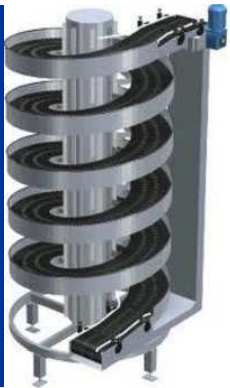


1673 & 2884 Series SpiralTopChains



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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 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® 1673 and 2884 SpiralTop® Chains are the industry's leading chains suitable for mass container flow or packaged case spiral conveying applications. These chains provide numerous features and benefits to the designer, builder, and the end user, including:



HP1673B1 SpiralTop Chain

A breakthrough in spiral conveying solutions.

Rexnord FlatTop continuously develops innovative conveyor chain and component solutions to meet the increasing performance and productivity demands of the marketplace. Rexnord® SpiralTop® Chains set an industry standard in vertical conveying solutions.

Designed for unique vertical conveying solutions

By utilizing proprietary base chains and top plate technology, Rexnords SpiralTop Chains allows for longer runs in multiple directions reducing floor space consumption, product transfer points and drive requirements. This makes these chains ideal for applications requiring conveyance between floors, off-line product accumulation, routing to and from inspection stations, and buffering between machines.

Features and benefits

- 16-inch (406.4 mm) side-flexing radius (1673) and multi-directional flexibility for spiral incline/decline capability within one conveyor, resulting in less transfers, fewer drives, and effective utilization of valuable floor space (29-inch (736.6 mm) side-flexing radius for 2884)
- Integrated bearings reduce chain tension buildup without the need for turn discs
- Utilizes HP™ (High-Performance) or NIM (Nylon Impact Modified) top plate materials available in smooth top or high friction insert designs, ensuring durable, long-wearing performance and reliable product protection
- Utilizes Rex HiPro base chain technology (1673), offering high corrosion protection without sacrificing working load, resulting in longer conveyor runs. Carbon steel or stainless steels base chain for 2884.
- Runs on standard 60 ANSI sprockets (1673) or standard 80 ANSI sprockets (2884)
- Excellent product handling and low operational costs based on the proven Rexnord chain design

This manual includes chain dimensions, basic conveyor design considerations, and installation recommendations. Following the suggestions outlined in this manual will ensure proper operation of the conveyor to provide the optimal product handling and optimum chain life. This manual contains information that is specific to the Rexnord 1673 and 2884 SpiralTop chains. Spiral conveyors require more development, testing and prototyping than a conventional TableTop chain conveyor. It is recommended a test unit be built prior to quoting a production unit.

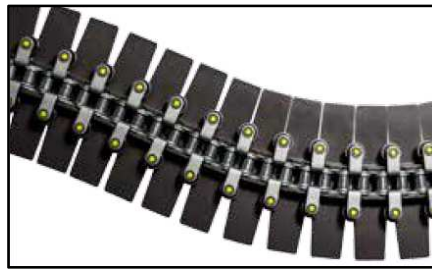
Chain Specifications

Basic Chain Specifications and Dimensions

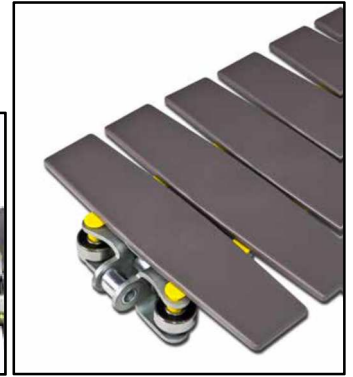
Chain Features – 1673



1673 SpiralTop Chain with single bearing
(Single-directional turns)

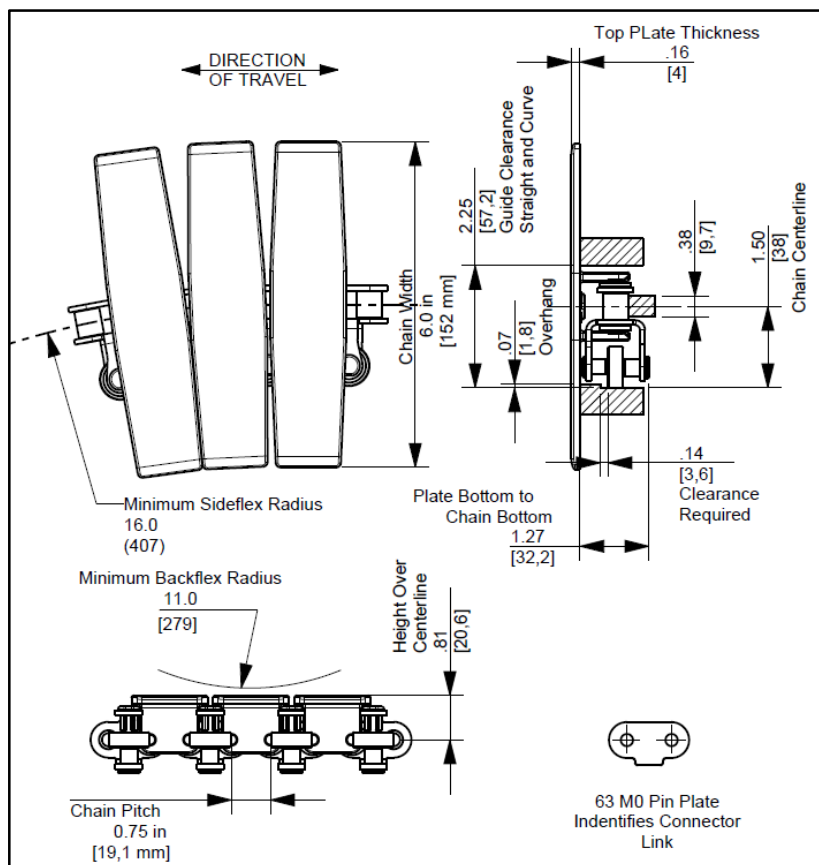


1673 SpiralTop Chain with double bearing
(Multi-directional turns)



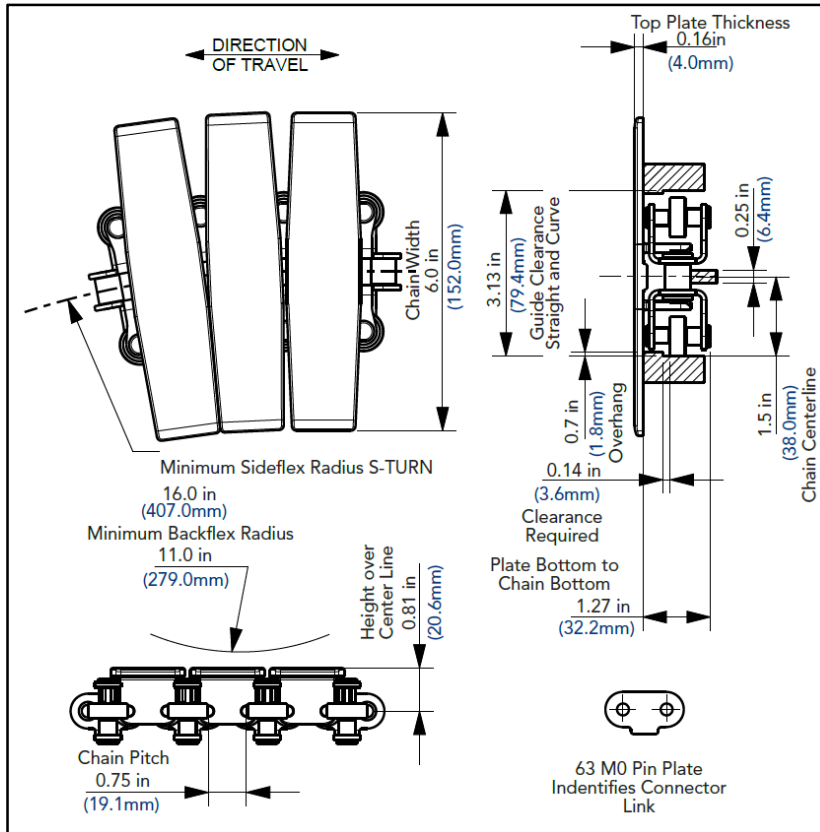
- Chain is available in single-bearing (single-directional turns) and double-bearing (multi-directional turns) styles
- Chain is available with smooth, plain top or with high friction inserts (60 Shore A)
- Chain Pitch: 0.75 in. (19.1 mm)
- Chain Width: 6.00 in. (152.4 mm)
- Chain Weight: 1673B1 - 1.8 lbs/ft (2.7 kg/m); 1673B2 – 2.3 lbs/ft (3.4 kg/m)
- Top Plate Thickness: 0.16 in. (4.0 mm)
- Minimum side-flex radius: 16.00 in. (406.4 mm)
- Minimum back-flex radius: 11.00 in. (279.4 mm)
- Standard Top Plate Material: HP™, High Performance acetal
- Standard Base Chain Material: Rex HiPro corrosion resistant specially plated carbon steel
- Direction of chain travel: Bi-directional
- Maximum Chain Strength: 780 lbs (3,479 N)
- Maximum Top Load: 5 lbs/ft (7.4 kg/m)
- Maximum Chain Speed: 200 ft/min (61 m/min)
- Maximum Incline/Decline Angle: 5°
- Sprockets: Standard 60 ANSI sprockets

Basic Chain Dimensions – 1673B1

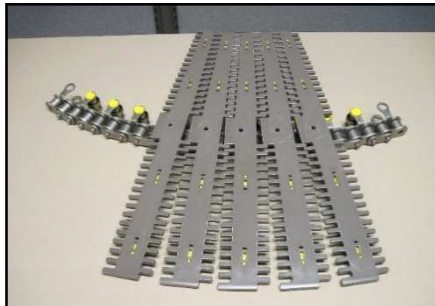


Chain Specifications

Basic Chain Dimensions – 1673B2



Chain Features – 2884



HP2884SS-18 chain assembly with S.S. base chain and bearings (all plain top plates only, no HF). Part no. 81444541

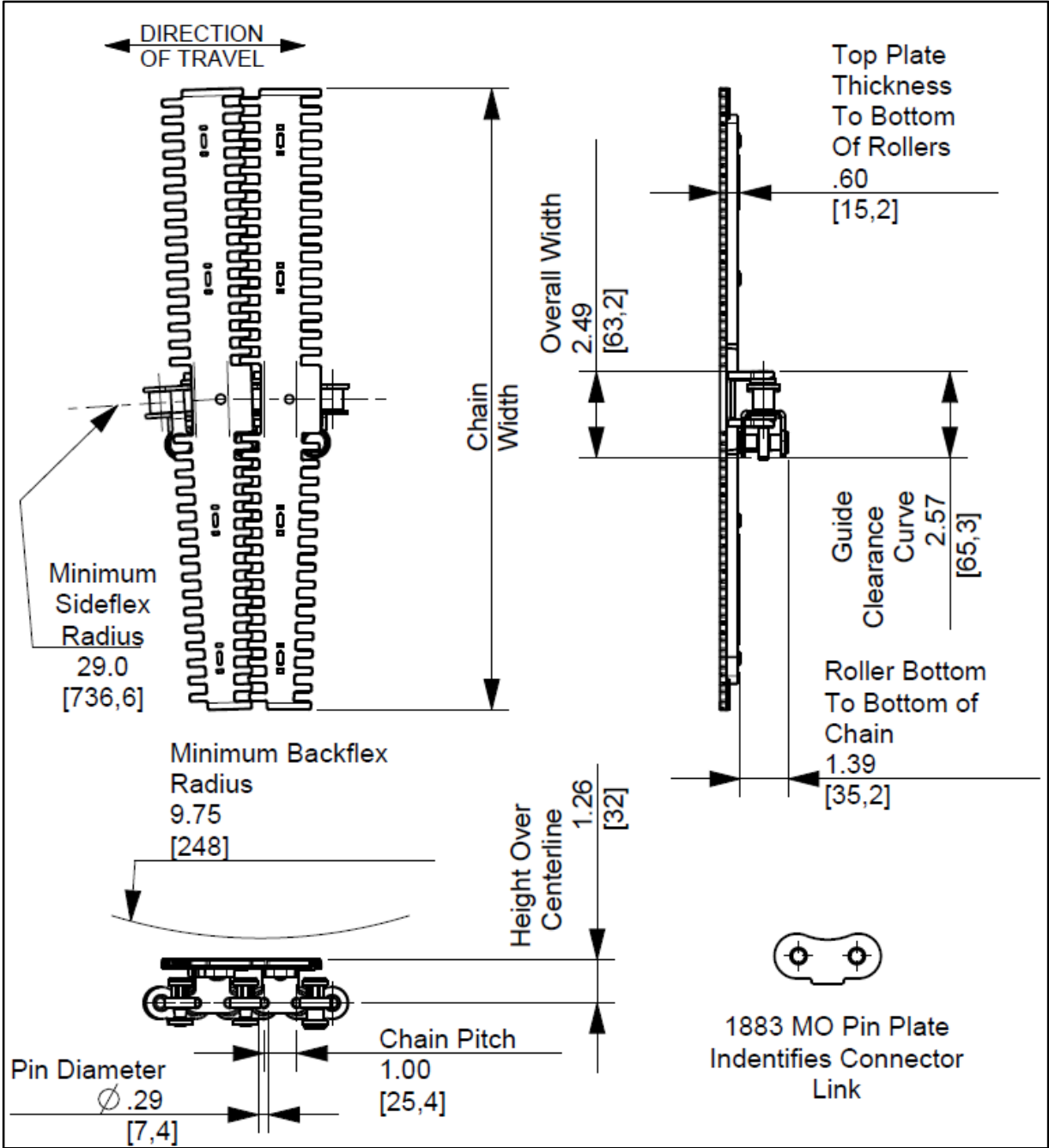


NIM2884RT-18 chain assembly with carbon steel base chain and HF RubberTop™ top plates EV2. Part no. 81444591

- Chain is available in single-bearing (single-directional turns) only
- Rollers built into the top plates provide rolling friction between the top plates and the wearstrips
- Chain is available with smooth, plain top or with high friction inserts (60 Shore A)
- Chain Pitch: 1 in. (25.4 mm)
- Chain Width: 18.00 in. (457.2 mm)
- Chain Weight: HP2884-18 – 5.0 lbs/ft (7.4 kg/m); NIM2884RT-18 – 4.25 lbs/ft (6.3 kg/m)
- Top Plate Thickness to bottom of rollers: HP2884-18 - 0.60 in. (15.2 mm); NIM2884RT-18 - 0.73 in. (18.5 mm)
- Minimum side-flex radius: 29.00 in. (736.6 mm)
- Minimum back-flex radius: 9.55 in. (242.6 mm)
- Standard Top Plate Material: HP™, High Performance acetal or NIM (Nylon – Impact Modified)
- Standard Base Chain Material: Stainless Steel or Carbon Steel
- Direction of chain travel: Bi-directional
- Maximum Chain Strength: Stainless Steel - 890 lbs (3,959 N); Carbon Steel – 2,200 lbs (9,786 N)
- Maximum Top Load: 25 lbs/ft (37.2 kg/m)
- Maximum Chain Speed: 200 ft/min (61 m/min)
- Maximum Incline/Decline Angle: 5°
- Sprockets: Standard 80 ANSI sprockets

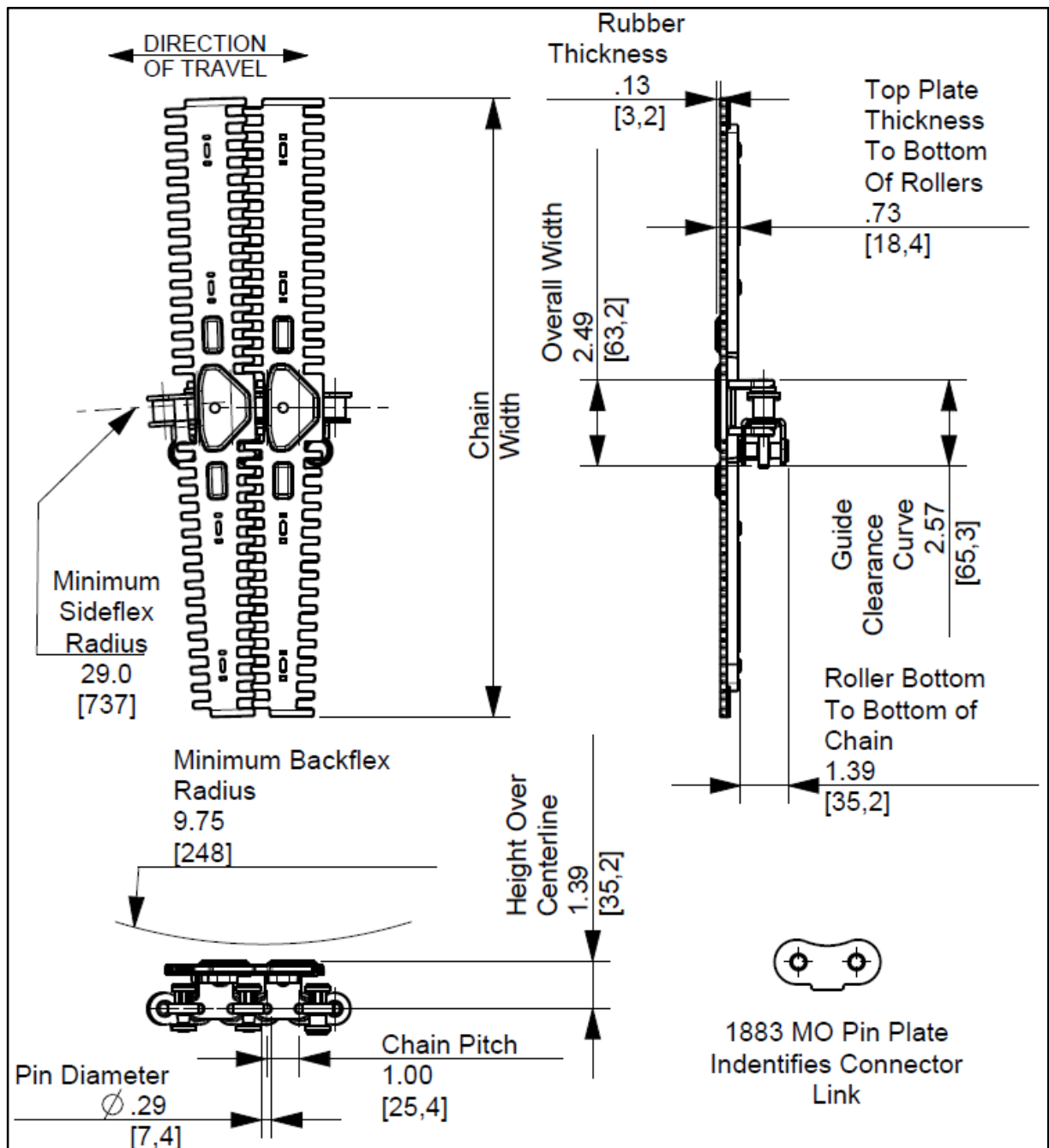
Chain Specifications

Basic Chain Dimensions – HP2884-18



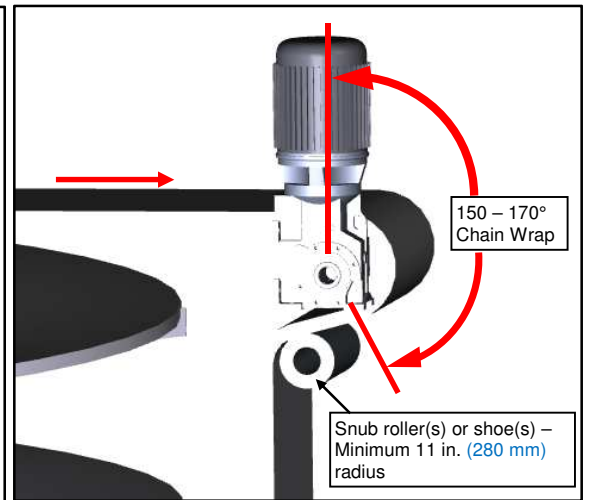
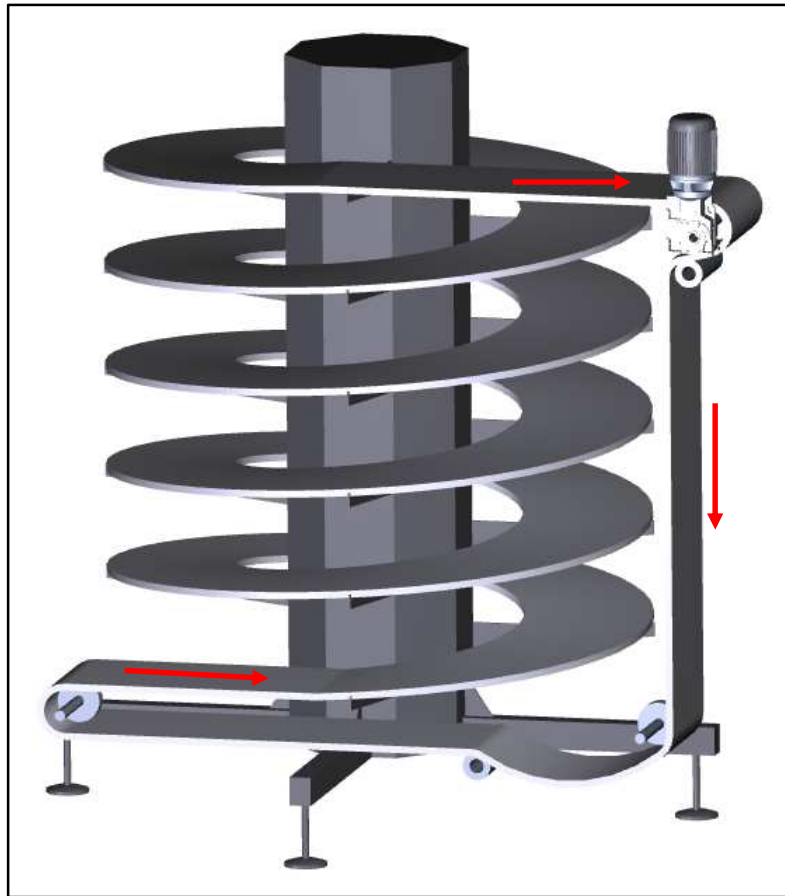
Chain Specifications

Basic Chain Dimensions – NIM2884RT-18

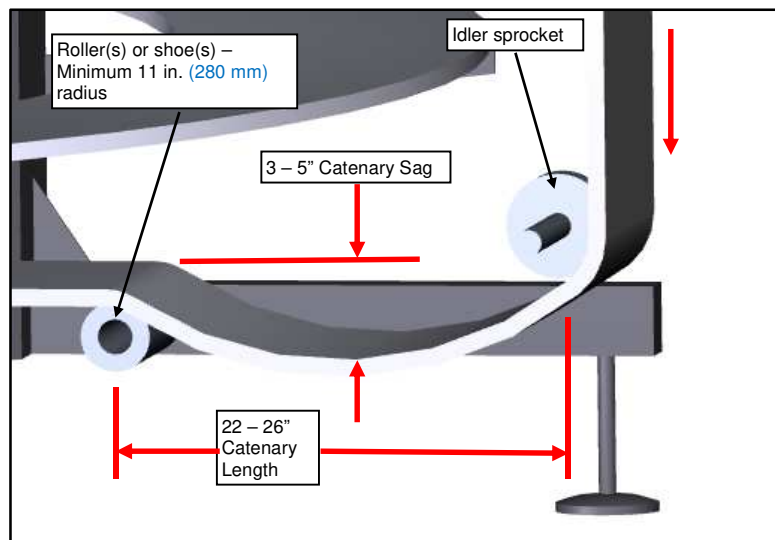


Typical Spiral Configurations

Incline Spiral

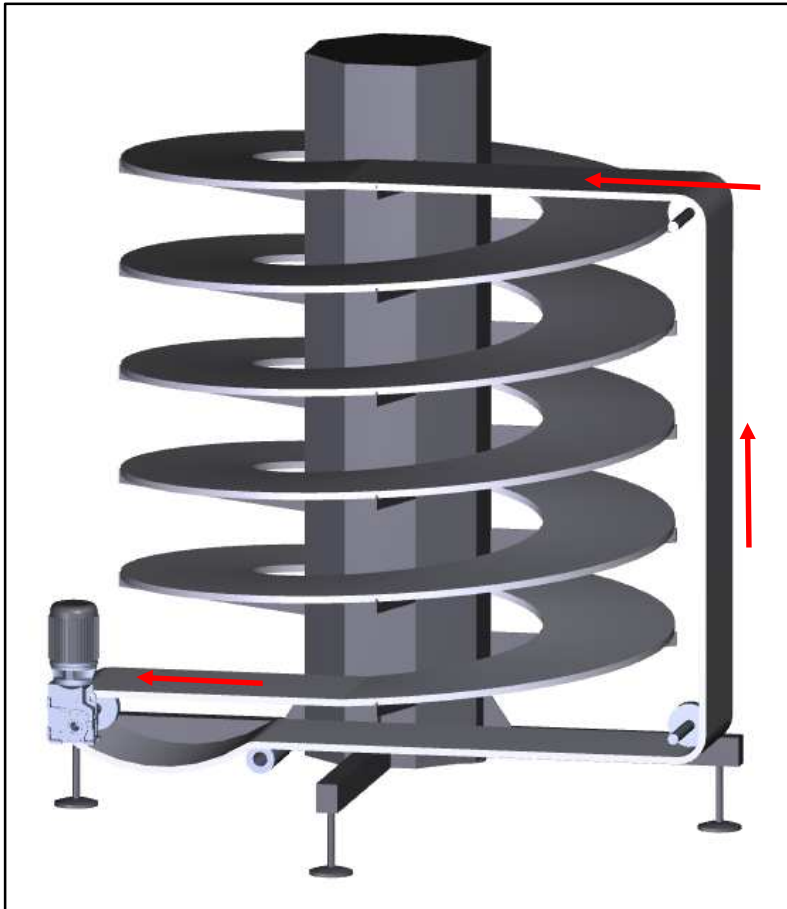


Incline Spiral - Catenary

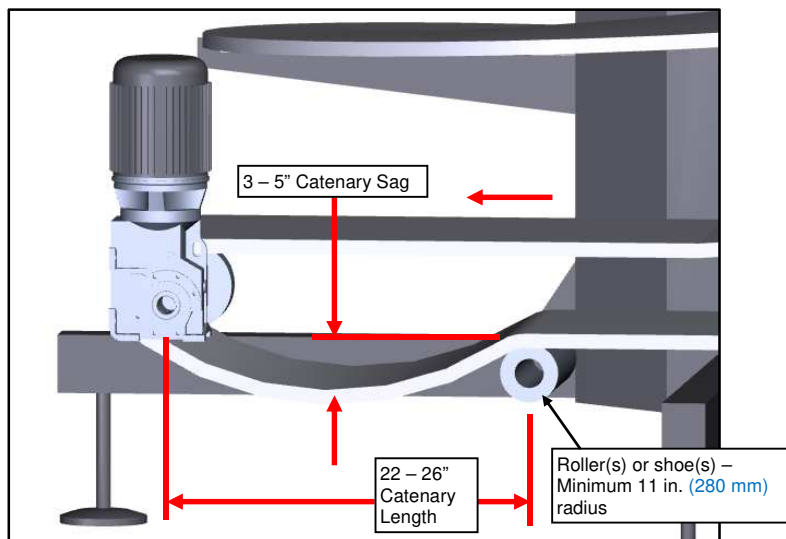


Typical Spiral Configurations

Decline Spiral with Catenary (No Tensioner)

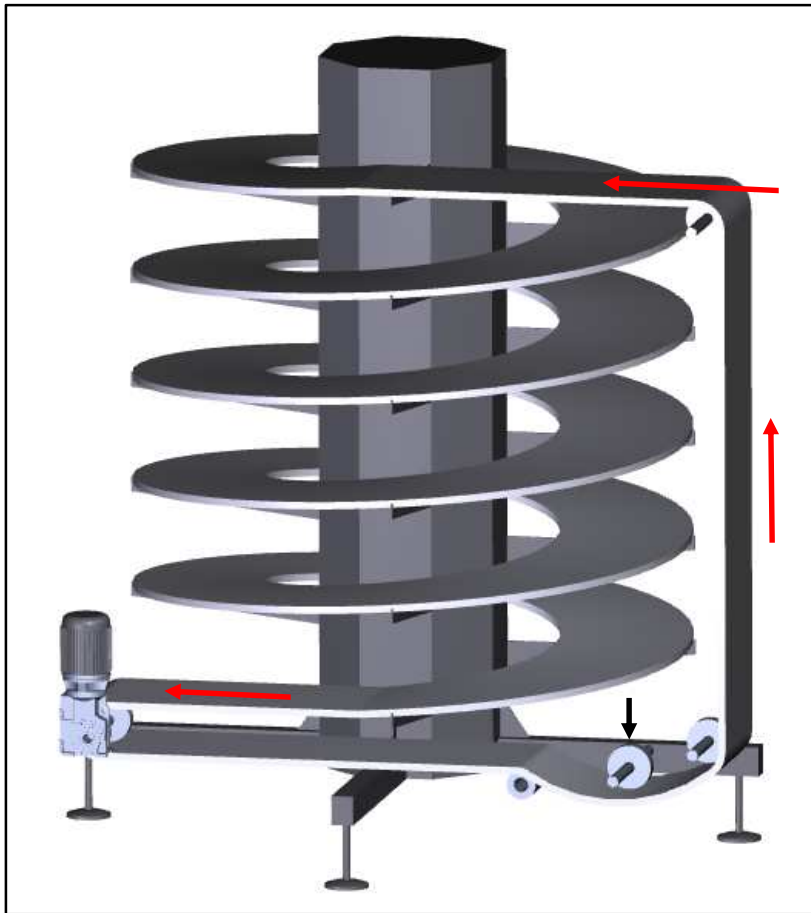


Decline Spiral - Catenary

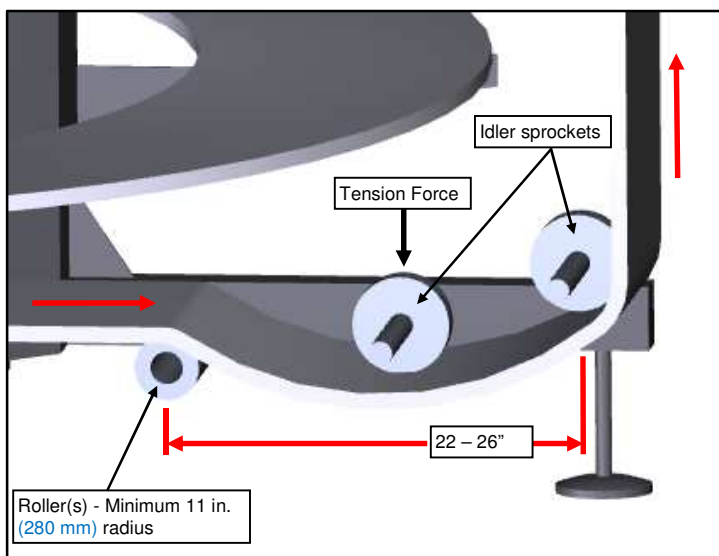


Typical Spiral Configurations

Decline Spiral with Tensioner

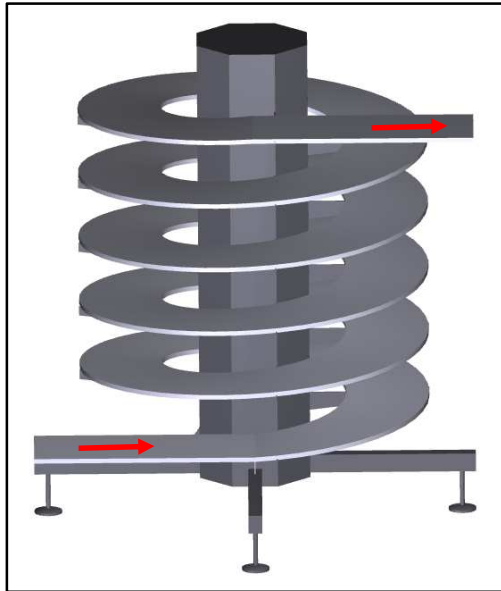


Decline Spiral - Tensioner

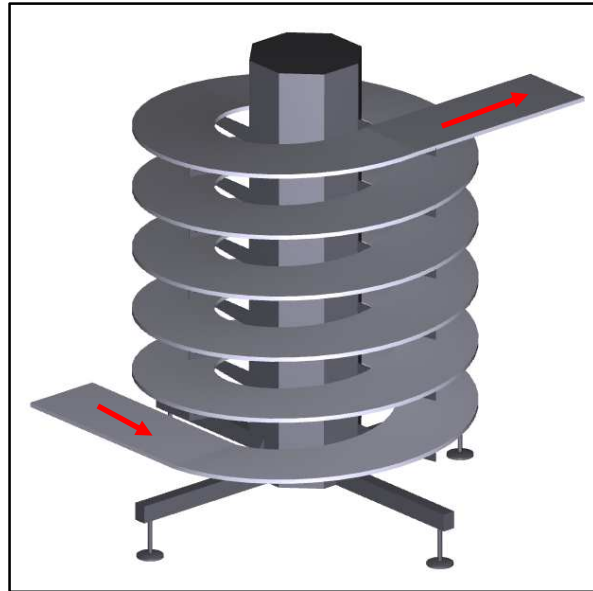


Typical Spiral Configurations

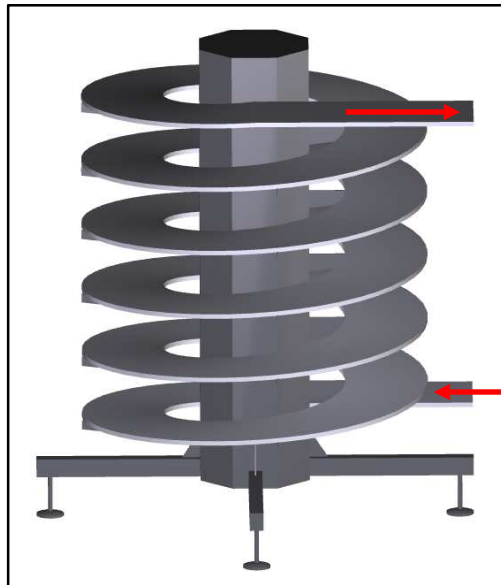
Alternate Infeed/Outfeed Configurations



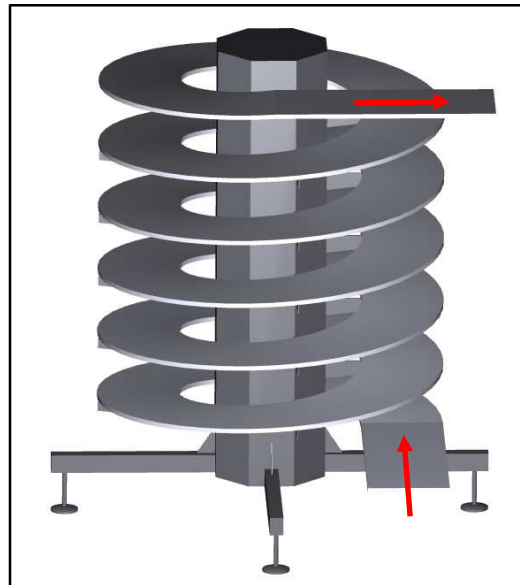
Inline Infeed to Outfeed



90° Infeed to Outfeed



180° Infeed to Outfeed



270° Infeed to Outfeed

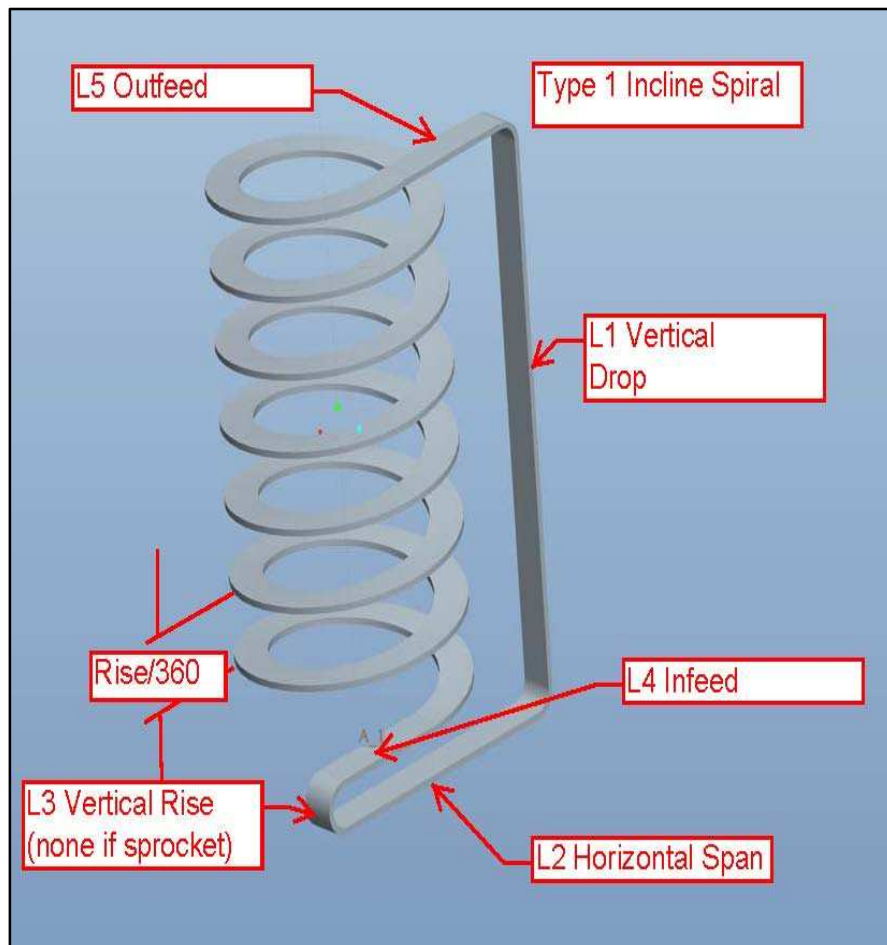
Spiral Design Parameters

Rexnord can run the chain pull calculation to determine horsepower, torque and if the chain is within capacity, however the following information is required:

Incline Spirals

- Spiral radius to centerline of chain (in)
- Rise per 360° wrap (in)
- Product weight (lbs/ft)
- L1 Vertical drop (in)
- L2 Horizontal span (in)
- L3 Vertical rise (None if sprocket) (in)
- L4 Infeed length (in)
- L5 Outfeed length (in)
- Number of 360° wraps
- Conveyor speed (FPM)
- Number of teeth on drive sprocket

Note: For chain pull calculation assistance, please contact Rexnord FlatTop Technical Support at flattop.tech.support@rexnord.com



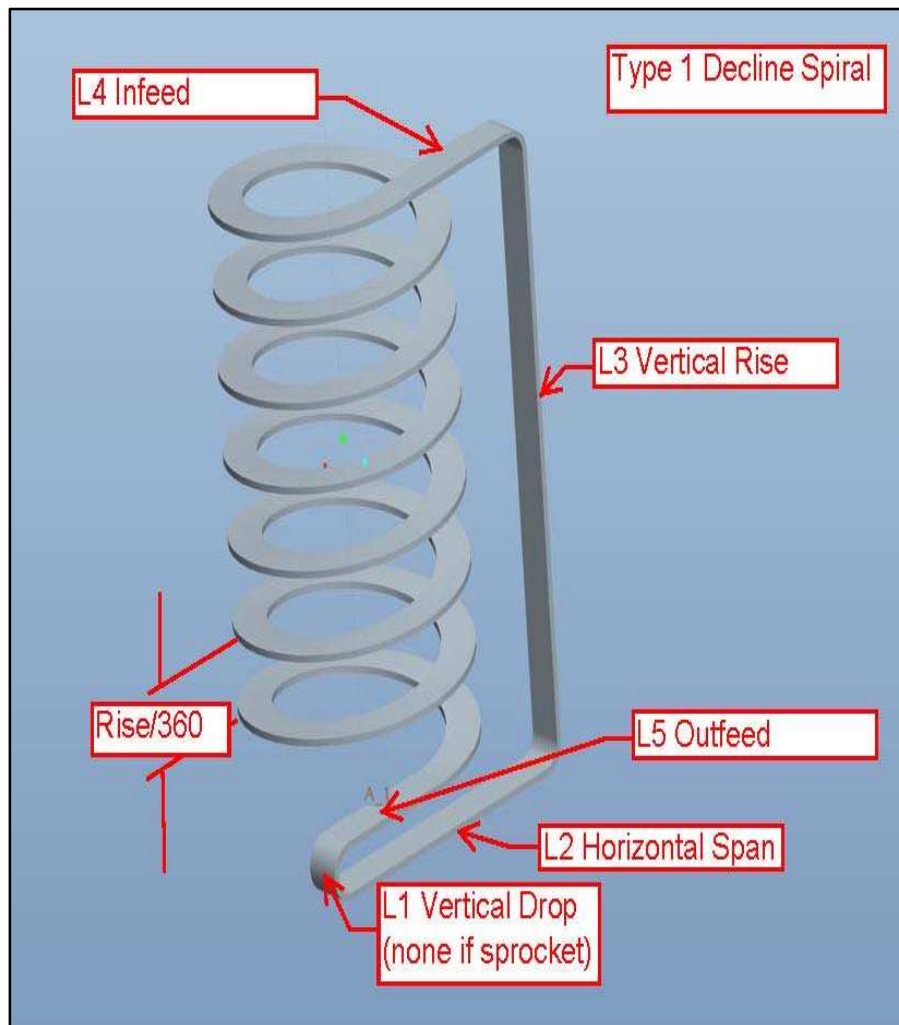
Spiral Design Parameters

Rexnord can run the chain pull calculation to determine horsepower, torque and if the chain is within capacity, however the following information is required:

Decline Spirals

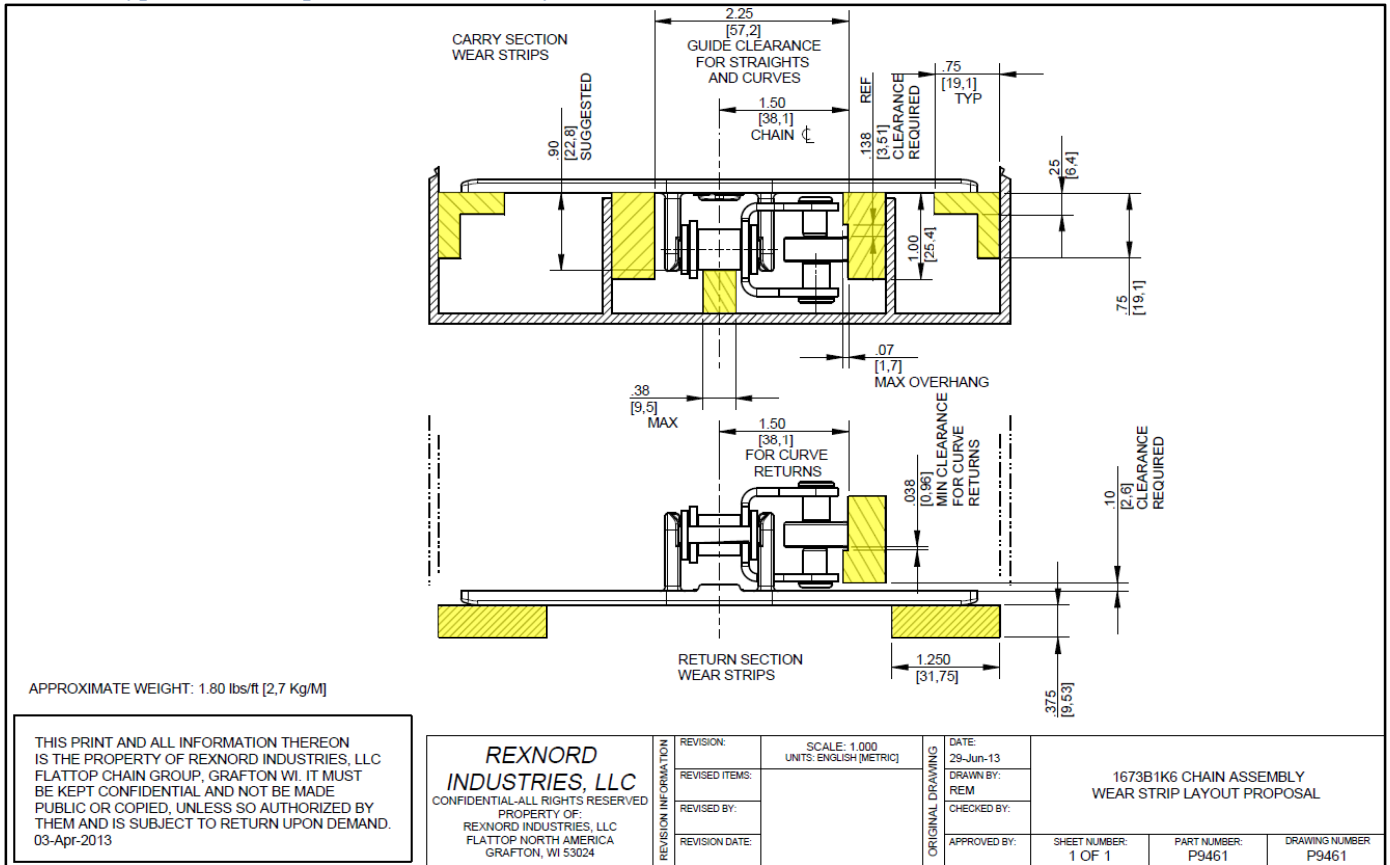
- Spiral radius to centerline of chain (in)
- Rise per 360° wrap (in)
- Product weight (lbs/ft)
- L1 Vertical drop (in) (None if sprocket) (in)
- L2 Horizontal span (in)
- L3 Vertical rise
- L4 Infeed length (in)
- L5 Outfeed length (in)
- Number of 360° wraps
- Conveyor speed (FPM)
- Number of teeth on drive sprocket

Note: For chain pull calculation assistance, please contact Rexnord FlatTop Technical Support at flattop.tech.support@rexnord.com

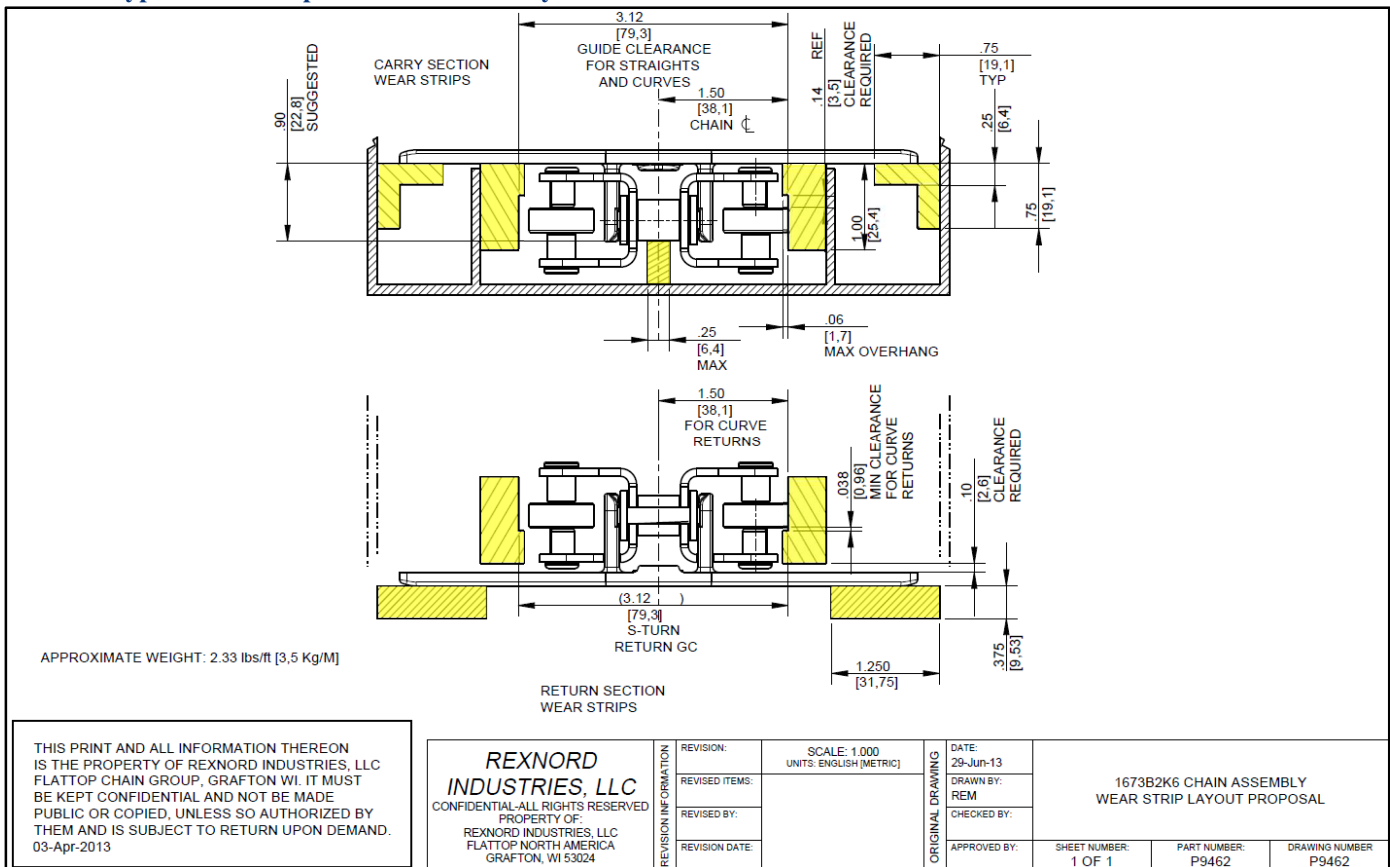


Wearstrip and Hold Down Layouts - 1673

Typical Wearstrip and Hold Down Layout – 1673B1

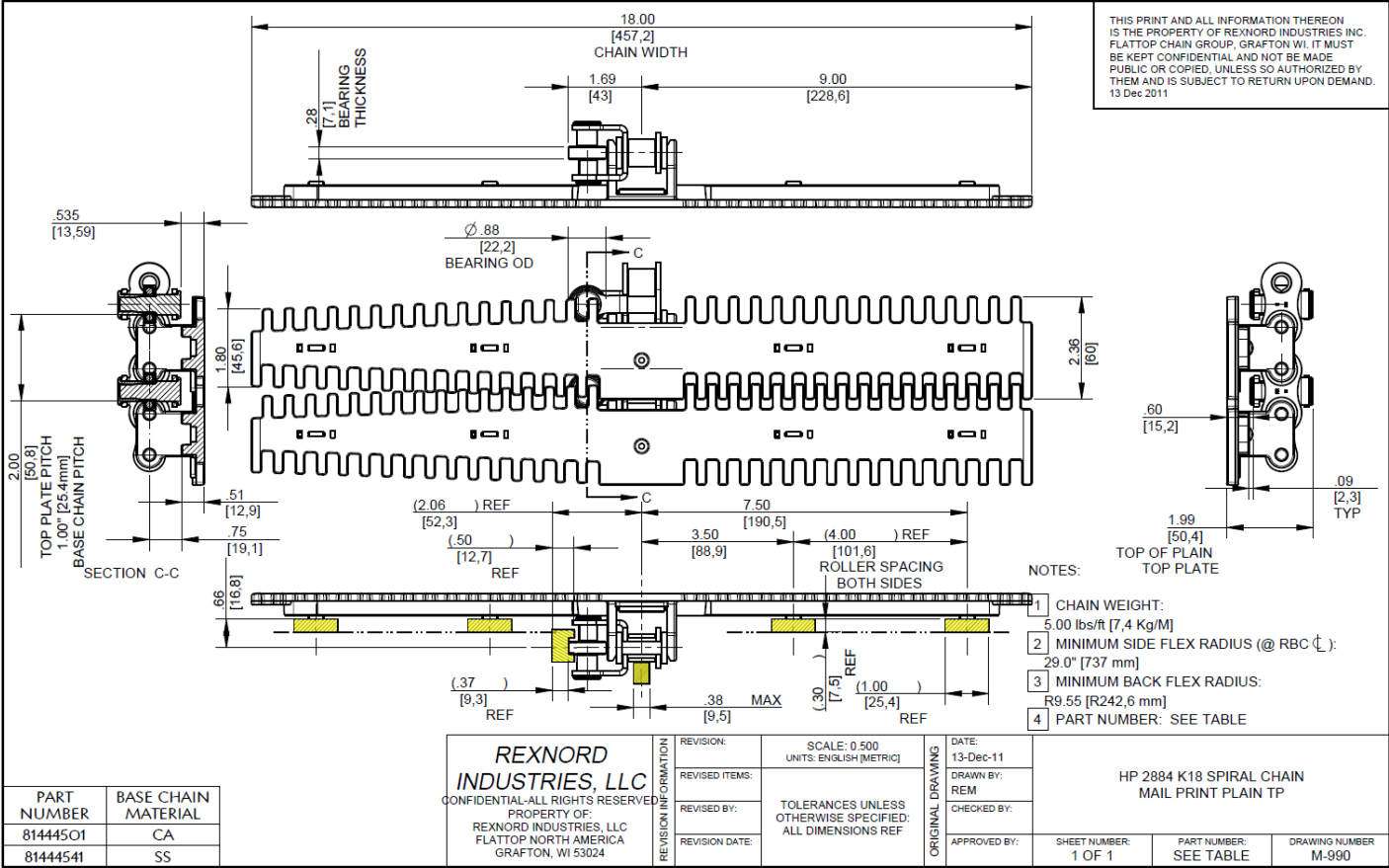


Typical Wearstrip and Hold Down Layout – 1673B2

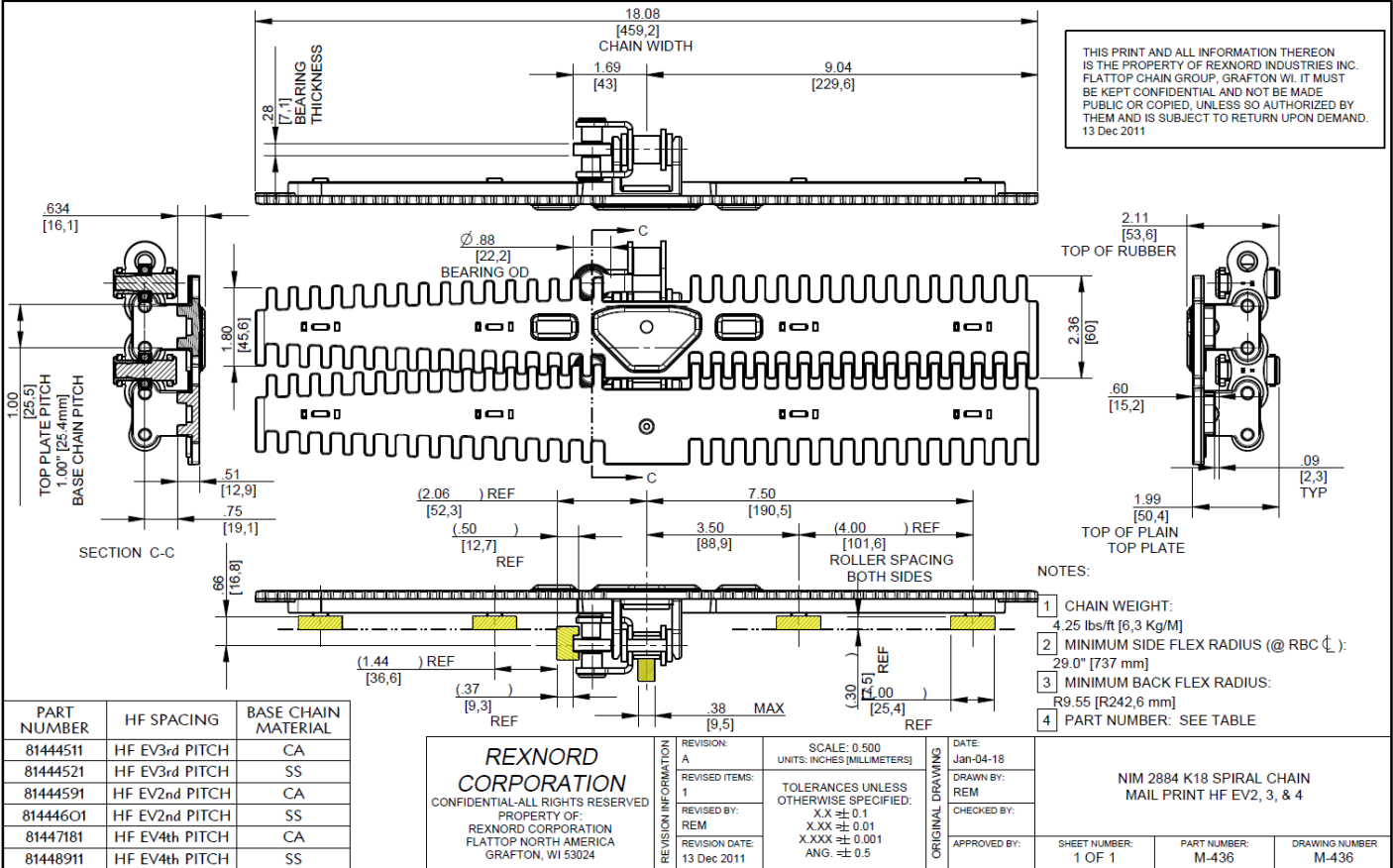


Detailed Chain Dimensions/Wearstrip and Hold Down - 2884

Detailed Chain Dimensions/Typical Wearstrip and Hold Down Layout – HP2884-18



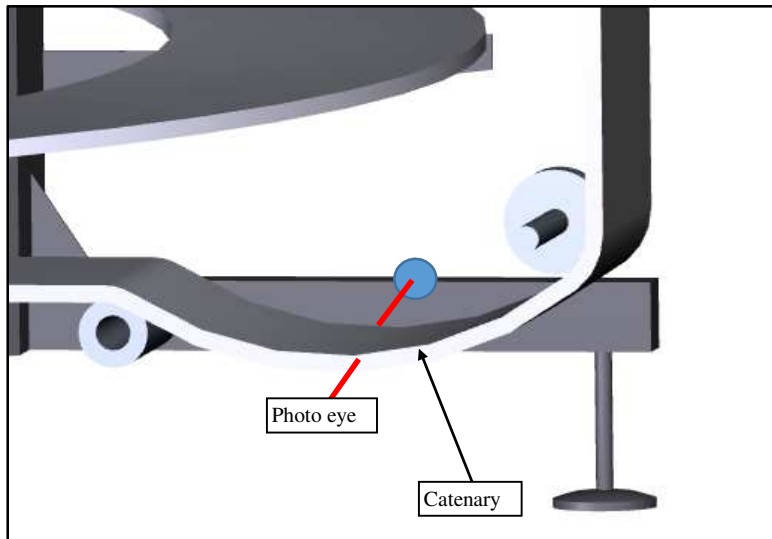
Detailed Chain Dimensions/Typical Wearstrip and Hold Down Layout – NIM2884RT-18



Conveyor Design Guidelines/General Recommendations

General Recommendations:

- Spirals with angles higher than 5°, or more than 5 wraps tend to see higher chain lift forces
- A lip above the thrust bearing is recommended on all spirals to hold down the chain
- The drive should be located at the discharge end of the conveyor
- Depending on the angle of descent, decline spirals may require a pneumatic take-up applying tension to the catenary. Pre-tensioning the chain on declines acts like a break to prevent the product and chain at the top of the spiral moving faster than the drive. Weighted take-up arrangements may also be considered.
- A photo eye, mechanical limit switch, or others means of controls is recommended at the catenary to sense excess chain slack (requiring links to be removed), or chain breakage which should shut off the conveyor (see below diagram)



- Appropriate controls/sensors must be used to prevent accumulation and unintended back-up of product anywhere on the spiral. The infeed conveyor to the spiral should stop when the spiral stops.
- An over torque or over load sensor should be used to shut off the conveyor under overload conditions
- Incline spirals with more wraps and steeper angles may require a motor brake to prevent the chain from drifting backwards upon stopping
- Side transferring products onto or off of the spiral chain must not be done with RubberTop chains
- Stainless steel base chain is required for wash-down applications
- Base chain lubrication is necessary to obtain maximum chain life and performance. An automatic type system is preferred.
- The horsepower and torque shown on the chain pull calculation do not take into account the efficiency loss(s) of the motor and gearbox, nor do they include any service factors. These must be taken into account when sizing and selecting the gearbox and motor.
- VFD (Variable Frequency Drives) should be used on all spiral conveyors to slowly accelerate at start and decelerate at stop
- UHMWPE support wearstrips are recommended
- All sharp edges of wearstrips, including corner tracks, should be chamfered to ensure smooth chain movement. Recommended contact surface finish of wearstrips is 32 to 125 μ -in Ra (0.8 to 3.2 μ -m Ra) for best wear performance
- Wearstrips should be kept clean. Cover the conveyor when performing any cutting, drilling, welding, etc.

Chain Assembly/Disassembly

1673 Chain:

Removal of Top Plates

Step 1

Place a large flat blade screwdriver in-between the top plate sidewall and the roller base chain

Step 2

Gently pry off the top plate as shown in photo A

Note: Top plates can also be removed manually from the top of the conveyor, but exercise care so as not to over bend them to avoid fracturing of the top plates.

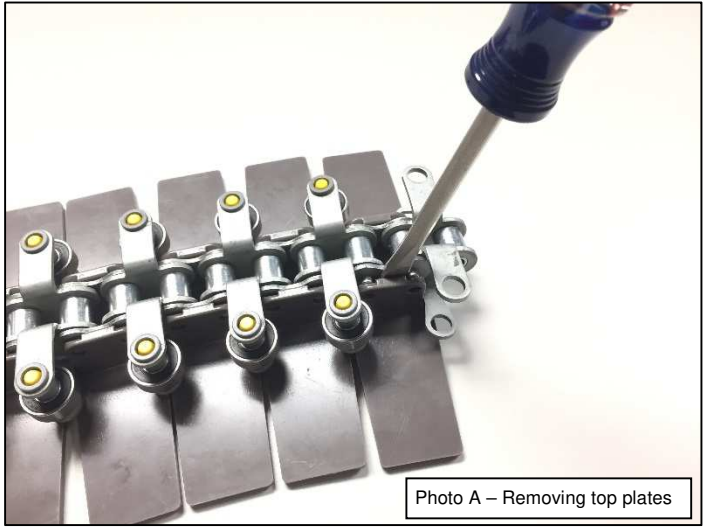


Photo A – Removing top plates

Installation of Top Plates

Step 1

Place the top plate over the roller base chain. 1673 top plates are symmetrical and can be put onto base chain in either direction.

Step 2

Pound the top plate on using a rubber mallet as shown in Photo B

Caution: Do not use excessive force, or a metal faced hammer, or top plates can fracture.



Photo B – Installing top plates

Disconnecting base chain

The base chain can only have links removed or added in increments of 2 pitches (1.5 in., 38.1mm).

Step 1

Remove three consecutive top plates over the point the chain is to be disconnected (see Photo C)

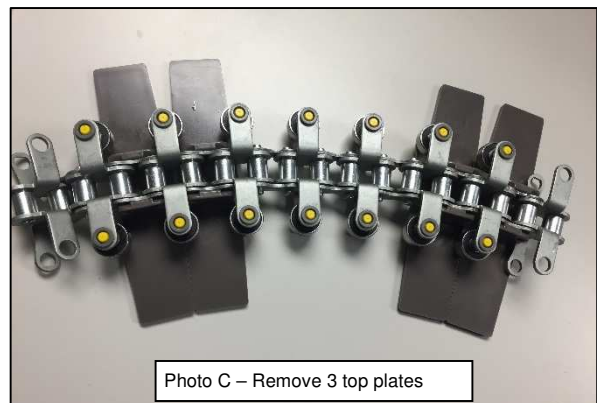


Photo C – Remove 3 top plates

Step 2

Remove the bearings, yellow shafts and gray caps from each side of the link to be broken (4 each if B2 chain, 2 each if B1 chain). This can be done by placing a standard ANSI 60 chain breaker on the end of the yellow shaft. Turn handle until shaft unseats from gray cap. See Photos D, E and F. A drift punch and hammer can be used in lieu of a chain breaker tool.



Photo D

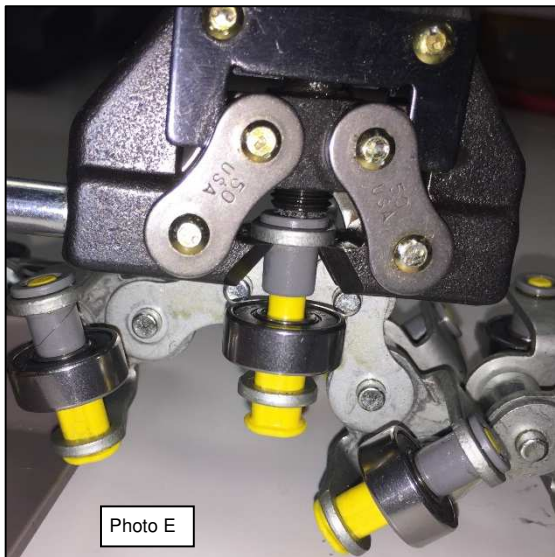


Photo E

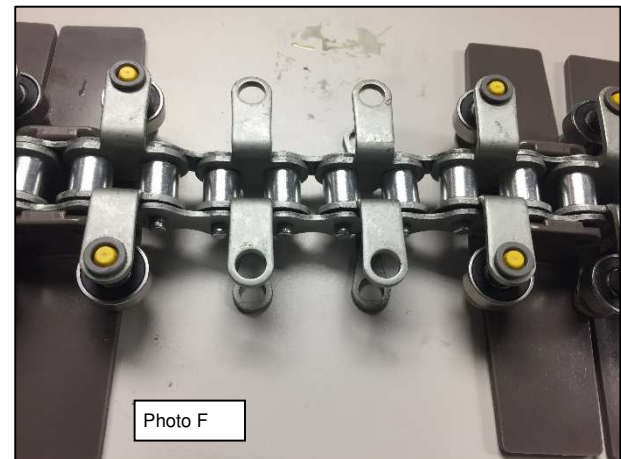


Photo F

Step 3

Place the Rexnord machined chain breaker (part no. 10311561) under the link to be removed. Tighten the screws using a 5/16 in. Allen hex wrench. Tighten each screw $\frac{1}{2}$ revolution at a time until the link is separated. See Photos G, H and I.

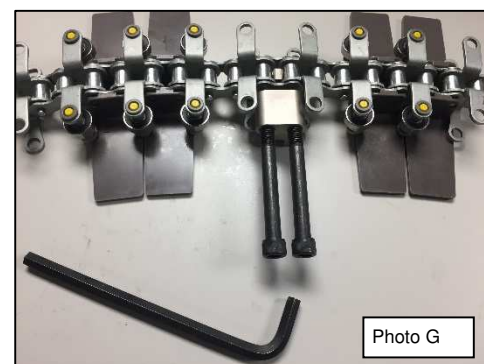


Photo G

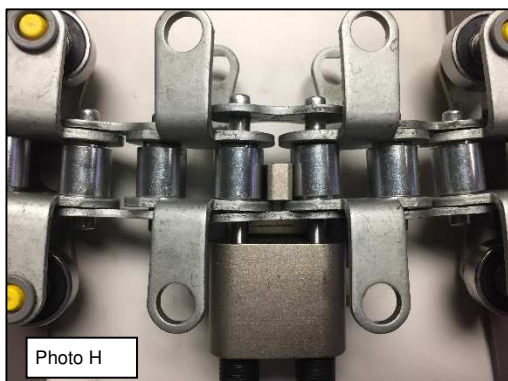


Photo H



Photo I

Reconnecting base chain

The base chain can only have links removed or added in increments of 2 pitches (1.5 in., 38.1mm).

Step 1

To reconnect chain, use 1673 HiPro connecting link (part no. 10351643). Place the connecting link in the chain with the “raised flats” on the connecting link away from the top plates. Use Channellock pliers to squeeze the link together. Do not squeeze the side plates tight together. Use same clearance as adjacent links so the chain can properly side-flex. See photos J and K



Photo J - 63S HiPro connecting link, Part no. 10351643

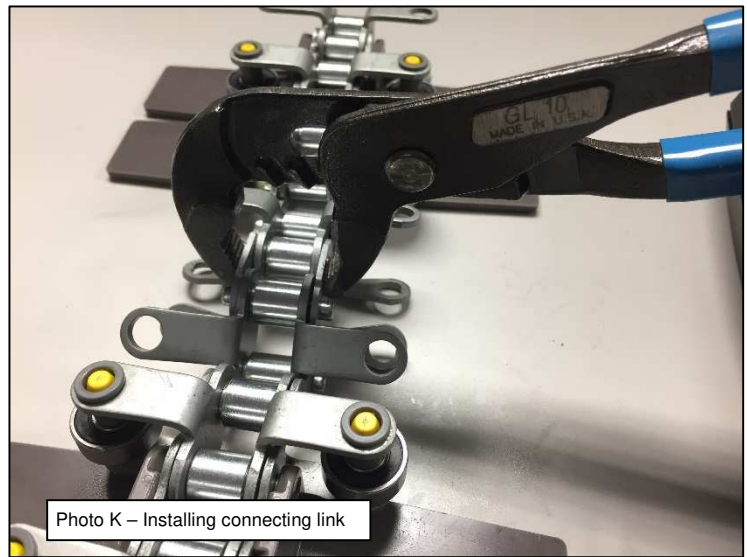


Photo K – Installing connecting link

Install new bearings, bearing shafts and caps

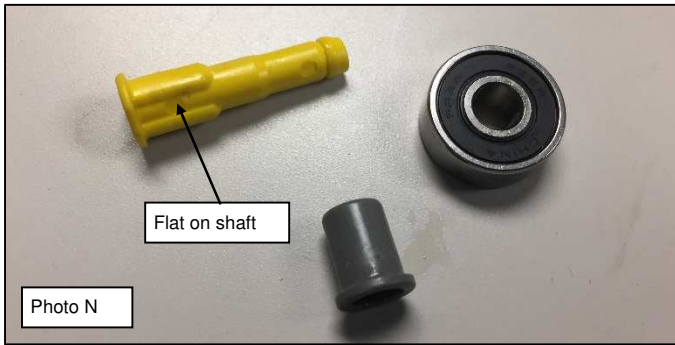
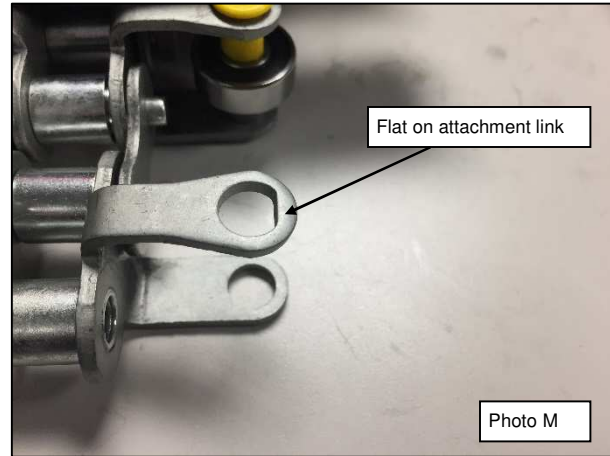
It is recommended that new bearings, shafts and caps be used rather than reusing the old parts. A kit which contains (2) bearings, (2) shafts, (2) caps and (1) connecting link is available (part no.10405297). See Photo L.



Photo L - 63S HiPro connecting link, Part no. 10351643

Step 1

Insert the yellow bearing post into the chain attachment link with the flat on the shaft aligning with the flat on the link. Place bearing onto shaft and place cap on end of shaft. Gently squeeze the cap onto the shaft until a "click" is heard and felt. Repeat for other bearing attachment links. See Photos M, N, O and P.



Reinstall top plates onto base chain

Chain Assembly/Disassembly

2884 Chain:

Removal of Top Plates

Step 1

Place a large flat blade screwdriver in-between the top plate sidewall and the roller base chain

Step 2

Gently pry off the top plate as shown in photo A

Note: Top plates can also be removed manually from the top of the conveyor, but exercise care so as not to over bend them to avoid fracturing of the top plates.

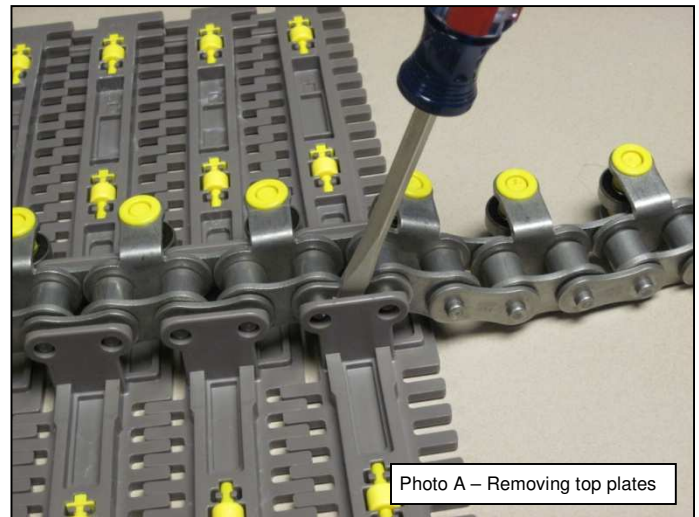


Photo A – Removing top plates

Installation of Top Plates

Step 1

Place the top plate over the roller base chain. Make sure the narrow side of the top plate is on the bearing side of the chain.

Step 2

Pound the top plate on using a rubber mallet as shown in Photo B

Caution: Do not use excessive force, or a metal faced hammer, or top plates can fracture.

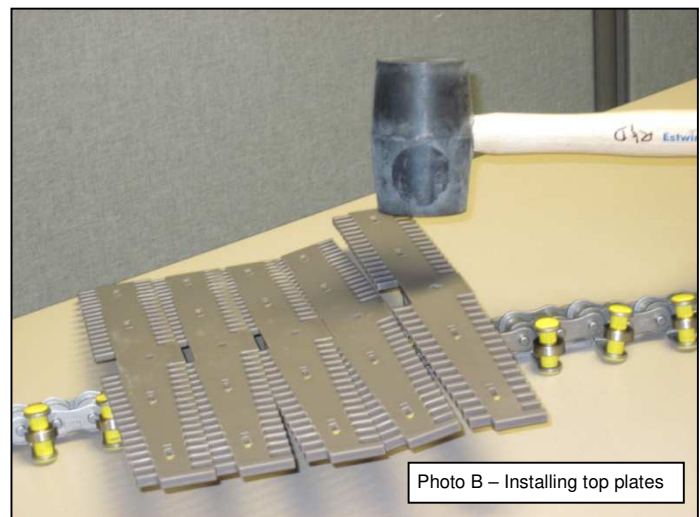


Photo B – Installing top plates

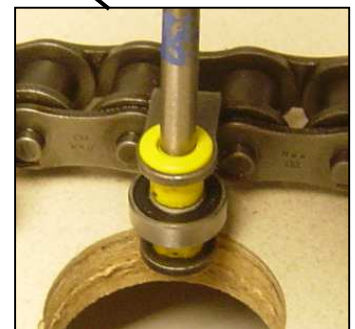
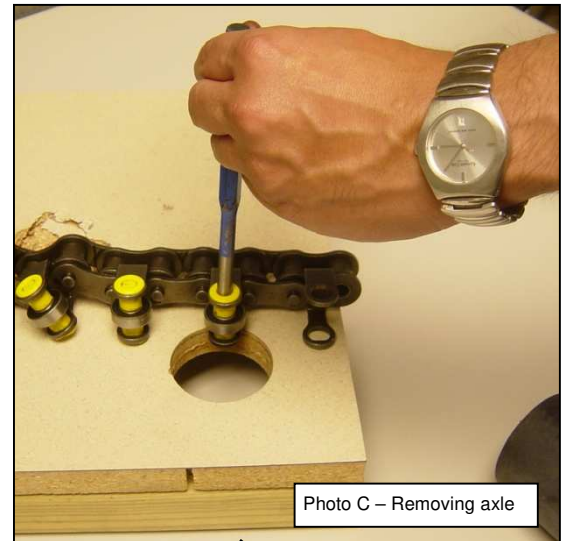
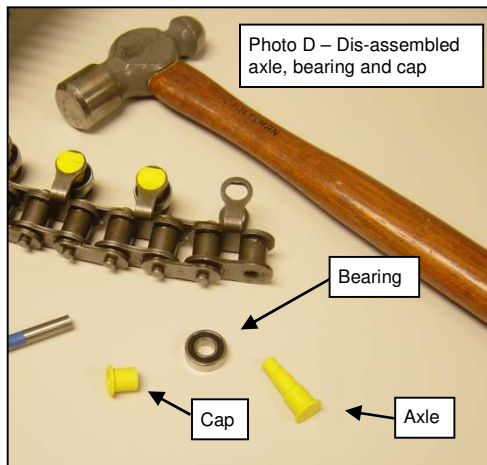
Dis-assembly of Axle, Bearing and Axle Cap

Step 1

Situate the chain on a board or bench with a hole so that the axle can be punched out. Place a round punch on the end of the axle on the side with the cap, as shown in Photo C

Step 2

Strike the punch with a hammer so that the axle becomes free of the attachment link and bearing, as shown in Photo D.



Assembly of Axle, Bearing and Axle Cap

Step 1

Place the axle into the chain attachment link. The axle gets inserted into the hole with the flat. Photo E shows the hole with the flat.

Step 2

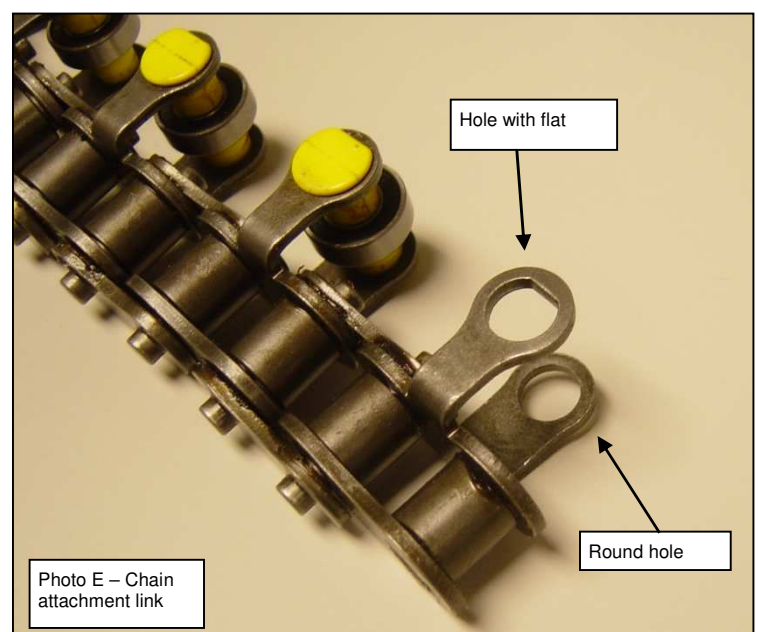
Place the bearing on the axle in-between the link tabs, as shown in Photo F.

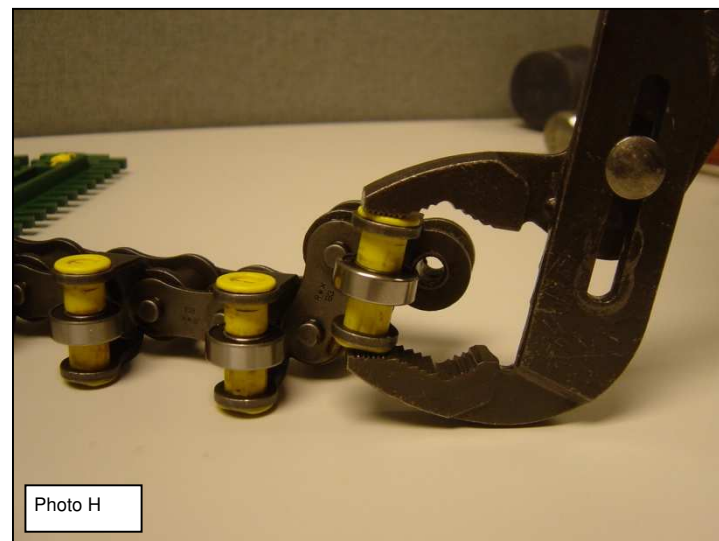
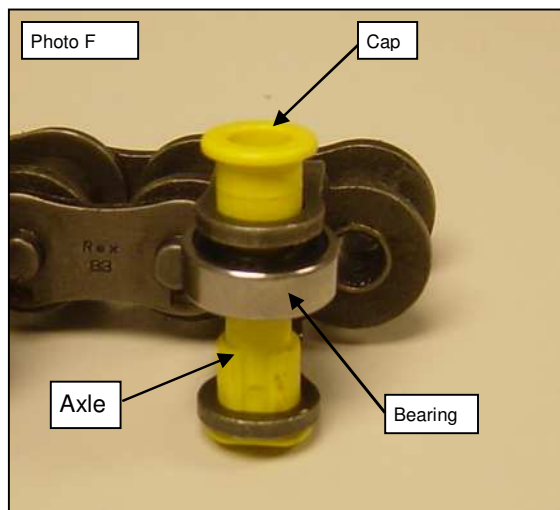
Step 3

Insert the cap into the round hole, as shown in Photo F.

Step 4

Using a pair of Channellock® pliers, press the cap onto the axle until it locks in place, as shown in photos G and H.





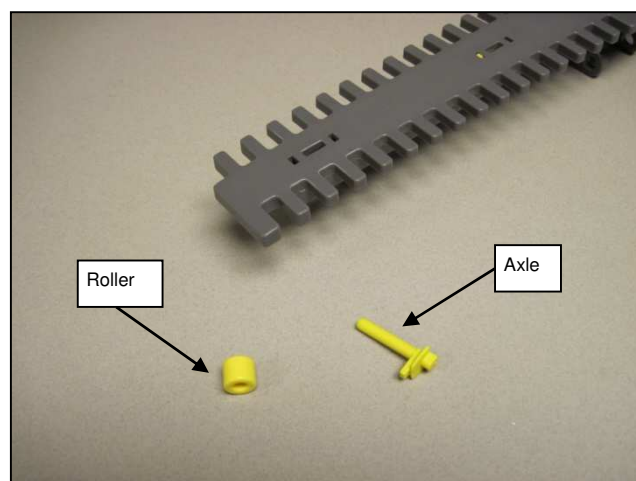
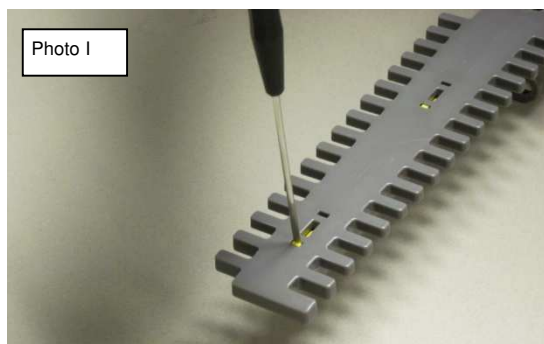
Removal and Installation of Top Plate Rollers and Axles

Step 1

From the top side of the chain, insert a small screwdriver into the access hole and push out the roller and roller axle, as shown in Photo I.

Step 2

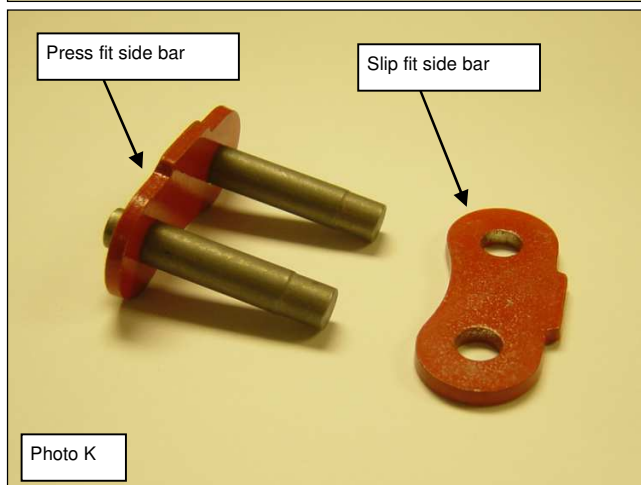
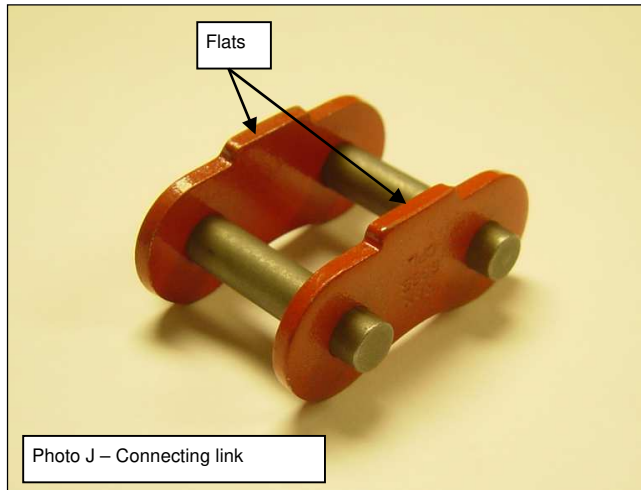
To replace the roller and axle, slide the roller over the axle and snap the roller and axle back into the top plate from the bottom side.



Connecting Link

The 2884 chain sections are connected with an M-O style connecting link, available in either carbon steel or stainless steel, depending on which base chain is being used. The connecting link has one press fit side bar and one slip fit side bar. Photos J and K show the carbon steel connecting link.

- The connecting link must be installed with the flats pointing down (away from the top plate). If the connecting link is installed the wrong way, the top plates will not fit over the base chain properly.
- The connecting link should also be installed so that the slip fit side is on the bearing side, otherwise the bearings would have to be removed. In other words, insert the connecting link from the side opposite the bearings.



Chain Assembly Part Numbers

1673 Chains:

1673 SpiralTop® Chain Assemblies		
Chain description	SAP #	SAP Description
Rex HiPro Corrosion Resistant Base Chain		
HP1673K6 single bearing chain assembly with HiPro base chain and plain top plates only, no HF RubberTop™	10196352	HP1673-6IN S-HIPRO 1B
HP1673K6 double bearing chain assembly with HiPro base chain and plain top plates only, no HF RubberTop™	10196349	HP1673-6IN S-HIPRO 2B
HP1673RTK6 RubberTop™ every pitch, single bearing chain assembly with HiPro base chain	10323947	HP1673RT_B1-6IN RT T1P
HP1673RTK6 RubberTop™ every 2nd pitch, single bearing chain assembly with HiPro base chain	10323964	HP1673RT_B1-6IN RT T2P
HP1673RTK6 RubberTop™ every 3rd pitch, single bearing chain assembly with HiPro base chain	10323985	HP1673RT_B1-6IN RT T3P
HP1673RTK6 RubberTop™ every 4th pitch, single bearing chain assembly with HiPro base chain	10323987	HP1673RT_B1-6IN RT T4P
HP1673RTK6 RubberTop™ every pitch, double bearing chain assembly with HiPro base chain	10322955	HP1673RT_B2-6IN RT T1P
HP1673RTK6 RubberTop™ every 2nd pitch, double bearing chain assembly with HiPro base chain	10322960	HP1673RT_B2-6IN RT T2P
HP1673RTK6 RubberTop™ every 3rd pitch, double bearing chain assembly with HiPro base chain	10323927	HP1673RT_B2-6IN RT T3P
HP1673RTK6 RubberTop™ every 4th pitch, double bearing chain assembly with HiPro base chain	10323935	HP1673RT_B2-6IN RT T4P
Miscellaneous		
Connecting link	10351643	CONN LINK 63 S-HIPRO
Bearing shaft	10196252	SHAFT BEARING YPBT-G 1673
Bearing cap	10196250	CAP BEARING D 1673
Bearing	10073274	BEARING .25X.75X.281
Rebuild kit for 63 HiPro chain (1 connecting link, 2 bearing shafts, 2 bearing caps, 2 bearings)	10405297	KIT FOR 1673B1 ASSEMBLY

2884 Chains:

2884 SpiralTop® Chain Assemblies		
Chain description	SAP #	SAP Description
Carbon Steel Base Chain		
HP2884K18 chain assembly with C.S. base chain and plain top plates only, no HF RubberTop™	10145982	HP2884-18IN PLAIN CHAIN
NIM2884K18 chain assembly with C.S. base chain and HF RubberTop™ EV1	10504742	NIM2884-18IN 1RT T1P
NIM2884K18 chain assembly with C.S. base chain and HF RubberTop™ EV2	10145984	NIM2884-18IN 1HF T2P
NIM2884K18 chain assembly with C.S. base chain and HF RubberTop™ EV3	10145983	NIM2884-18IN 1HF T3P
NIM2884K18 chain assembly with C.S. base chain and HF RubberTop™ EV4	10146101	NIM2884-18IN 1HF T4P
Stainless Steel Base Chain		
HP2884SSK18 chain assembly with S.S. base chain and bearings and plain top plates only, no HF RubberTop™	10186868	HP2884SS-18IN CHAIN ASSY
NIM2884SSK18 chain assembly with S.S. base chain and bearings and HF RubberTop™ EV1	10613325	NIM2884-18IN SS 1HF T1P
NIM2884SSK18 chain assembly with S.S. base chain and bearings and HF RubberTop™ EV2	10500897	NIM2884-18IN SS 1HF T2P
NIM2884SSK18 chain assembly with S.S. base chain and bearings and HF RubberTop™ EV3	10186867	NIM2884-18IN SS W/HF T3P
NIM2884SSK18 chain assembly with S.S. base chain and bearings and HF RubberTop™ EV4	N/A	N/A
Miscellaneous		
83 carbon steel M-O connecting link	10106211	CONN LINK 83 S
83 stainless steel M-O connecting link	10106212	CONN LINK 83 SS
Plastic axle (bearing shaft)	10073503	SHAFT BEARING YPBT-G 2883
Plastic cap	10192778	CAP BEARING D 2883
Bearing – carbon steel	10073485	BEARING 3/8ID X 7/8OD SR6
Bearing – stainless steel	10074116	BRG OD7/8XID3/8IN SSR6 RED SEALS

Preventative Maintenance/Trouble Shooting

General Notes

- Periodic maintenance is essential to ensure chain reliability and increased lifetime. A general recommended maintenance schedule is shown below that applies to all Rexnord SpiralTop® chains. It is always recommended to replace or repair damaged product as soon as it is detected.
- Before any maintenance procedures are carried out, make sure that the conveyor is turned off and properly locked out

Maintenance Schedule

Maintenance And Inspection Schedule					
Maintenance Item	Interval Between Checks				
	Daily	Weekly	Monthly	Semi-annually	Annually
Clean conveyor of any debris/jammed containers, etc.	X				
Check for and replace any missing or damaged top plates		X			
Check catenary sag, adjust as necessary			X		
Check chain for unusual grooves or wear			X		
Check for and replace any missing or damaged thrust bearings				X	
Measure chain elongation (replace at 3% - see below)					X
Disconnect chain and check sprockets for wear					X

Trouble Shooting Guide

Symptom	Cause	Correction
<ul style="list-style-type: none"> • Chain jumps sprocket teeth 	<ul style="list-style-type: none"> • Improper catenary • Improper shaft drop • Inadequate chain wrap • Chain is elongated beyond useful life • Improper sprocket positioning 	<ul style="list-style-type: none"> • Adjust catenary per recommendations above • Check and adjust shaftdrop • Check and adjust chain wrap as noted above • Sprockets must be positioned in center of track
<ul style="list-style-type: none"> • Chain breakage 	<ul style="list-style-type: none"> • Impact loading • Over back-flexing of chain • Products backup/accumulate • Jam up/No overload protection 	<ul style="list-style-type: none"> • Don't drop load • Return roller too small diameter. Return rollers or shoes must meet minimum Backflex radius of chain • Ensure controls are used to prevent products from backing up on chain • Clear cause of jam/Install overload protection
<ul style="list-style-type: none"> • Rapid or unusual chain wear 	<ul style="list-style-type: none"> • Wear tracks embedded with debris • Container(s) jammed in conveyor 	<ul style="list-style-type: none"> • Clean or replace wearstrips • Clear out any fallen containers or debris wedged in the conveyor

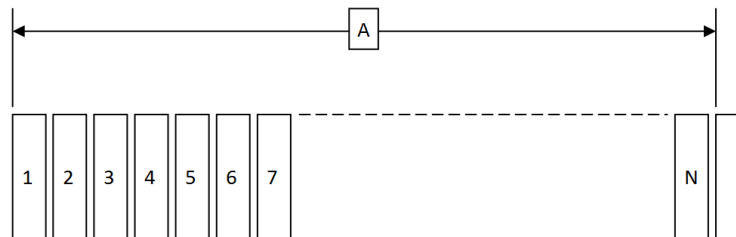
<ul style="list-style-type: none"> Chain Pulsation Chain jumps sprocket teeth 	<ul style="list-style-type: none"> Not uniform coefficient of friction Improper catenary Debris/Spilled product causes “sticking” locally Idler sprockets don’t turn freely Inadequate guide clearance Abrasive debris 	<ul style="list-style-type: none"> Lubricate/Clean conveyor Be sure catenary stays at the head end Clean wear tracks Check to be sure any idler sprockets aren’t tight on tail shaft Be sure chain is not being “pinched” by side guides.
<ul style="list-style-type: none"> Rapid sprocket tooth wear 	<ul style="list-style-type: none"> Abrasive debris 	<ul style="list-style-type: none"> Most commonly a problem when using plastic sprockets. Change to hardened metal sprockets or eliminate abrasive debris

Measuring Chain Pitch Elongation

Step 1 Determine the nominal chain pitch of your specific chain (see table below)

Nominal Chain Pitch (P)		Chain Series
(in)	(mm)	
0.75	19.1	1673
1.00	25.4	2884

Step 2 Count “N” link rows. With a tape measure at the straight section (infeed or outfeed of spiral), measure the length from the leading edge of the first link to the leading edge the N+1 link (Dimension A, as shown below). **Note:** You will get a more accurate result if you measure a longer distance. It is recommended to measure a minimum of 50” to 150” of chain length.



Step 3 Determine what your chain length was when it was new, using formula below:

$$\text{Chain length new (B)} = N \times P$$

Where:
B = What the chain length was when new
N = The number of chain links measured
P = Nominal chain pitch (from table above)

Step 4 Determine what your chain elongation is, using formula below:

$$\text{Chain elongation (\%)} = \frac{(A - B)}{B} \times 100$$

Where:
A = Actual measured chain length (from step 2)
B = The chain length when new (from step 3)

From this, and knowing how long your chain has been in service, the total estimated chain life and the remaining chain life can be determined, using the formula below:

$$\text{Total Estimated chain life (Years)} = \frac{(\# \text{ years in service} \times 3\%)}{\text{Chain elongation (\%)}}$$

Example:

Chain:	HP2884-18
Years in service:	4
Nominal Chain Pitch:	1.0"
Number of pitches measured (N):	50
Chain length when new (B):	50 x 1.0" = 50.0"
Actual measured Chain length (A):	50.62"

$$\text{Chain elongation (\%)} = \frac{(50.62 - 50)}{50} \times 100 = 1.24\%$$

$$\text{Total Estimated chain life (Years)} = \frac{(4 \times 3\%)}{1.24\%} = 9.68 \text{ years (or 5.68 years more life remaining)}$$

- When replacing chains insure that the correct material and style are specified. Refer to specifications of the OEM to determine the correct material and style.
- Replace sprockets with new whenever new chain is installed



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