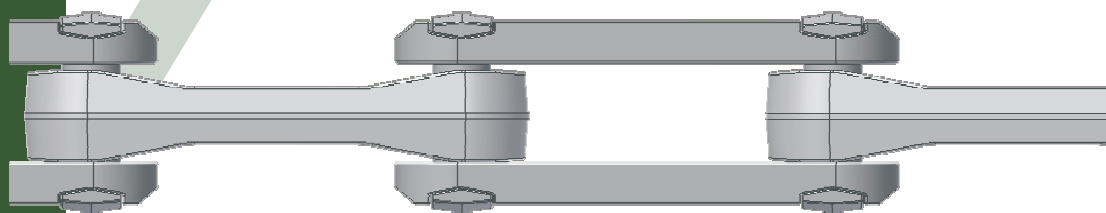


I-BEAM MONORAIL



January, 2009

Founded in 1958 in Pickering, Ontario, Allied Conveyors Limited established a reputation as an industry leader in the design, manufacture and installation of premium quality materials handling systems. Recently acquired by interests in the United States, the company now operates under the name Allied Conveyor Systems, Inc. and proudly continues the 50 year old company traditions from Statham, Georgia.

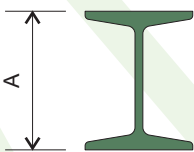
We offer a wide variety of overhead conveyors that are suitable for various applications, from paint finish and processing, to in-line and flexible assembly operations in the automotive, electronic, agriculture, and many other industries. Our conveyors have also established a strong presence for distribution and warehousing applications.



I-BEAM TRACK:

The I-Beam Track is made of special high carbon steel that have outstanding wear and load carrying characteristics.

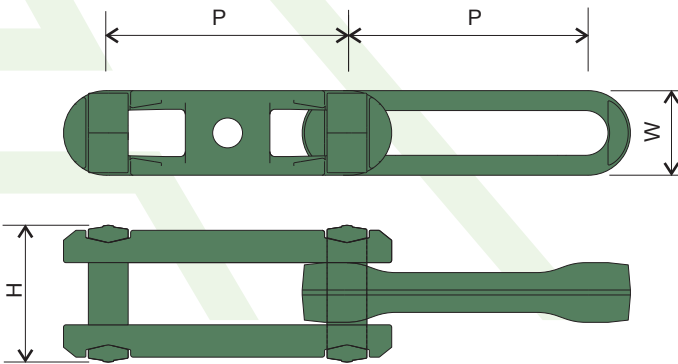
The straight track is stocked in 20'-0" lengths.



A	Weight	Part Number
3"	5.7 lbs/ft	7063
4"	7.7 lbs/ft	4213
6"	12.5 lbs/ft	5230

Rivetless Chain:

The I-Beam Chain is drop-forged and heat treated for added strength and resistance to corrosive and abrasive to weight action. This type of chain has the advantages of a high strength to weight ratio, excellent wear qualities, and the ability to flex easily both horizontally and vertically for negotiating curves. The heat treating also provides the ability to withstand high shock loads. This chain can also be easily assembled and disassembled without tools simply inserting or removing the pin in the center link. The chain has a symetrical design which allows for 180 degree rotation, if a new wear surface is required.



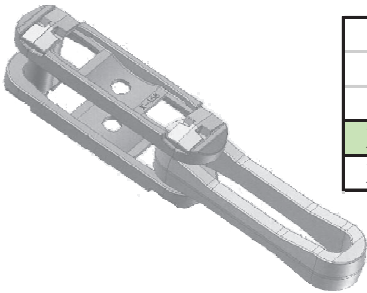
Chain	P	W	H	Weight
X-348	3"	1 5/64"	1 3/4"	2.25 lb/ft
X-458	4"	1 27/64"	2 1/4"	3.10 lb/ft
X-678	6 1/16"	2"	3 1/8"	6.50 lb/ft

NEW XS Series Chain:

Unique chain pin design and special high strength alloy steel make our new XS series chain last longer and more cost effective.

It is completely interchangeable with existing chains.

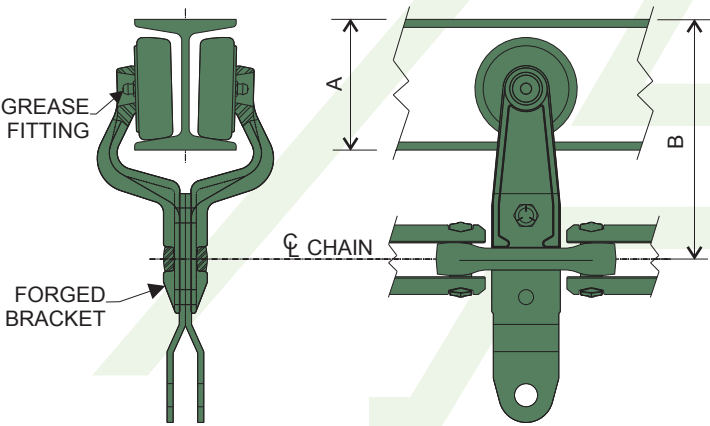
eXtra Strong Chain



Chain	Weight	Average Ultimate Strength
XS-348	2.1 lb.	37,000 lb.
XS-458	3.1 lb.	65,000 lb.

Trolley:

A standard trolley half is equipped with a full ball complement trolley wheel and a drop forged steel sidearm. Trolley wheel are completely enclosed by sheet steel triple labyrinth seals at the sidearm and a solid steel welsh plug on the outer face as an option. The wheel assembly is lubricated thru a grease fitting in the sidearm which has been designed so that the grease fitting is protected in a recess within the sidearm.

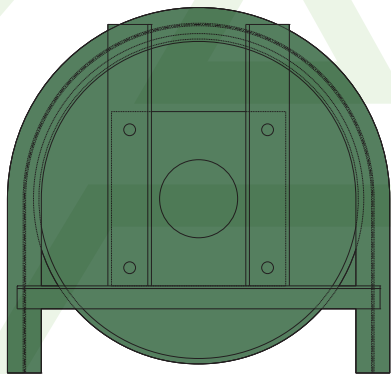


Trolleys listed are in stock and packed with Hi-temp grease which will also operate at normal temperatures.

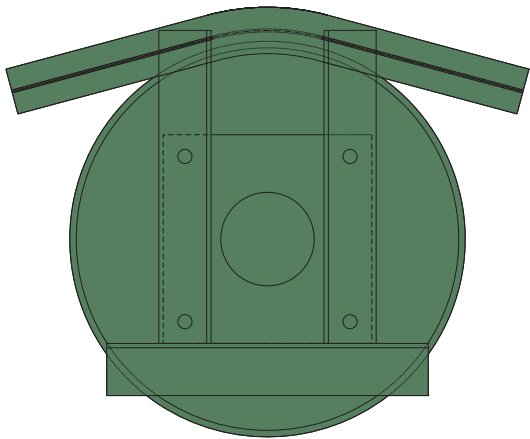
Chain	A	B	Weight Per Pair	Single Capacity	Loadbar Capacity
X348	3"	5 1/2"	3 lb.	200 lb.	400 lb.
X458	4"	7 3/16"	10 lb.	400 lb.	800 lb.
X458	4"	8"	10.1 lb.	400 lb.	800 lb.
X678	6"	10"	20 lb.	1200 lb.	2400 lb.

3" Trolley - X-348 Chain - 3" I-Beam Track

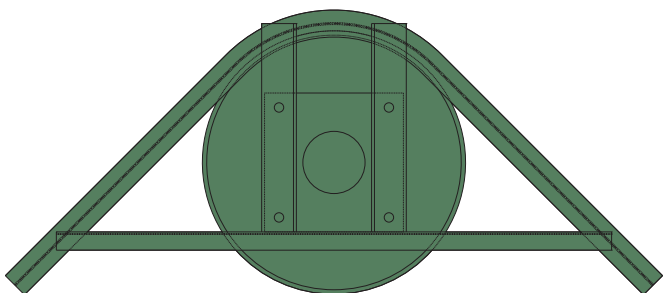
Load lb/trolley	Radius Feet	Trolley Spacing - Inches				
		6	12	18	24	30
50	6	1800	1800	1400	1050	840
	8	1800	1800	1800	1400	1120
100	6	1800	1800	1200	900	720
	8	1800	1800	1600	1200	960
150	6	1800	1500	1000	750	600
	8	1800	1800	1333	1000	800
200	6	1800	1200	800	600	480
	8	1800	1600	1066	800	640
250	Monoplane Only 1800					



180 Degree Turn



30 Degree Turn



90 Degree Turn

Allowable Chain Pull:

The charts readily gives allowable multiplane capacities for trolley loading, radii, chain pull and recommended trolley centers.

For special requirement, consult us for more details.

4" Trolley - X-458 Chain - 4" I-Beam Track

Load lb/trolley	Radius Feet	Trolley Spacing - Inches				
		8	16	24	32	40
100	8	4000	4000	2800	2100	1680
	12	4000	4000	4000	3150	2520
200	8	4000	3600	2400	1800	1440
	12	4000	4000	3600	2700	2160
300	8	4000	3000	2000	1500	1200
	12	4000	4000	3000	2250	1800
400	8	4000	3600	2400	1800	1440
	12	4000	4000	3200	2400	1920
500	Monoplane Only 4000					

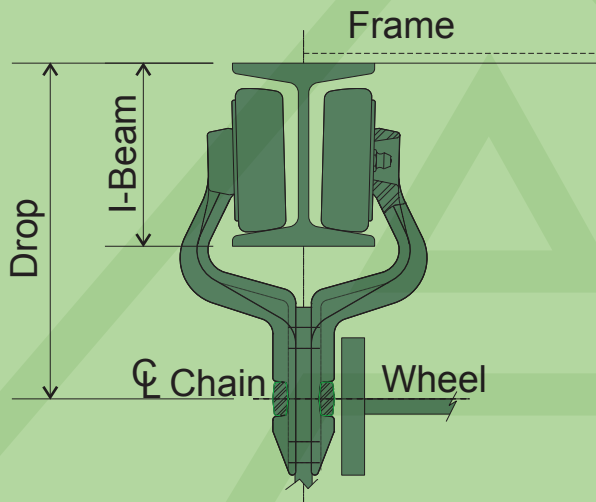
Traction Wheel Turns:

Horizontal traction wheel turns are used to obtain horizontal changes of direction. They are preferred when a small radii is required or in a high temperature application.

A complete turn includes a structure steel frame and a plate wheel. Two types of bearings are available - self aligning roller bearing for ambient temperature and carbon style for high temperature applications.

Spoke type wheel is available for large radius turns. Flush type frame is available for limited overhead room.

Standard radius include 18", 24", 30", 36", 42", 48", 54", 60" and 72". Standard angles include 30, 45, 60, 90 and 180. Customized turns are available.



Roller Turns:

Roller turns are the most economical means of obtaining horizontal changes of direction. These assemblies consist of a series of double-row ball bearing rollers, fitted between 2 curved steel retainer bars, held by cast iron mounting brackets to a structural steel platform complete with track.

The rollers are supplied with plain button head axle bolts and are also available with hollow axle bolts complete with alemite fittings to lubricate the bearing assembly.

Single Labyrinth Shields formed from heavy gauge steel.

Each roller has a full complement of 20 - 1/2" diameter precision steel balls - 10 balls on each end.

Standard re-lube provision via center-pin. Also available pre-lube and seal-for-life style.

Available for 3", 4" and 6" chain, with standard 1/2" diameter bores and 2 3/4" diameter O.D. Other bore and O.D. Sizes available on request.

Standard radius include 18", 24", 30", 36", 42", 48", 60" and 72". Standard angles include 30, 45, 60, 90 and 180. Customized turns are available.

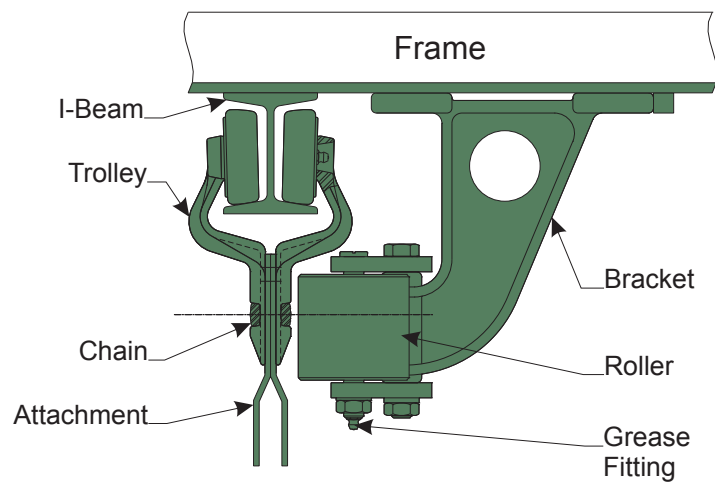
Roller Turn Roller:

The rollers are pre-lubricated to be used in an operating range of 32 to 350 F. They are regreasable with grease bolts. "Seal-for-life" type is also available upon the request.

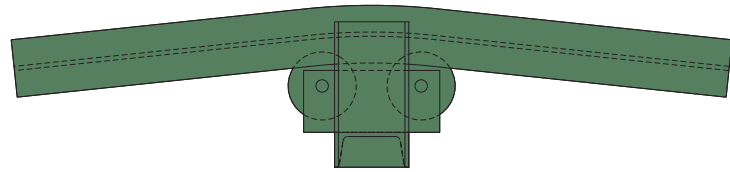
- ♦Single Labyrinth Shields formed from heavy gauge steel.

- ♦Each roller has a full complement of 20 - 1/2" diameter precision steel balls - 10 balls on each end.

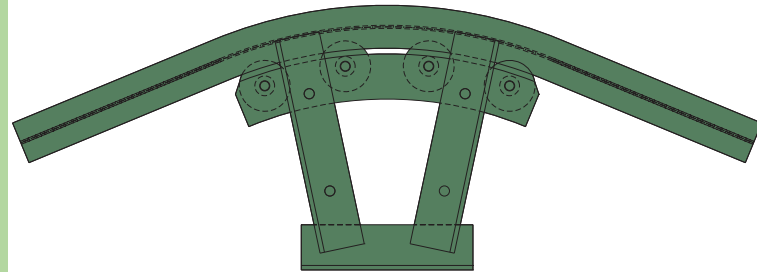
- ♦Standard re-lube provision via center-pin. Also available with oil hole in top bearing shield.



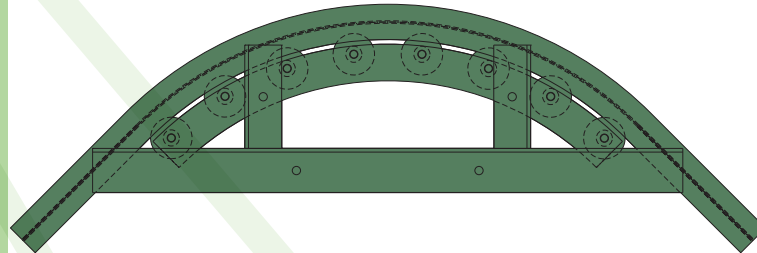
Typical Roller Turn Section



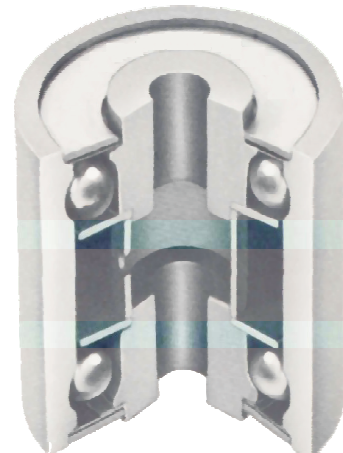
15° or less Turn



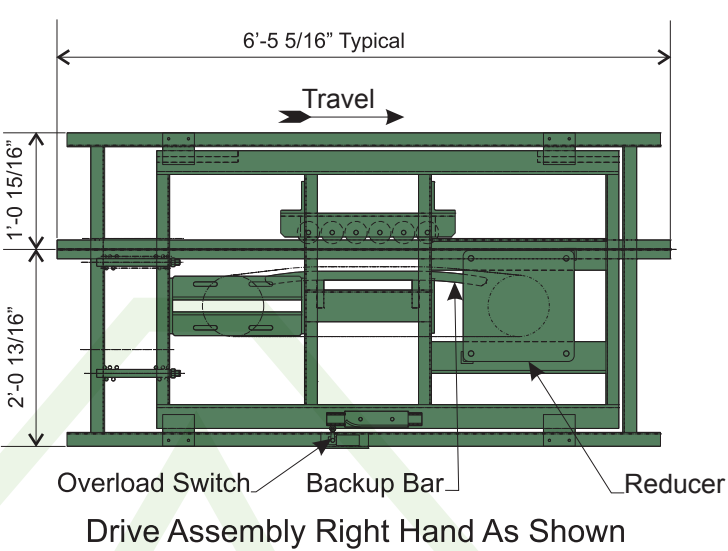
45° or less Turn



More than 45° Turn



Roller Turn Roll

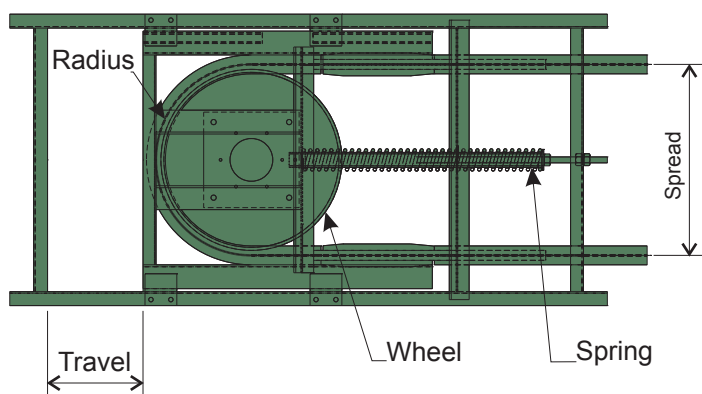


Drives:

Floating caterpillar drives can be installed in any straight portion of the track. They are more flexible than sprocket drives in their application, having few limitations in regard to mounting location.

Allied caterpillar drives use a heavy extended pitch precision roller chain. Machined steel dogs attached to the caterpillar chain transmit power to the conveyor chain. The caterpillar chain is driven by machined steel sprockets and is held taut by an integral take-up arrangement provided at the idler sprocket.

As the chain pull thru the drive is increased, the compression springs between the floating inner frame and the fixed outer frame are compressed as the inner frame moves against the direction of travel of the conveyor chain. A shut-off limit switch is located in such a position as to stop the drive when overload occurs.

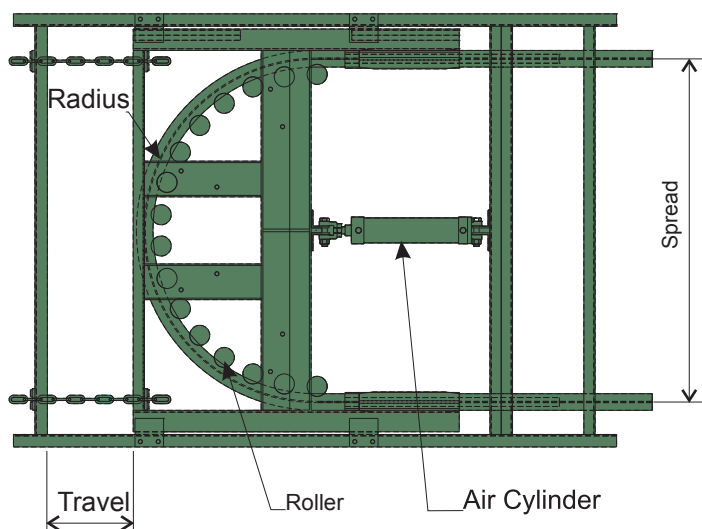


Take-ups:

An overhead conveyor take-up is provided to compensate for chain wear or stretch, and is generally considered a necessity for satisfactory conveyor operation.

Take-ups are available in both roller turn or traction wheel type, and are either manual screw operated or automatic air cylinder operated or automatic spring operated. The latter is the most commonly used. Counterweight type take-ups also are available.

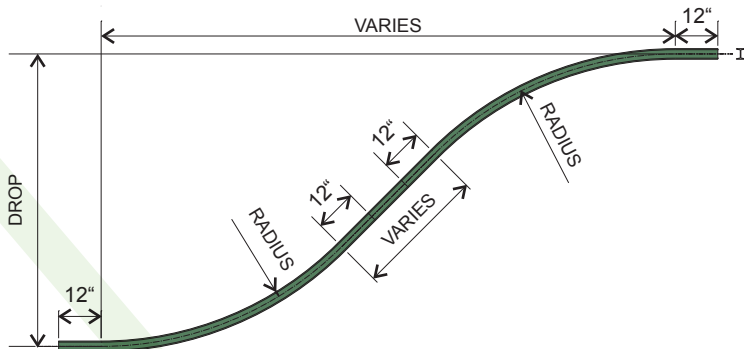
Take-ups should be located at a 180° turn and on the output side of a drive. They should be placed if possible, at the bottom of a vertical dip where they have a greater tendency to pull slack chain away from the drive unit.



Vertical Bends:

The track is rolled for vertical inclines and declines. Vertical bends are stocked in 15°, 30° and 45°. Compound vertical bends are also available.

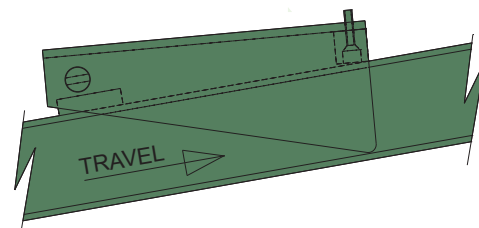
The charts at right side illustrates the maximum trolley spacing permissible on vertical bends to guarantee longer trolley and chain life.



Trolley Centers	Minimum Radius			Recommended Radius		
	348	458	678	348	458	678
8"	-	3'-6"	-	-	6'-0"	-
12"	4'-0"	-	6'-0"	5'-0"	-	12'-0"
16	-	5'-6"	-	-	8'-0"	-
18"	5'-0"	-	-	6'-6"	-	-
24"	6'-6"	7'-0"	11'-0"	8'-0"	10'-0"	15'-0"
30"	7'-8"	-	-	10'-0"	-	-
32"	-	9'-0"	-	-	12'-0"	-
36"	9'-0"	-	16'-0"	12'-0"	-	20'-0"

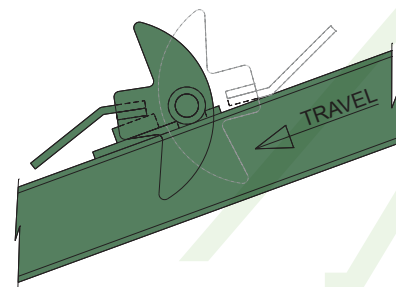
Uphill Stops:

When desired, Uphill Stops (also called Anti-Backups) are available for mounting on vertical inclined track bends. In case of chain failure these stops are always in position to prevent any “runaway” and possible injury or damage.



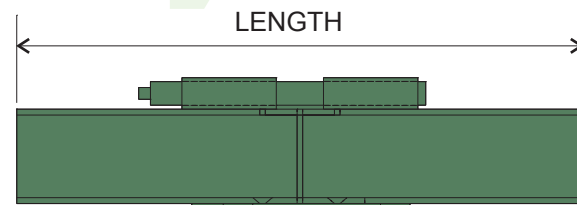
Downhill Stops:

Downhill Stops (also called Anti-Runaways) serve the same purpose on the vertical decline track bends, usually equipped with a limit switch to stop the drive unit from feeding further chain and trolleys against the actuated stop.



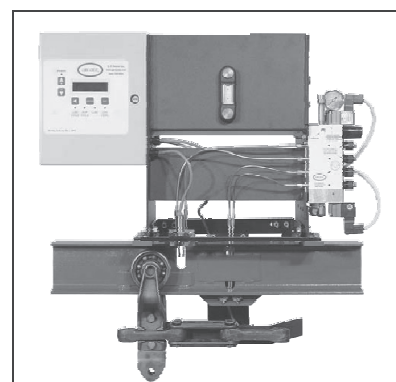
Expansion Joints:

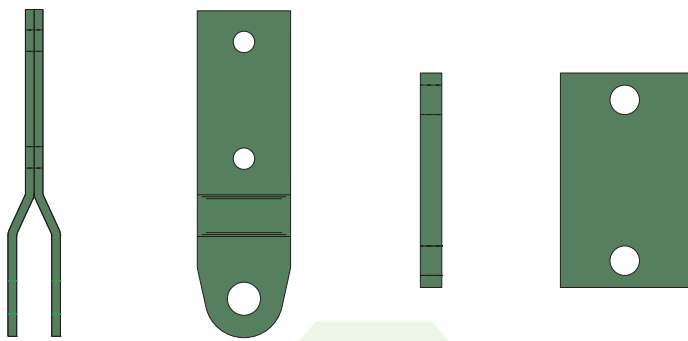
Expansion joints are used mainly in ovens and are located in each track in the area of the oven expansion joint. This allows both oven and conveyor to expand and contract together.



Lubricators:

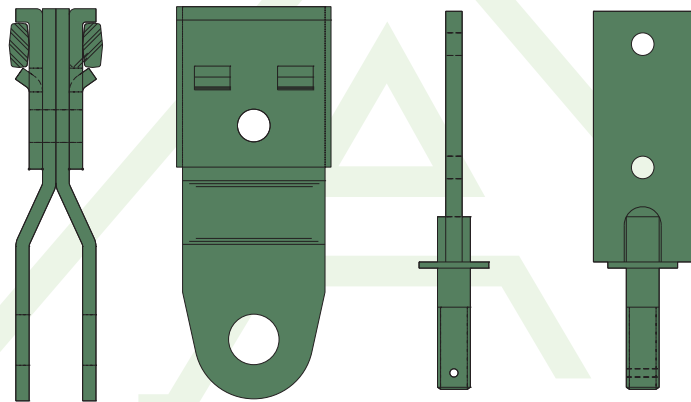
For maximum life and smooth conveyor travel, the conveyor chain pins and trolley wheels should be reasonably well lubricated. For this purpose Allied can supply automatic oil-mist units for use on the chain and trolleys, or if preferred an automatic grease dispensing unit for the trolley wheels.





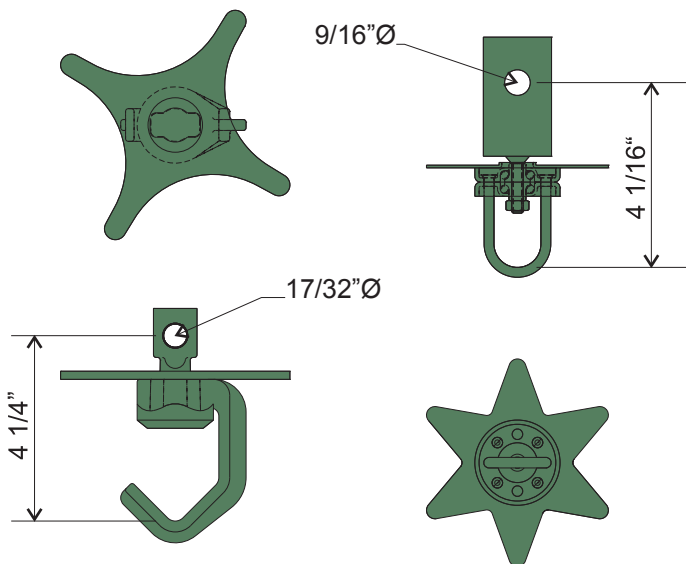
"H" Attachment

"I" Attachment



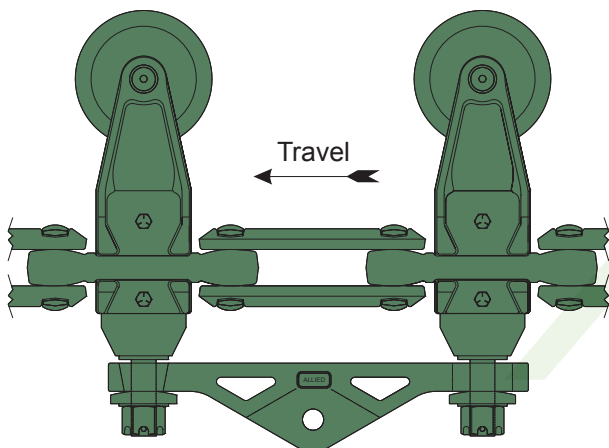
Intermediate "H" Attachment

"B" Attachment



90° Indexing Swivel Hook
Capacity: 150 lb.

Swivel Rotator
Capacity: 75 lb.



Load Bar Assembly

Trolley Attachment:

Standard "H" Attachment - This is the most widely used type of trolley attachment and is suitable for almost any type of hook and rack.

Chain Size	Bottom Gap	Bottom Hole
X-348	9/16"	17/32"
X-458	11/16"	17/32"
X-678	13/16"	13/16"

"I" Attachment - Intermediate trolleys with no load use this type of attachment.

"B" Attachment - This type of attachment is usually used with load bar assembly which hung from a pair of trolleys. (See Load Bar Assembly below)

Intermediate Attachment - This assembly consists of a pair of intermediate "H" attachment and a pair of filler attachment. It can be attached to chain without trolleys.

Chain Size	Bottom Gap	Bottom Hole	Hardware
X-348	9/16"	17/32"	5/16-18 Bolt x 3/4" Lg.
X-458	11/16"	9/16"	3/8-16 Bolt x 1" Lg.
X-678	-	-	

90° Indexing Swivel Hook - Cast two piece cam construction provides 90 degree indexing. A four point star as shown is optional and ordered separately.

Swivel Rotator - This free spinning ball bearing swivel assembly can be rotated by hand or automatically rotated at any point on the system with the installation of a rub rail. A six point star as shown is optional and ordered separately.

Load Bar Assembly - To increase the capacity of the trolleys, load bars are recommended, suspended from two "B" attachments.

Chain Size	Capacity	Bottom Hole
X-348	400 lb.	9/16"
X-458	800 lb.	11/16"
X-678	2400 lb.	13/16"



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