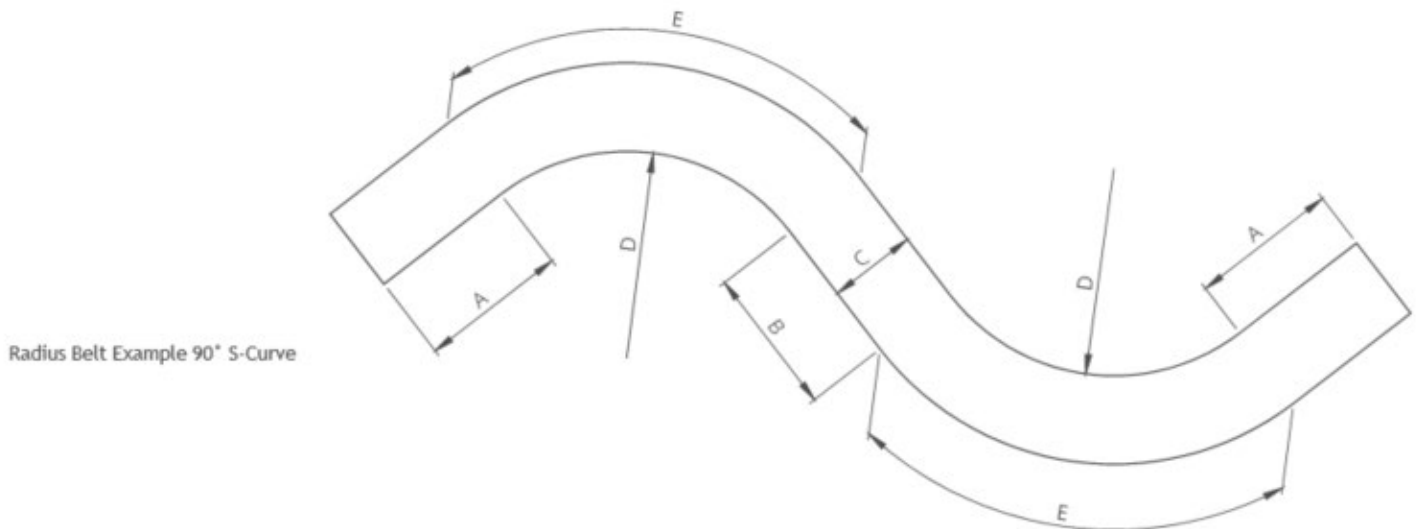
**Longitudinal Rails:** Flat wear strips the full length of the conveyor, parallel to each other and perpendicular to the terminal shafts. Low friction wear strip material preferred to minimize belt wear. Recommended spacing between rails of 100-300mm depending on belt type, load, and other factors. This configuration does not distribute wear over the full width of the belt.

## Engineering Information



## Conveyor Frame Dimensions

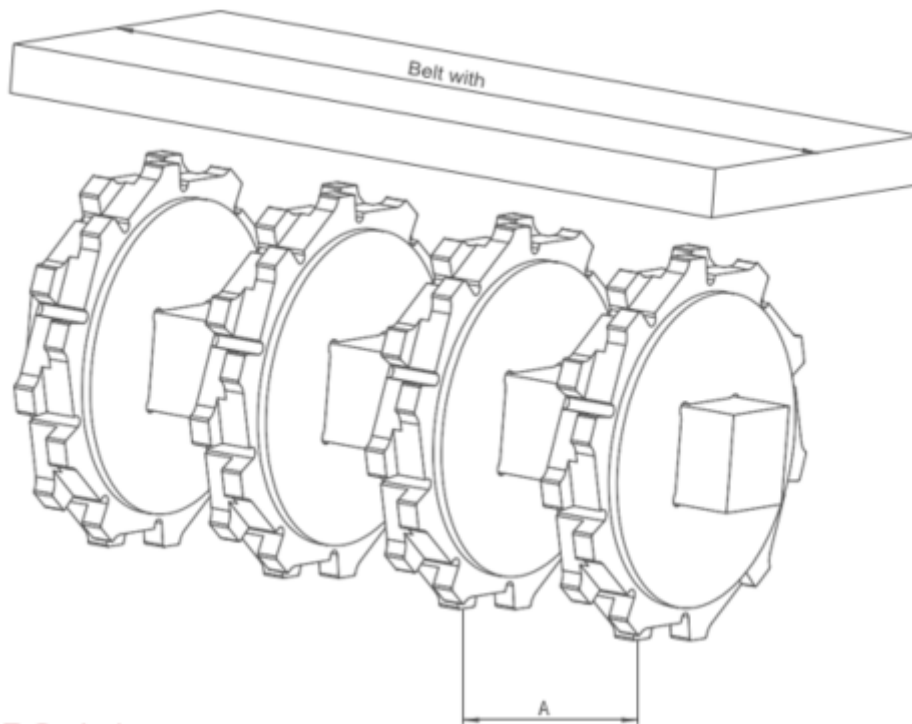
SPROCKETS DESCRIPTION			A		B		C		E		X	
Pitch Diameter		Number of teeth	Range (Bottom to Top)		inch	mm	inch	mm	inch	mm	inch	mm
inch	mm		inch	mm								
FabLink®EC50.8.T_R												
4.52	114,8	8	2.36	60,1	1.85	47,0	4.47	113,5	3.36	85,4	0.63	16,0
5.81	147,5	10	2.96	75,1	2.31	58,7	5.85	141,8	4.01	101,8	0.63	16,0
7.09	180,2	12	3.55	90,1	2.77	70,5	6.70	170,2	4.65	118,1	0.63	16,0
-	-	-	-	-	-	-	-	-	-	-	-	-



Radius Belt Example 90° S-Curve

Calculation Example	
<p>A: Straight run pull and n = Belt width</p> <p>B: Straight run between 2 curves = min. 2 x belt width</p> <p>C: Belt width</p> <p>D: Minimum inner radius</p> <p>E: Curve length</p> <p>Min. inner radius</p> <p>Collapse Factor = -----</p> <p style="padding-left: 40px;">Belt width</p> <p>Minimum inner radius = Collapse Factor x Belt width</p>	<p>Belt width: 762 mm Radius Belt</p> <p>Collapse Factor: 1.53</p> <p>D: 762 x 1.53 = 1166 mm</p> <p>A: 762 mm</p> <p>B: 2 x 762 mm = 1524 mm (min.)</p> <p>E: 2 x (C+D) x 3.14 = 3027 mm</p> <p style="text-align: center;">-----</p> <p style="text-align: center;">4</p> <p>Total length = (2 x A) + B + (2 x E)</p>

## Slider Support System for Straight Running Belts



### Sprockets Arrangement

Standard Belt Width		Number of sprockets per shaft		A (mm/inch)	
mm	inch	Drive Shaft	Return Shaft	Min.	Max.
508,0	20.0	6	5	50 / 2	120 / 4.7
558,8	22.0	7	6	50 / 2	120 / 4.7
609,6	24.0	8	7	50 / 2	120 / 4.7
660,4	26.0	8	7	50 / 2	120 / 4.7
711,2	28.0	9	8	50 / 2	120 / 4.7
762,0	30.0	10	9	50 / 2	120 / 4.7
812,8	32.0	10	9	50 / 2	120 / 4.7
863,6	34.0	11	10	50 / 2	120 / 4.7
914,4	36.0	11	10	50 / 2	120 / 4.7
965,2	38.0	12	11	50 / 2	120 / 4.7
1016,0	40.0	13	12	50 / 2	120 / 4.7
1066,8	42.0	13	12	50 / 2	120 / 4.7
1117,6	44.0	14	13	50 / 2	120 / 4.7
1168,4	46.0	15	14	50 / 2	120 / 4.7

Note: Number of sprockets depends on the belt load.

## Collapse factors per widths

Nom. Belt Width (mm)	355,6	406,4	457,2	508,0	558,8	609,6	660,4	711,2	762,0	812,8	863,6	914,4	965,2	1016,0	1066,8	1117,6	1168,4	1219,2	1270,0	1320,8
Nom Belt Width (inch)	14.0	16.0	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
Collapse Factor	1,49	1,49	1,49	1,49	1,50	1,51	1,52	1,53	1,53	1,54	1,54	1,55	1,56	1,56	1,57	1,57	1,58	1,60	1,62	1,63
Min Inner Radius (mm)	529,8	605,5	681,2	756,9	838,2	920,5	1003,8	1088,1	1165,9	1251,7	1329,9	1417,3	1505,7	1585,0	1674,9	1754,6	1846,1	1950,7	2057,4	2152,9
Min Inner Radius (inch)	20.9	23.8	26.8	29.8	33.0	36.2	39.5	42.8	45.9	49.3	52.4	55.8	59.3	62.4	65.9	69.1	72.7	76.8	81.0	84.8

Standard range of belt width and collapse factor ( Min. Inner radius = Collapse factor x Standard belt width )