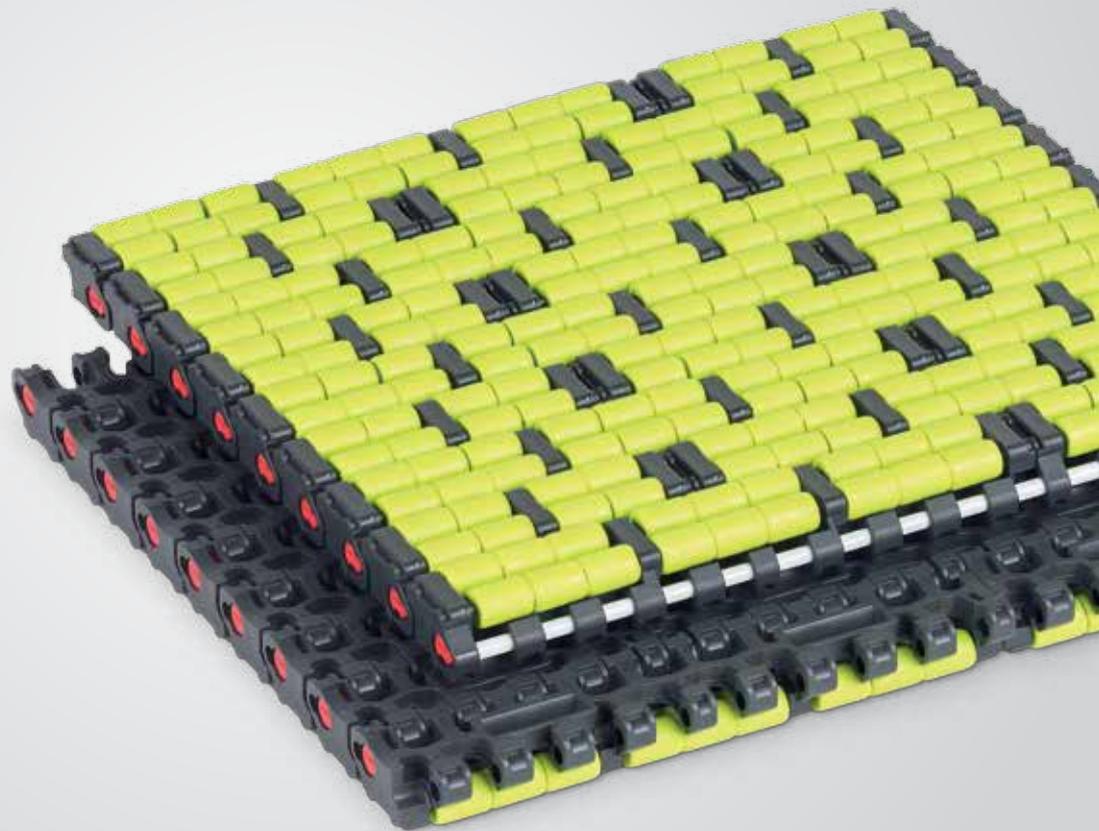


Rexnord 1005 XLBP Series MatTop Chain



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Safety Considerations

Product safety

Products designed and manufactured by Rexnord are capable of being used in a safe manner; but Rexnord cannot warrant their safety under all circumstances. Purchaser must install and use the products in a safe and lawful manner in compliance with applicable health and safety regulations, laws and general standards of reasonable care; and if purchaser fails to do so, purchaser shall indemnify Rexnord from any loss, cost or expense resulting directly or indirectly from such failure.

Safety devices

Products are provided with only safety devices identified herein. It is the responsibility of purchaser to furnish appropriate guards for machinery parts in compliance with MSHA or OSHA Standards, as well as any other safety devices desired by purchaser and/or required by law; and if purchaser fails to do so, purchaser shall indemnify Rexnord from any loss, cost or expense resulting directly or indirectly from such failure.

Introduction

Rexnord introduces the Rexnord® 1005 XLBP Series MatTop® Chain for pack conveyors that require the lowest backline pressure. The new design sets a new standard for the industry with the following features and benefits:



1005 XLBP MatTop Chain

- Reduced gaps between the links at conveyor transfers for extra worker safety
- Rollers in highly visible color contrasting with the modules to ensure chain movement is noticed by workers
- Permanent fixation of roller shafts to ensure no rollers can disintegrate from the chain
- Optimal protection of accumulating packs, as a result of providing the lowest friction between rollers and the packs
- Reduced risk of rollers not turning as a result of optimized pin-roller ratio
- Scalloped shape design on the underside of the links to enable nose-over transfers

The Rexnord 1005 XLBP Series MatTop Chain is available in assembled-to-width sizes with a smallest width of 3.35 inches (85 mm) and increments of 3.35 inches (85 mm). The chain facilitates the use of a nose-over transfer.

This manual includes chain dimensions, basic conveyor design considerations, adjustments to existing conveyors, and installation recommendations. Following the suggestions outlined in this manual will ensure proper operation of the conveyor to provide the optimal product handling and longest wear life of the chain and conveyor components. This manual contains information that is specific to the Rexnord 1005 XLBP Series MatTop Chain and should be used in conjunction with the Rexnord Engineering Manual (8rxEM-M_A4).

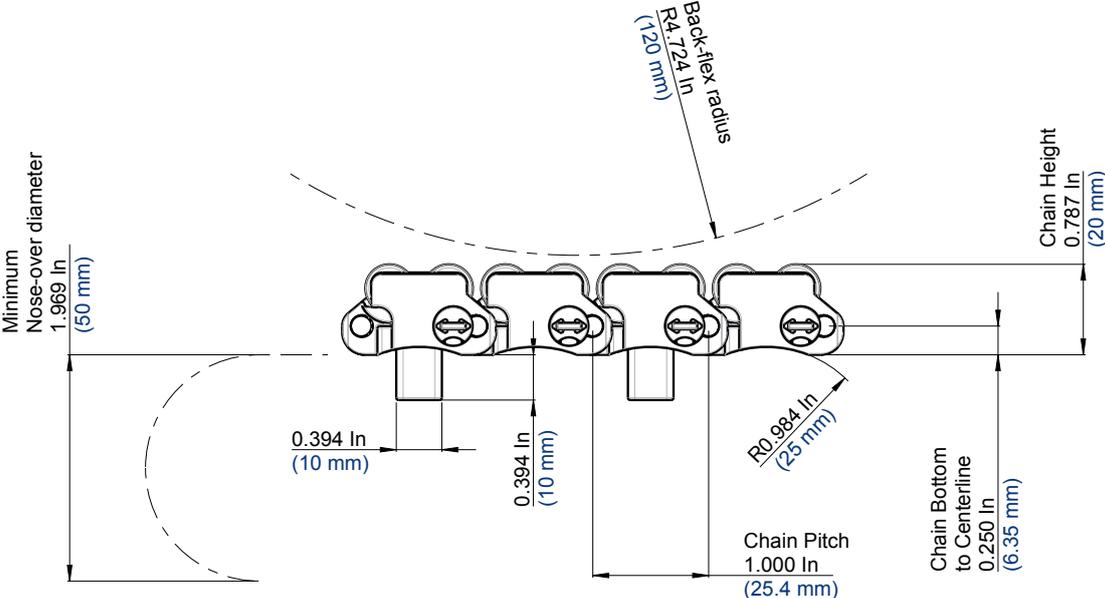


Chain Selection

Basic chain dimensions

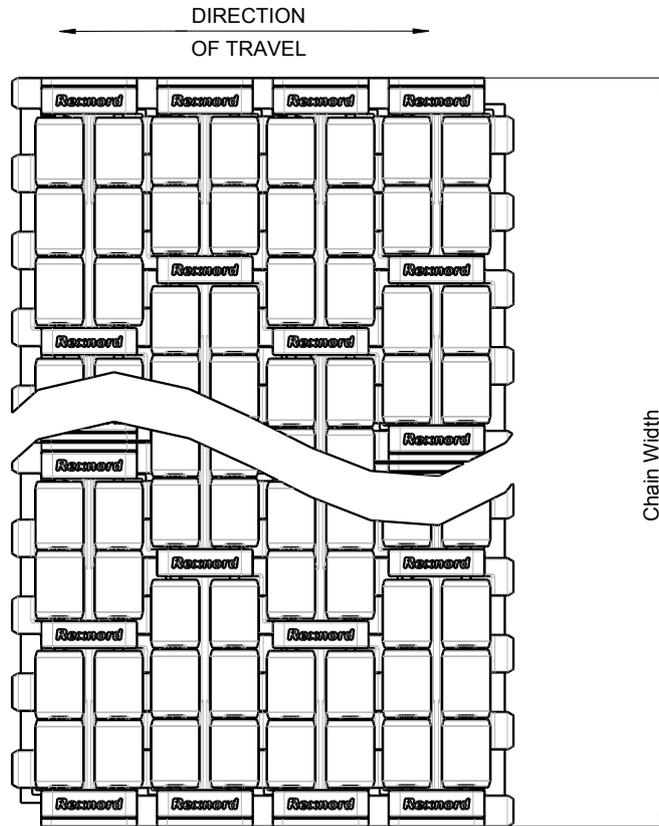
Chain characteristics

- Chain pitch: 1.00 inch (25.4 mm)
- Thickness: 0.79 inches (20.0 mm)
- Minimum back-flex radius: 4.72 inches (120.0 mm)
- Chain material: XLA, low-friction acetal
- Standard pin material: Polyester
- Direction of chain travel: Bi-directional
- Nose-over diameter: 1.96 inches (50 mm)



Chain Selection

Basic chain dimensions



Carry Section Wearstrips

Wearstrips recommendations

- Ram extruded wearstrips from ULF™ material are recommended to maximize conveyor performance
- Wearstrips should always be chamfered at the beginning of the strips where they are fixed for a smooth operation
- On straight sections with a length of more than 10 feet (3.048 meters), it is recommended to use plastic wearstrips with a maximum length of 10 feet (3.048 meters) over the conveyor length, with a small gap in between the strips, to allow for thermal expansion

Wearstrip quantities and locations

Chain Width		Outside	Center
inch	mm		
3.35	85	2	0
6.69	170	2	1
10.04	255	2	2
13.39	340	2	3
16.73	425	2	4
20.08	510	2	5
23.43	595	2	6
26.77	680	2	7
30.12	765	2	8

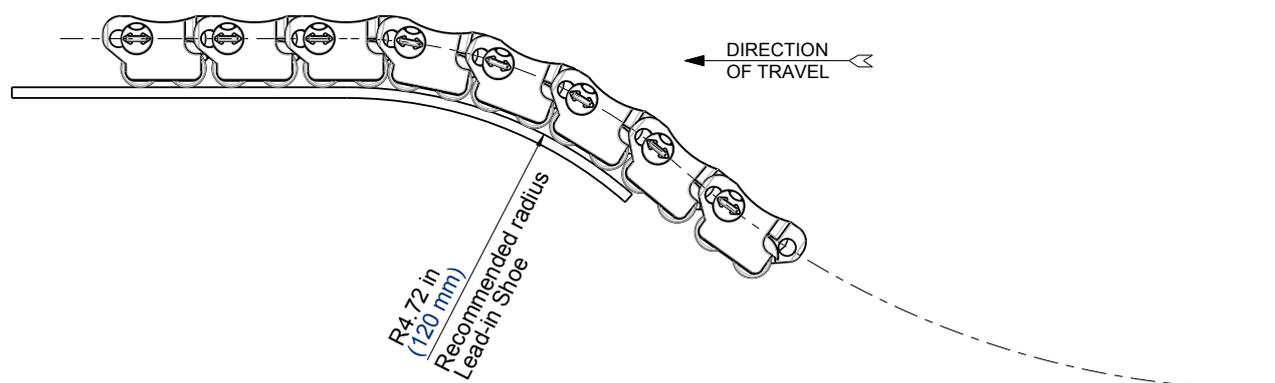
Return Section Wearstrips

Recommendations

- Fixed guide-shoes (Rexnord Conveyor Component part S0153) are recommended
- All sharp edges in the return part should be chamfered to ensure smooth chain movement
- Support return rollers are not recommended for Rexnord 1005 XLBP MatTop Chain, due to the required back-flex radius of 4.72 inches (120 mm)

Entry radius

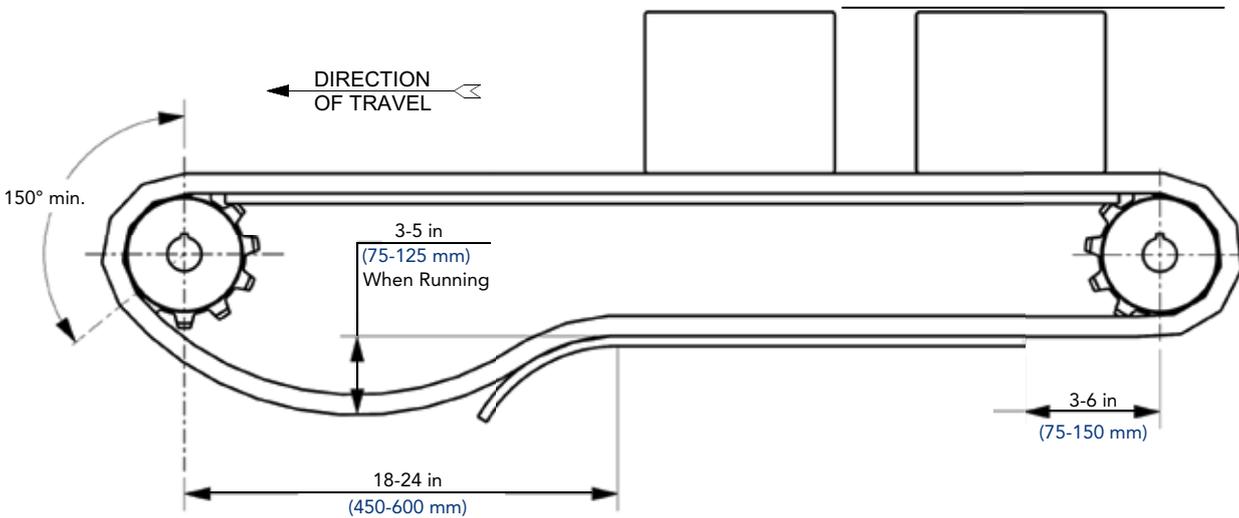
- Provide a generous entry to the return section that allows the chain to feed smoothly into the return section
- The entry radius should be equal or greater than the minimum back-flex radius of the MatTop Chain
- The back-flex radius of the Rexnord 1005 XLBP MatTop Chain is 4.72 inches (120 mm), as shown on page 4



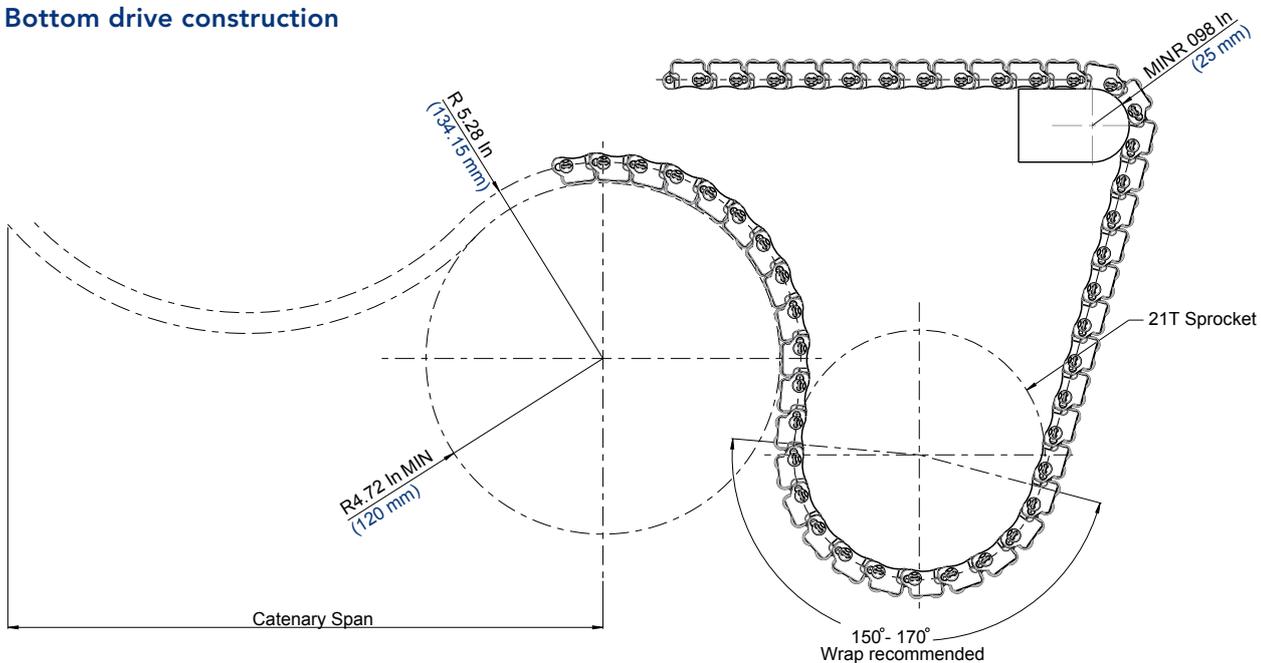
Drive and Idler

End drive and idler construction / catenary

- A catenary is needed to provide optimal sprocket-chain engagement. A horizontal span of 18 to 24 inches (450 to 600 mm) and a vertical sag of 3 to 5 inches (75 to 125 mm) is typically recommended. The catenary should be measured when the chain is running.
- It is always beneficial to minimize the back-flexing of the chain in the conveyor. Less hinge movements in the chain during operation, results in less wear and a longer life.



Bottom drive construction



Drive and Idler

Drive construction

Sprocket dimensions are shown below.

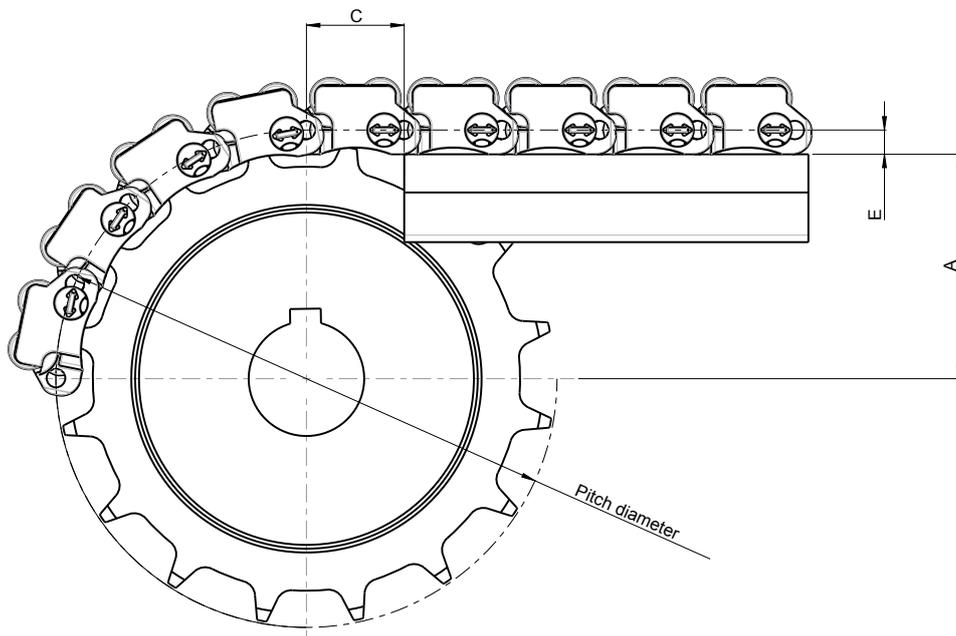
Sprocket size	Pitch diameter		Outside diameter		Dimension A		Dimension C		Dimension E	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
13T	4.17	106.1	4.10	104.2	1.83	46.7				
14T	4.49	114.1	4.42	112.5	2	50.7				
15T	4.80	122.1	4.75	120.7	2.15	54.7				
16T	5.14	130.2	5.07	128.9	2.31	58.8				
17T	5.44	138.2	5.40	137.1	2.47	62.8	1.0	25.4	0.25	6.35
18T	5.78	146.3	5.72	145.3	2.63	66.8				
19T	6.07	154.3	6.04	153.4	2.79	70.8				
20T	6.39	162.4	6.36	161.6	2.94	74.9				
21T	6.72	170.4	6.68	169.7	3.11	78.9				



NSH1005



KUS1005



Shaft height

- $A = (\text{Pitch diameter} / 2) - E$
- $C = \text{One chain pitch of } 1.00 \text{ inch (25.4 mm)}$

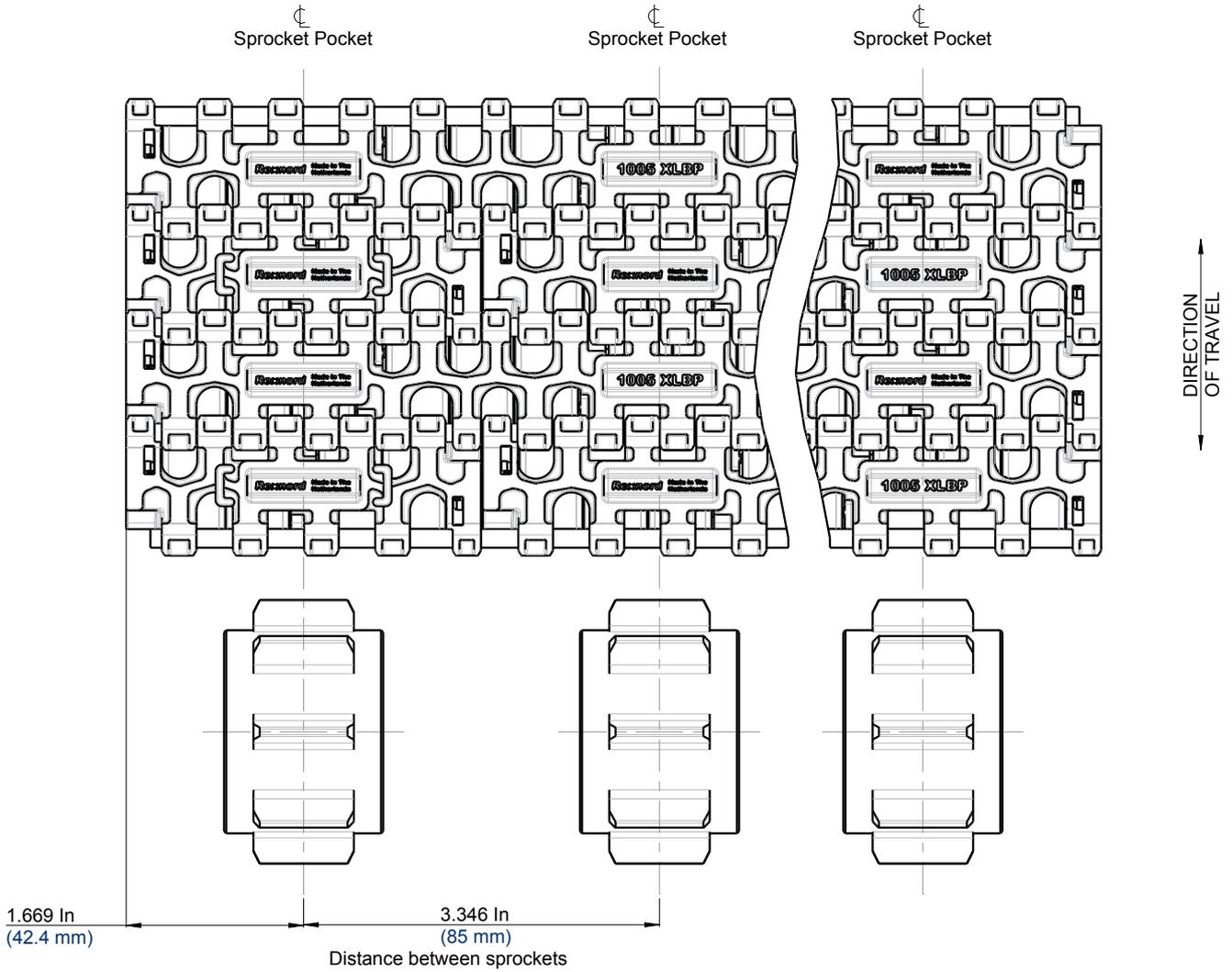
General notes

- Dimension C equals one chain pitch which ensures support under the chain at all times
- The leading edges of the wearstrips should be beveled
- When replacing an existing chain there needs to be adjustments made to the conveyor. See pages 11-13 for more information.

Drive and Idler

Sprocket pocket location

The Rexnord 1005 XLBP MatTop Chain design requires 1 sprocket per 3.35-inch (85 mm) chain width as shown below.

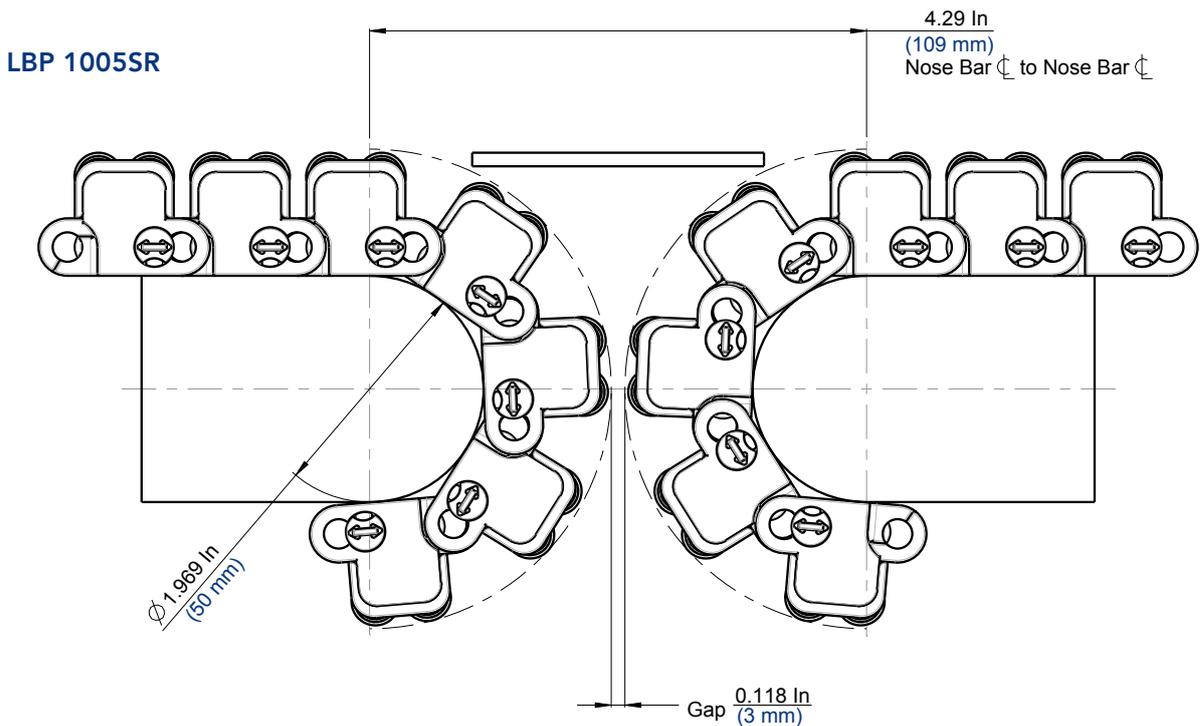
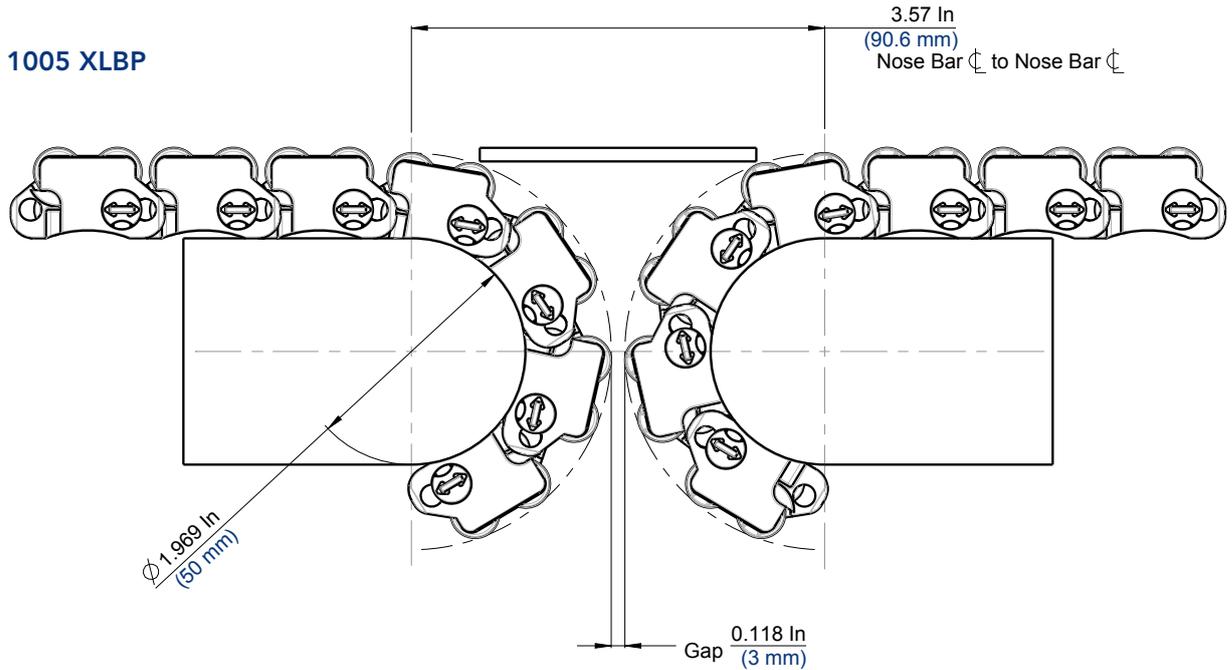


Nose-over Transfers

Transfer dimensions

The new design of the Rexnord 1005 XLBP MatTop Chain is optimized for the use in combination with nose-over transfers.

- The optimum nose-over bar diameter is 1.97 inches (50 mm)
- The recommended wrap angle for maintaining good surface contact between the chain and nose-over bar is 135 degrees
- Compared to the original Rexnord LBP 1005SR chain, the inline transfer with nose-over bars is reduced by 0.73 inches (18.4 mm) to a distance of 3.5 inches (90.6 mm) (between the centerlines of the nose-over bars)



Adjustments to existing conveyors

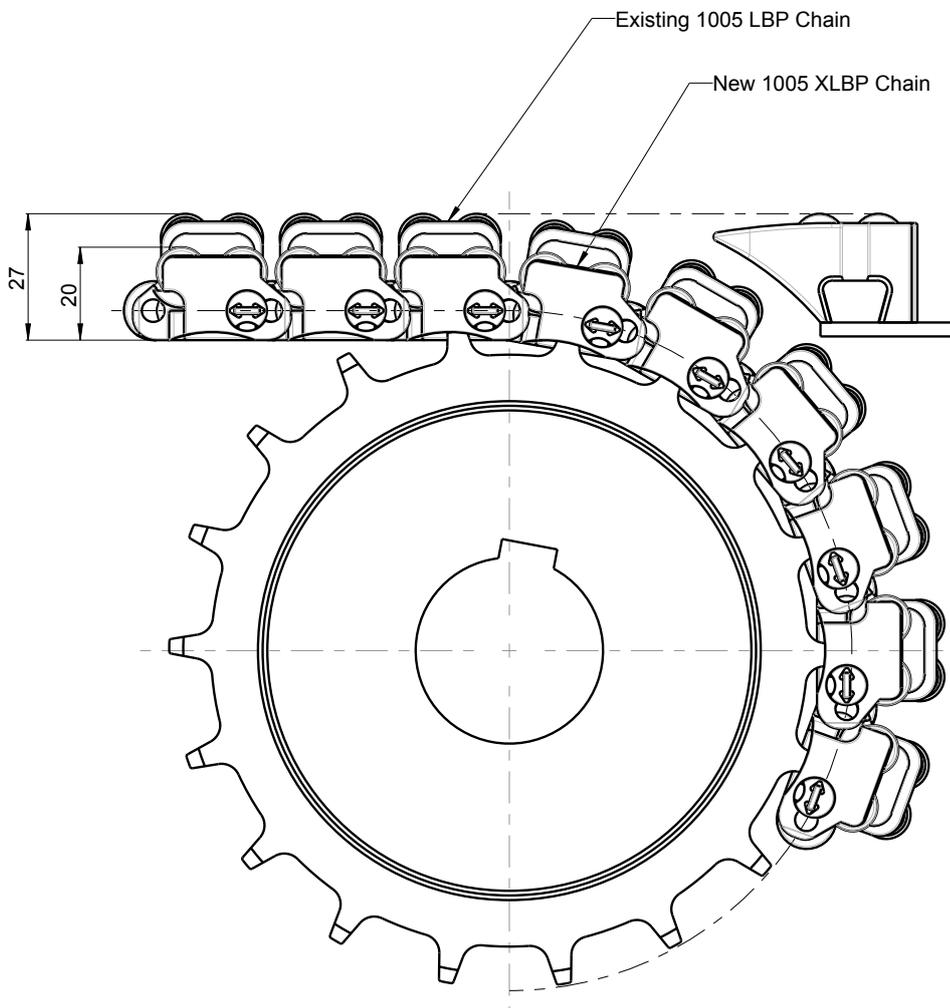
1005 XLBP versus LBP 1005SR

One of the changes of the new Rexnord 1005 XLBP MatTop Chain is the total height of the chain; the chain is 0.27 inches (7 mm) lower than the original Rexnord 1005 LBP MatTop Chain. As a result, modifications to the existing conveyor frames are required. Below is a comparison between the original and new chain without changes to the conveyor.

To replace the former 1005 LBP MatTop Chain with the new 1005 XLBP MatTop Chain in an existing conveyor, some minor adjustments are required to accommodate the 0.27-inch (7 mm) height difference in chain height.

Possible adjustments:

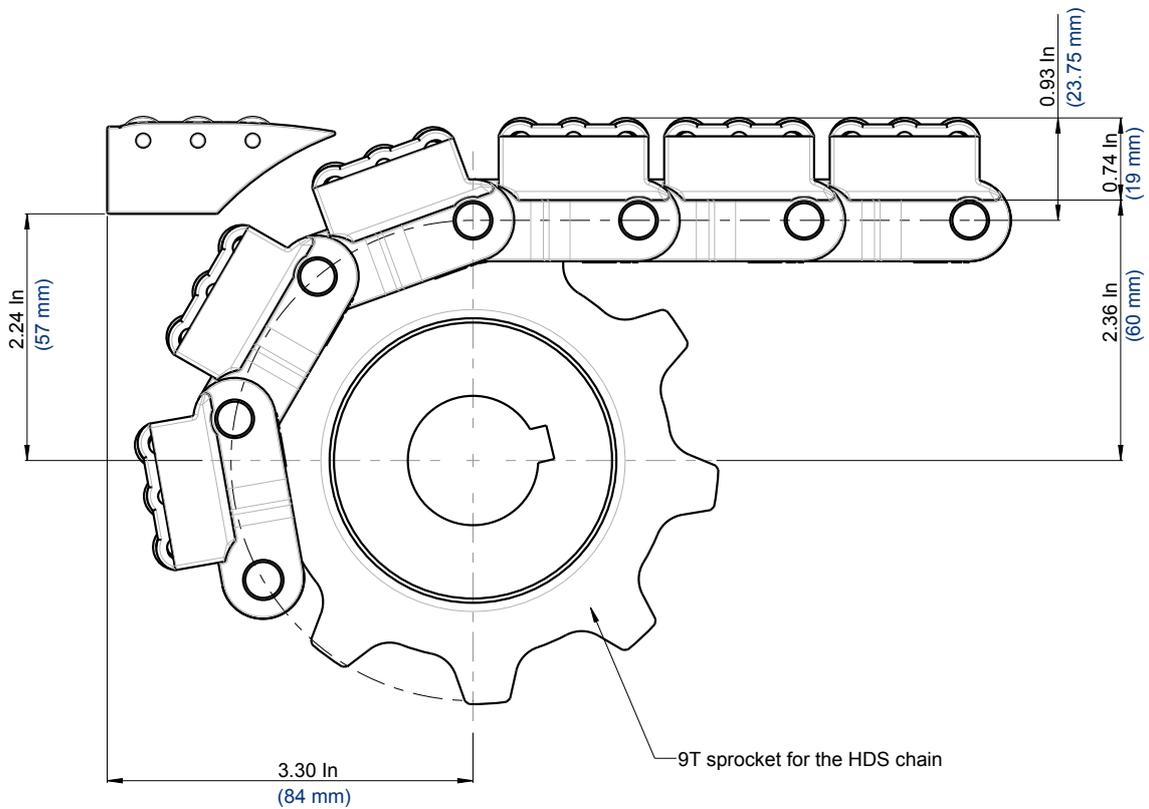
- Lowering to the transfer roller modules
- Raising the shaft and the wearstrips by 0.27 inches (7 mm), without adjusting the roller transfer modules (see drawing below)



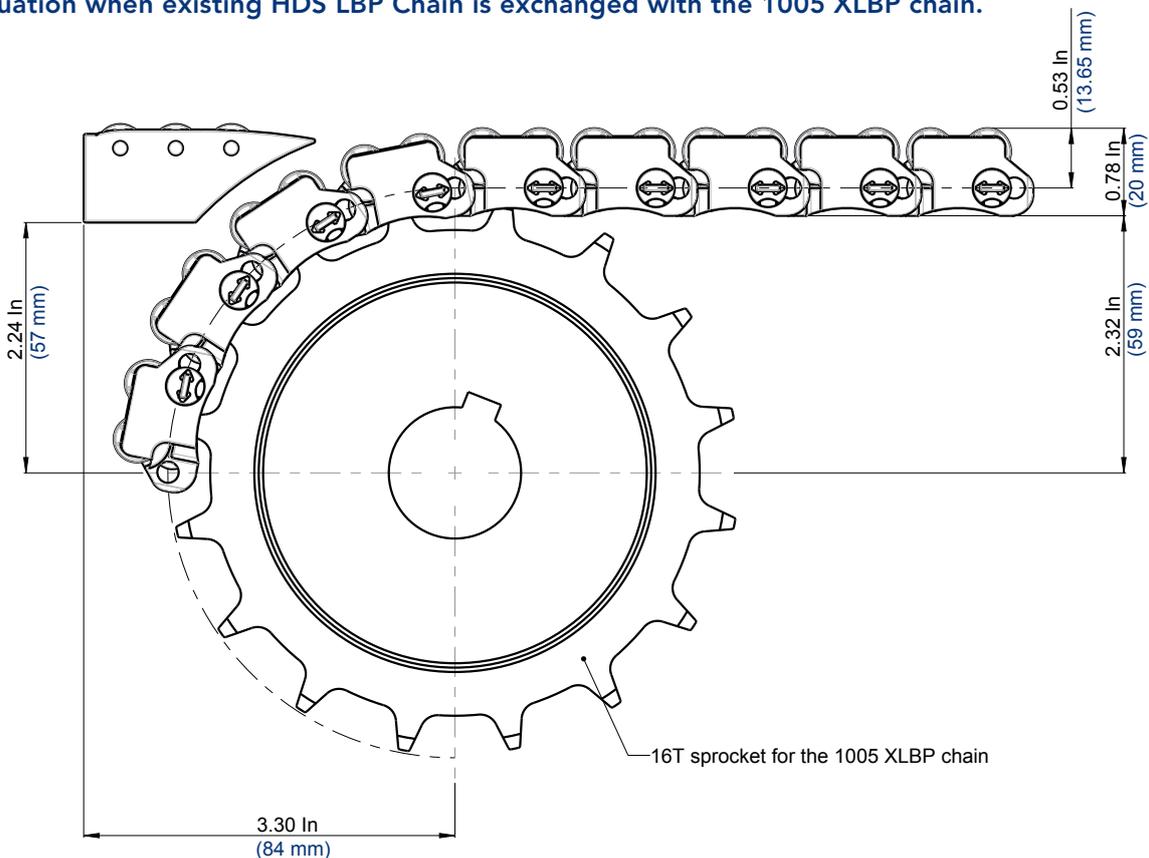
Adjustments to existing conveyors

1005 XLBP versus Heavy Duty Straight running (HDS) LBP chain

HDS LBP TableTop Chain can easily be retrofitted to the 1005 XLBP MatTop Chain.



Situation when existing HDS LBP Chain is exchanged with the 1005 XLBP chain.



Adjustments to existing conveyors

1005 XLBP versus HDS LBP chain

The following tables show the needed sprocket changes when replacing the HDS LBP Chain with the Rexnord 1005 XLBP MatTop Chain.

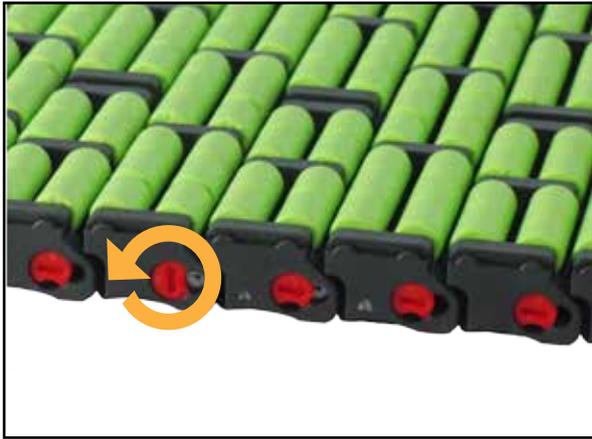
HDS LBP

Sprocket size	Pitch diameter	
	in	mm
9T	4.39	4.39
10T	4.85	4.85
11T	5.32	5.32
12T	5.80	5.80

1005 XLBP

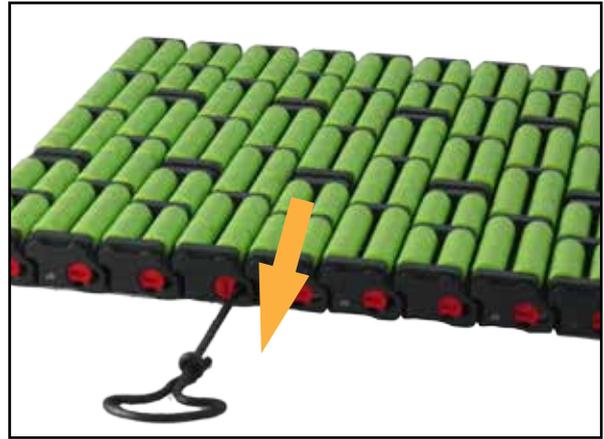
Sprocket size	Pitch diameter		Shaft drop / Raise	
	in	mm	in	mm
16T	5.13	130.2	0.027	0.7
18T	5.76	146.3	-0.055	-1.4
19T	6.03	154.3	0.022	0.6
21T	6.71	170.4	-0.059	-1.5

Assembly and Disassembly



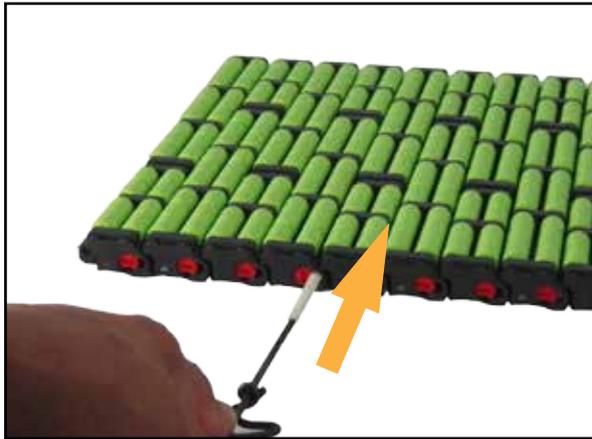
Step 1 - Open clip

Open the clip by turning counter-clockwise using a screwdriver.



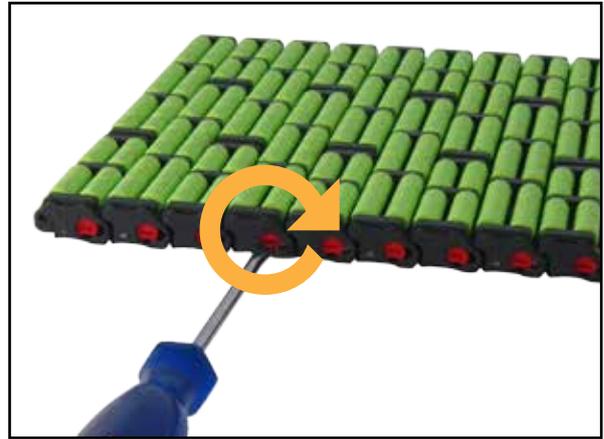
Step 2 - Remove plastic pin

Use the pin puller to thread into the end of the plastic pin and pull the plastic pin out of the chain as shown. After the removal of the plastic pin, the chain can be separated.



Step 3 - Re-insert plastic pin

Use the pin puller to re-insert the plastic pin and connect the modules.



Step 4 - Close clip

Close the clip by turning counter-clockwise using a screwdriver.

Why Choose Rexnord?

When it comes to providing highly engineered products that improve productivity and efficiency for industrial applications worldwide, Rexnord is the most reliable in the industry. Commitment to customer satisfaction and superior value extend across every business function.

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The highest quality products are designed to help prevent equipment downtime and increase productivity and dependable operation.

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Commitment to operational excellence ensures the right products at the right place at the right time.

REXNORD

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Rexnord is a growth-oriented, multi-platform industrial company with leading market shares and highly trusted brands that serve a diverse array of global end markets.

Process & Motion Control

The Rexnord Process & Motion Control platform designs, manufactures, markets and services specified, highly engineered mechanical components used within complex systems where our customers' reliability requirements and the cost of failure or downtime are extremely high.

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