



EC254 R

Modular Radius Belt Series

- **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

- **Automotive Applications**

Car Part Manufacturing, Battery Filling

- **Packaging Applications**

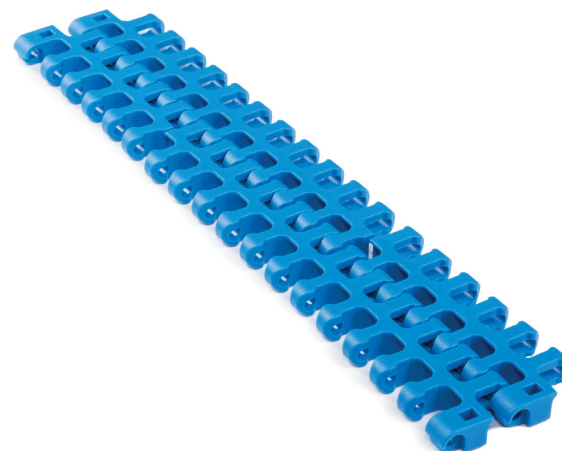
Tray Packers, Box Transport Horizontal



MODUTECH®
Movement Technologies

EC254 R

Pitch:	25,8 mm / 1 inch
Belt Surface:	Open, Smooth Surface
Minimum Width:	100 mm / 3.94 inch
Open Area (%):	36%. (Biggest opening 7,5 x 12 mm)
Flight:	Yes
Sidewall:	Yes
Pin:	Ø5 mm / 0.197 inch - Self Lock
Approved:	FDA and EU
Curve:	Yes
Color:	Blue / White / Gray
Cleanability:	Excellent
Application:	Straight and side flexing
Collapse Factor:	2.1 - 2.4 (Please check page 197 to see Collapse Factors-Width Table)
Belt Thickness:	11 mm / 0.433 inch

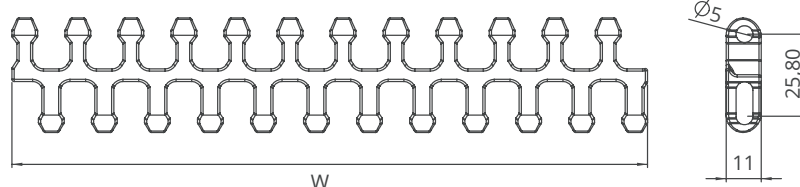


EC254 R Technical Information

Belt Material		POM	POM	PP	PP
Pin Material		PA	POM	PA	POM
Belt Strength (Straight)	N/m lb/ft	27000 - 1850	27000 - 1850	19000 - 1300	19000 - 1300
Belt Strength (Curve)	N/m lb/ft	1500 - 338	1500 - 338	1000 - 225	1000 - 225
Temperature	°C °F	-40 / +93 -40 / +200	-40 / +93 -40 / +200	+5 / +105 +40 / +220	+5 / +93 +40 / +200
Belt Weight	kg/m² lb/sqft²	7.0 / 1.44	7.0 / 1.44	4.7 / 0.96	4.7 / 0.96

Diameter of idling rollers (min.)		Diameter of support rollers (min.)		Diameter for gravity take up center drive rollers (min.)		Backbending radius for elevators without side guards or hold down devices (min.)		Backbending radius for elevators with side guards or hold down devices (min.)	
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
50	2	50	2	100	4	150	6	250	10

Belt Width mm	200,0	250,0	300,0	350,0	400,0	450,0	500,0	550,0	600,0	650,0	700,0	750,0	800,0	850,0	900,0	950,0	1000,0
Belt Width inch	7.87	9.84	11.81	13.78	15.75	17.72	19.69	21.65	23.62	25.59	27.56	29.53	31.50	33.46	35.43	37.40	41.34
Belt Width mm	1050,0	1100,0	1150,0	1200,0													
Belt Width inch	41.34	43.31	45.28	47.24													



Product Features and Functional Benefits

- Available for light and medium load capacity.
- 180 degree high speed side flexing applications.
- High temperature and wear resistance.
- Unique locking system.
- Belt provides optimal open area for drainage airflow.

Important Notes

- **Standard belt increments 50 mm.**
- **Non-standard belt increments 16,6 mm.**
- Please contact with customer service for precise belt measurements.
- Special raw materials and additional colors available.
- Belt widths bigger than **1200 mm (48")** are not recommended. For further information, please contact Modutech Representatives.
- Physical belt widths are generally **0.1% to 0.3%** smaller.
- For PP & POM material up to **750 mm (30") -3 mm to 0mm** and **-0.4% to 0%** for wider belts.

EC254 R Series

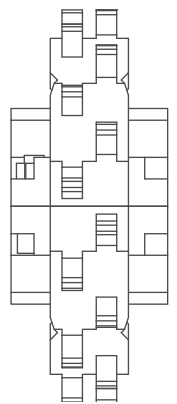
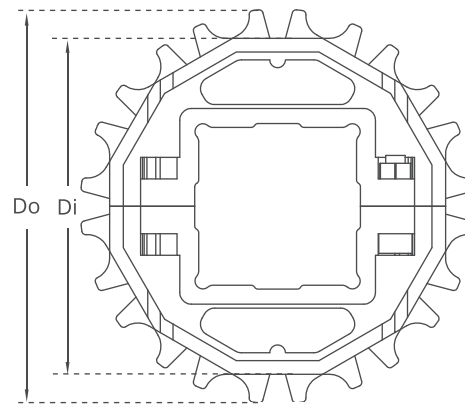
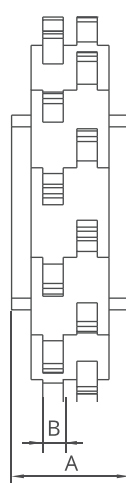
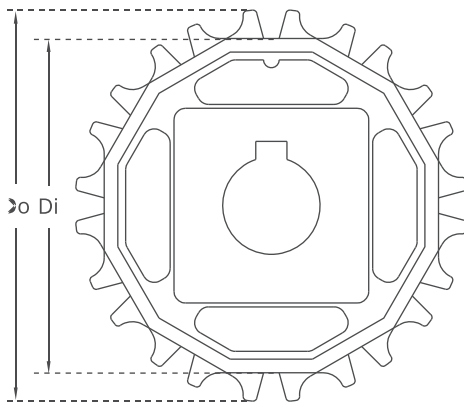
Sprockets and Technical Specifications



Z15



Z8



Split molded sprockets are available for the products with "Red" font color.

EC254 R Series / Standard Sprockets Dimensions

NO. 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*	52,0 / 2.05	67,0 / 2.64	5,3 / 0.21	30,0 / 1.18	25	1	25	1	MD-TR254SQZ8*POM	MD-TR254SRZ8*POM
Z10*	69,0 / 2.72	84,0 / 3.31	5,3 / 0.21	30,0 / 1.18	40	1.5	25-30	1-1.25	MD-TR254SQZ10*POM	MD-TR254SRZ10*POM
Z12*	85,8 / 3.38	100,8 / 3.97	5,3 / 0.21	30,0 / 1.18	40	1.5	25-30-35	1-1.25	MD-TR254SQZ12*POM	MD-TR254SRZ12*POM
Z15*	110,8 / 4.36	125,8 / 4.95	5,3 / 0.21	30,0 / 1.18	40	1.5	25-30	1-1.25	MD-TR254SQZ15*POM	MD-TR254SRZ15*POM
Z16	119,1 / 4.69	134,1 / 5.28	5,3 / 0.21	30,0 / 1.18	40	1.5	25-30	1-1.25	MD-TR254SQZ16*POM	MD-TR254SRZ16*POM
Z18*	135,6 / 5.34	150,6 / 5.93	5,3 / 0.21	30,0 / 1.18	40	1.5	25-30-35	1-1.25	MD-TR254SQZ18*POM	MD-TR254SRZ18*POM
Z20	152,0 / 5.98	167,1 / 6.58	5,3 / 0.21	30,0 / 1.18	40	1.5	25-30	1-1.25	MD-TR254SQZ20*POM	MD-TR254SRZ20*POM

*Other sprockets and hub sizes are manufactured up to request.

*PA (Polyamide) and PP (Polypropylene) sprockets raw material is available on request.

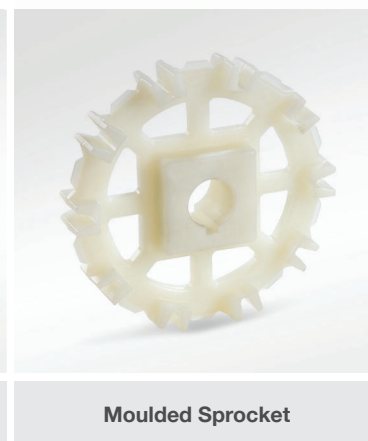
*Machined Split Sprockets are available for each size.



Clamp



Machined Split Sprocket



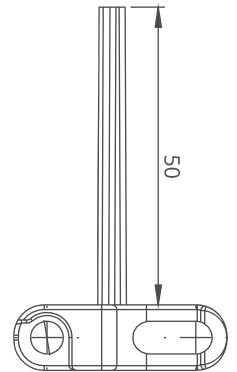
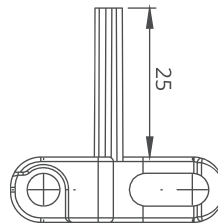
Moulded Sprocket



Machined Sprocket

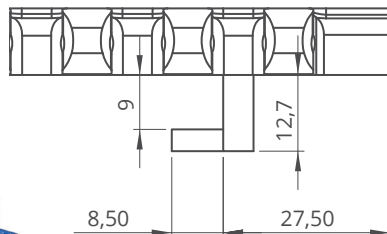
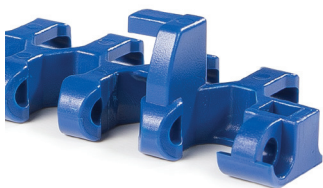
EC254 R Series

Accessories and Technical Specifications

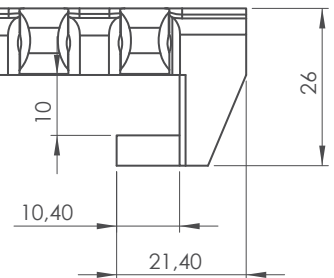
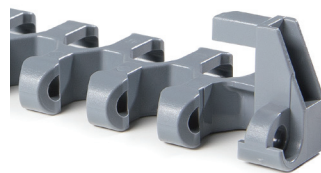


EC254 R Series / TAB - Technical Specification

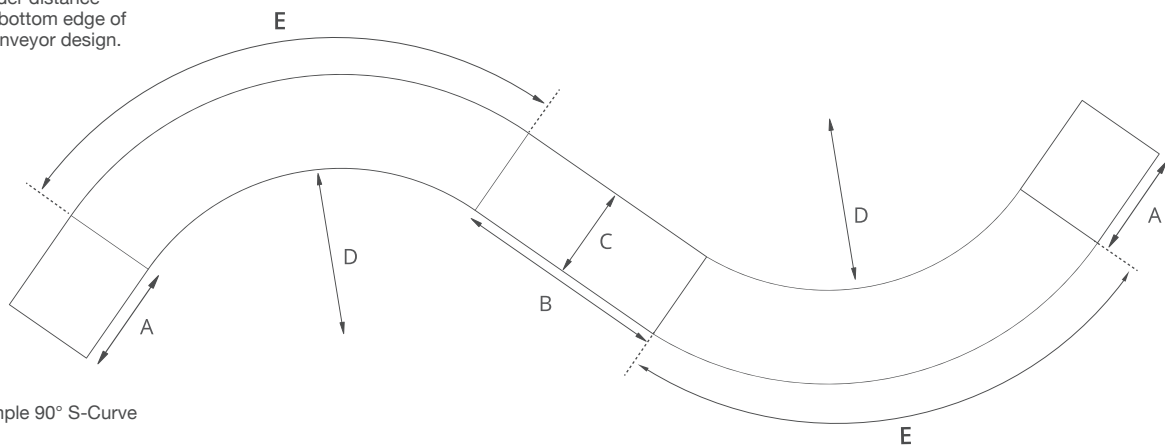
TAB-M



TAB-E



Note: Please consider distance between shaft and bottom edge of TABS during the conveyor design.



Radius Belt Example 90° S-Curve

EC254 R Series / Radius Belt Calculation

- A:** Straight run pull and $n = \min. 1,5 \times \text{belt width}$ recommended
- B:** Straight run between 2 curves = $\min. 2 \times \text{belt width}$
- C:** Belt width
- D:** Minimum inner radius
- E:** Curve length

$$\text{Collapse Factor} = \frac{\text{Min. inner radius}}{\text{Belt width}}$$

$$\text{Minimum inner radius} = \text{Collapse Factor} \times \text{Belt width}$$

CALCULATION EXAMPLE

Belt width: 400 mm 90° Radius Belt
Collapse Factor: 2.14

$$\text{D: } 400 \times 2.14 = 856 \text{ mm}$$

$$\text{A: } 400 \text{ (Min.)}$$

$$\text{B: } 2 \times 400 = 800 \text{ mm (Min.)}$$

$$\text{E: } \frac{2 \times (C + D) \times 3.14}{4} = 1972 \text{ mm}$$

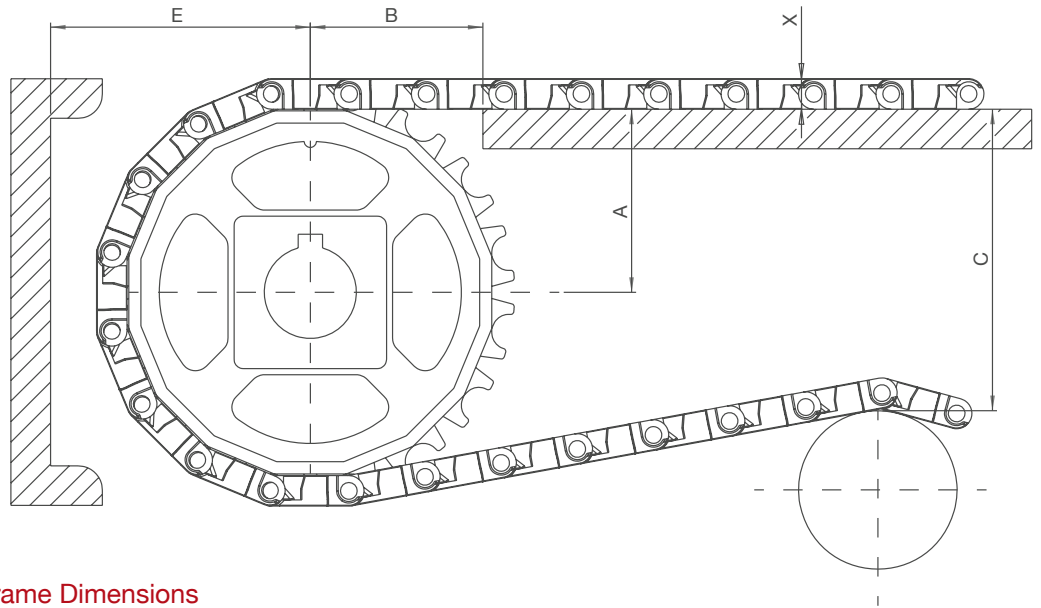
$$\text{Total length} = (2 \times A) + B + (2 \times E)$$

EC254 R Series

Engineering Information

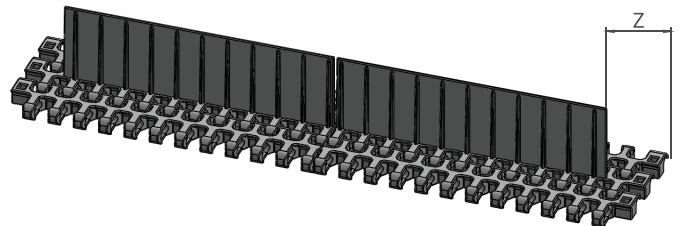
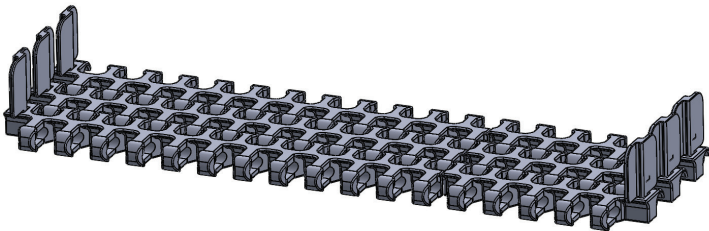
A - $\pm 0,031"$ (1mm)
B - $\pm 0,125"$ (3mm)

C - $\pm$ (Max.)
E - $\pm$ (Min.)



EC254 R Series / Conveyor Frame Dimensions

Sprockets Description			A		B		C		E		X	
Pitch Diameter		No. Teeth	Range (Bottom to Top)		inch	mm	inch	mm	inch	mm	inch	mm
inch	mm		inch	mm								
EC254 R												
2.38	60,5	8	1.15	29,2	1.55	39,4	1.95	49,5	1.94	49,2	0.43	11,0
3.07	78,0	10	1.46	37,1	1.77	45,0	2.60	66,1	2.25	57,1	0.43	11,0
3.74	95,0	12	1.76	44,8	1.97	50,1	3.24	82,3	2.55	64,8	0.43	11,0
4.70	119,5	15	2.22	56,4	2.23	56,7	4.18	106,1	3.01	76,4	0.43	11,0
5.02	127,5	16	2.37	60,2	2.38	60,5	4.46	113,2	3.21	81,5	0.43	11,0
5.71	145,0	18	2.73	69,3	2.45	62,3	5.19	131,8	3.51	89,3	0.43	11,0
6.46	164,0	20	3.03	77,0	2.64	67,0	5.82	148,0	3.86	98,0	0.43	11,0
EC254 R-GT												
2.38	60,5	8	1.15	29,2	1.55	39,4	1.95	49,5	2.18	53,7	0.61	15,5
3.07	78,0	10	1.46	37,1	1.77	45,0	2.60	66,1	2.48	61,6	0.61	15,5
3.74	95,0	12	1.76	44,8	1.97	50,1	3.24	82,3	2.79	69,3	0.61	15,5
4.70	119,5	15	2.22	56,4	2.23	56,7	4.18	106,1	3.25	80,9	0.61	15,5
5.02	127,5	16	2.37	60,2	2.38	60,5	4.46	113,2	3.46	86,0	0.61	15,5
5.71	145,0	18	2.73	69,3	2.45	62,3	5.19	131,8	3.76	93,8	0.61	15,5
6.46	164,0	20	3.03	77,0	2.64	67,0	5.82	148,0	4.02	102,5	0.61	15,5



EC254 R Series / Sidewall Technical Specifications

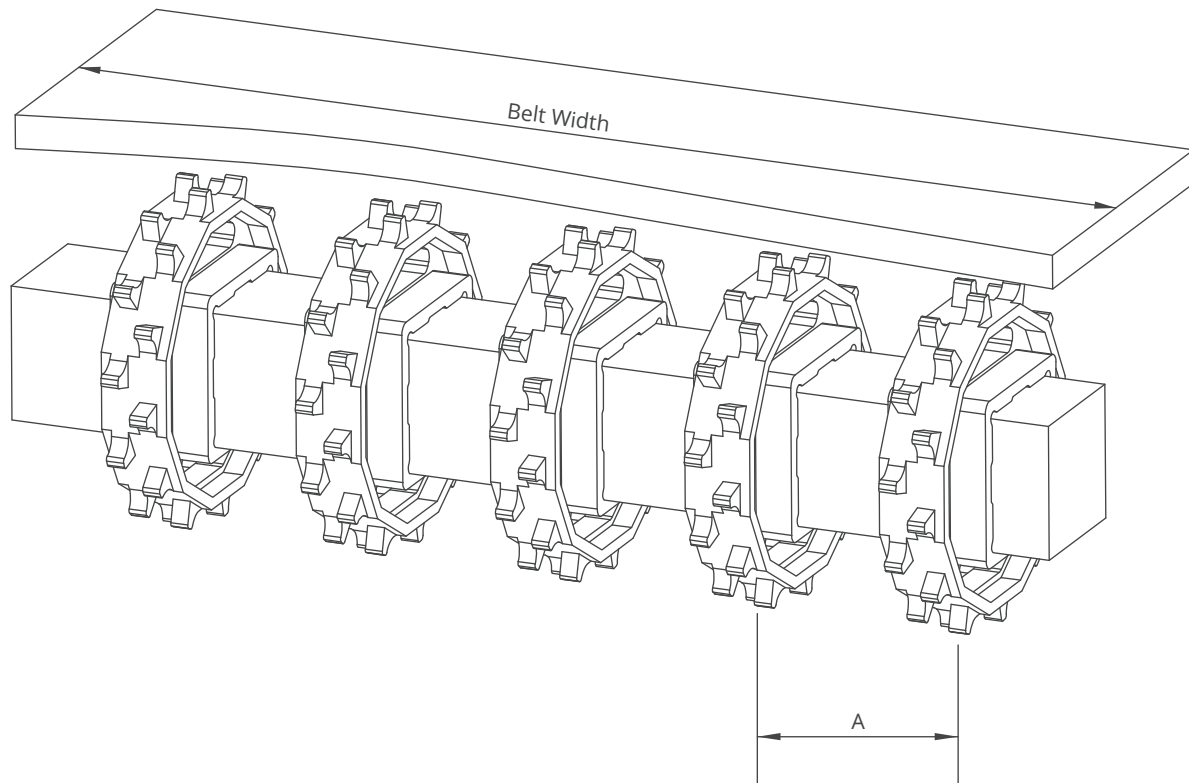
Possible Sidewall Indents	-	
	mm	inch
Standard, no module cutting	-	-

EC254 R Series / Flight Technical Specifications

Possible Flight Indents for EC254 R Series	Z	
	mm	inch
Standard, no module cutting	25,0	0.98
Standard, module cutting	37,5	1.48
Standard, module cutting	54,3	2.14

EC254 R Series

Engineering Information



EC254 R Series / Sprockets Arrangement

Standard Belt Width		Number of sprockets per shaft		A (mm/inch)	
mm	inch	Drive Shaft	Return Shaft	Min.	Max.
200,0	7.9	2	2	50/2	120/4.7
250,0	9.8	3	2	50/2	120/4.7
300,0	11.8	3	2	50/2	120/4.7
350,0	13.8	3	3	50/2	120/4.7
400,0	15.7	4	3	50/2	120/4.7
450,0	17.7	4	3	50/2	120/4.7
500,0	19.7	5	4	50/2	120/4.7
550,0	21.7	5	4	50/2	120/4.7
600,0	23.6	6	5	50/2	120/4.7
700,0	27.6	7	5	50/2	120/4.7
800,0	31.5	8	6	50/2	120/4.7
900,0	35.4	9	7	50/2	120/4.7
1000,0	39.4	10	7	50/2	120/4.7
1100,0	43.3	10	8	50/2	120/4.7
1200,0	47.2	10	8	50/2	120/4.7

Note: Number of sprockets depends on the belt load.

EC254 R Series / Collapse Factors per widths for EC254 R Series

Nom. Belt Width (mm)	250,0	300,0	350,0	400,0	450,0	500,0	550,0	600,0	650,0	700,0	750,0	800,0	850,0	900,0	950,0	1000,0	1050,0	1100,0	1150,0	1200,0
Nom. Belt Width (inch)	10.0	12.0	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
Collapse Factor	2,07	2,10	2,12	2,14	2,15	2,16	2,17	2,18	2,18	2,19	2,19	2,19	2,20	2,20	2,20	2,21	2,21	2,21	2,21	2,21
Min. Inner Radius (mm)	517,5	630,0	742,0	856,0	967,5	1080,0	1193,5	1308,0	1417,0	1533,0	1642,5	1752,0	1870,0	1980,0	2090,0	2210,0	2320,5	2431,0	2541,5	2652,0
Min. Inner Radius (inch)	20.7	25.2	29.7	34.2	38.7	43.2	47.7	52.3	56.7	61.3	65.7	70.8	74.8	79.2	83.6	88.4	92.8	97.2	101.7	106.1

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