



**YUH CHERN**

Forging The Future

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## Drop Forged Conveyor Rivetless Chains

Conveyor Equipments for Rivetless Chains







ZC

ZUH CHERN



# ABOUT YUH CHERN

In 1979, Yuh Chern Manufacturing Co., Ltd. was established in Taichung City, Taiwan.

## Core Business

Since our inception, we have developed a professional hot forging manufacturing service model together with experienced stamping and machining competitiveness that focuses on standardized and customized products in the field of conveyor chains and related products.

## Product Range

1 Enclosed Track  
Conveyor Chains

2 Drop Forged Rivetless  
Conveyor Chains

3 Industrial  
Conveyor Chains

## The Endless Pursuit for Perfection

Along with business growth, we had not only upgraded manufacturing facilities but also implemented the following management systems:

- ISO 9001 (Quality Management)
- ERP (Enterprise Resource Planning)
- SFT (Shop Floor Tracking)
- PLM (Product Lifecycle Management)
- APS (Advanced Planning and Scheduling)

## Experience Makes the Difference

Over the decades, our research and development team has accumulated valuable expertise in product development in order to provide customers with professional technical advice in the early stages of their product development. The efforts include material analysis, structure design and surface treatment. By utilizing software such as AutoCAD, Solidworks, Autodesk Inventor, SolidCAM, Cimatron CAD/CAM and Geomagic Design, we are capable of processing more than a hundred development cases per year. This has allowed us to provide increased product developing efficiency and helped customers to shorten the products TTM (time to market) period.



### Company Quality Policy

Customer Satisfaction & Continuous Improvement



### Company Vision

To further our knowledge and skill capabilities as a service provider in the technical fields of forging, stamping and machining.



### Company Mission

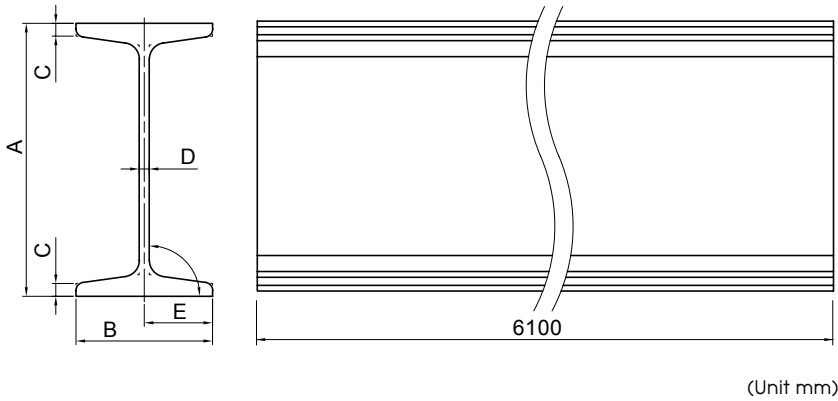
Through quality services and innovation, provide our customers with the most trusted and technologically advanced products.



## CONVEYOR EQUIPMENT FOR RIVETLESS CHAINS

## I-Beams (In Compliance with ASTM A6/A6M-17a Specifications)

I-Beam tracks are made with I-Beam steel. The channel section provides support for trolley wheels that carry the chain and allow the trolley wheels to move alongside the track.

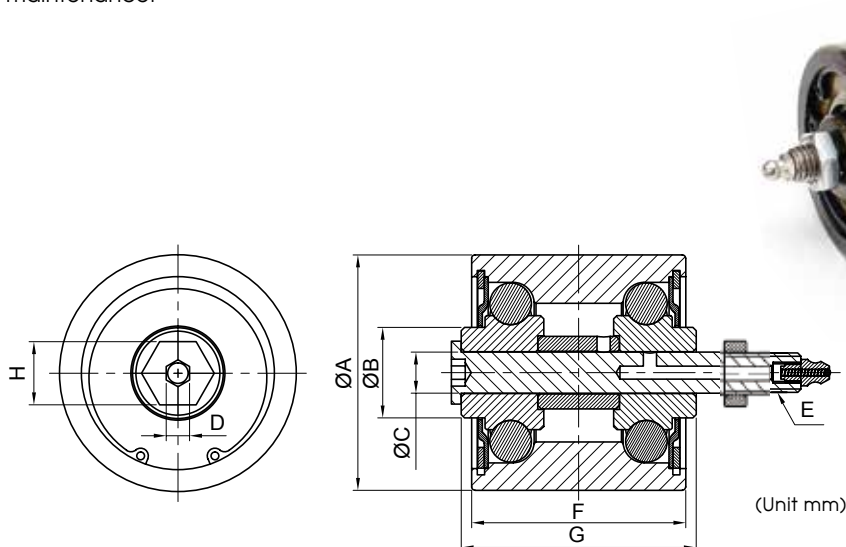


(Unit mm)

Item NO.	Description	A	B	C	D	E	Material	Surface Finishing
5011101105	3" I-Beam	76.2	59.1	4.3	4.3	29.5	Fe (Mild Steel)	Hot Rolled
5011101106	4" I-Beam	101.6	67.6	4.8	4.9	33.8	Fe (Mild Steel)	Hot Rolled
5011101121	6" I-Beam	150	75	7.0	5.5	37.5	Fe (Mild Steel)	Hot Rolled

## Roller Turn Rollers

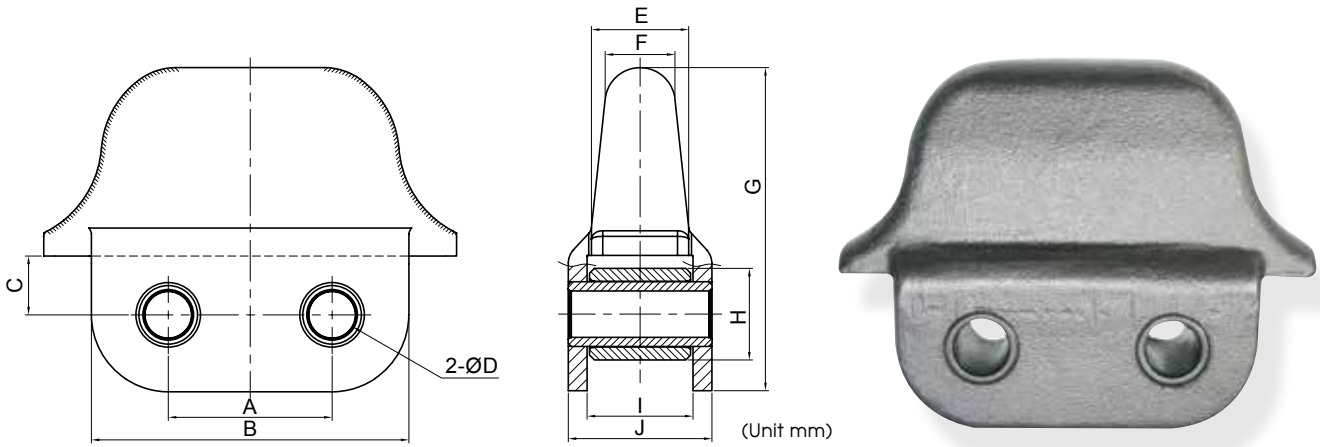
The rollers are installed on the horizontal segment bar of the roller turn frame. Its prime function is to provide proper alignment for chains and trolleys when negotiating horizontal turns. The grease fitting is strategically placed for ease of lubrication and maintenance.



(Unit mm)

Item NO.	Description	A	B	C	D	E	F	G	H	Material	Surface Finishing
501211105	3" Roller Turn Roller (With Bolt Set)	69.9	27.4	12.5	7	M12-P1.75	49	55.6	18.8	SCM415	Anti-Rust Oil
501221101	4" Roller Turn Roller (With Bolt Set)	71.4	27.4	12.5	7	M12-P1.75	65.1	71.4	18.8	SCM415	Anti-Rust Oil

## Drive Dogs



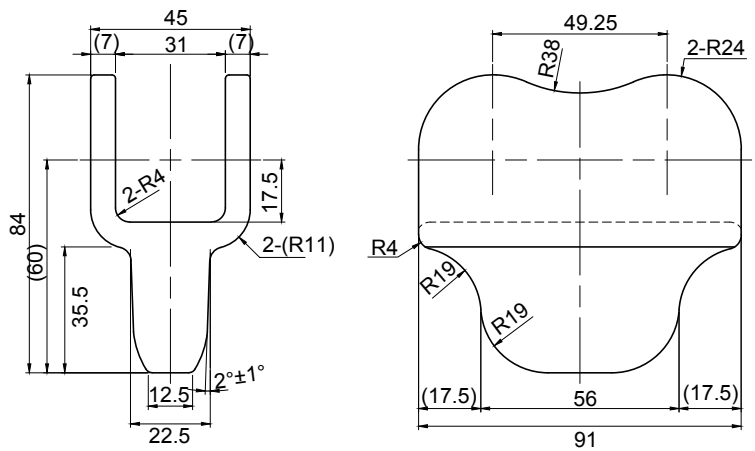
Item NO.	Description	A	B	C	D	E	F	G	H	I	J	Material	Surface Finishing
5014462002	348 Drive Dog (Pitch 1.5")	38.1	73	15.65	14.8	17.9	12.5	64.7	25.32	25.4	37.3	SAE1045	Anti-Rust Oil
5014420001	348 Drive Dog	50.8	98.42	18.25	14.44	19.3	13.8	77.04	28.58	32	44.7	SAE1045	Anti-Rust Oil
5014430001	458 Drive Dog	50.8	98.42	18.25	14.44	25.4	18.9	84.15	28.58	32	44.7	SAE1045	Anti-Rust Oil
5014430003	KS-100 Drive Dog	50.8	98.42	18.25	14.44	25.4	18.9	84.15	28.58	32	44.7	SAE1045	Anti-Rust Oil
5014440001	678 Drive Dog	50.8	98.42	18.25	14.44	30.3	21.7	100.5	28.58	32	44.7	SAE1045	Anti-Rust Oil

## Drive Dogs

### • Drive Dogs

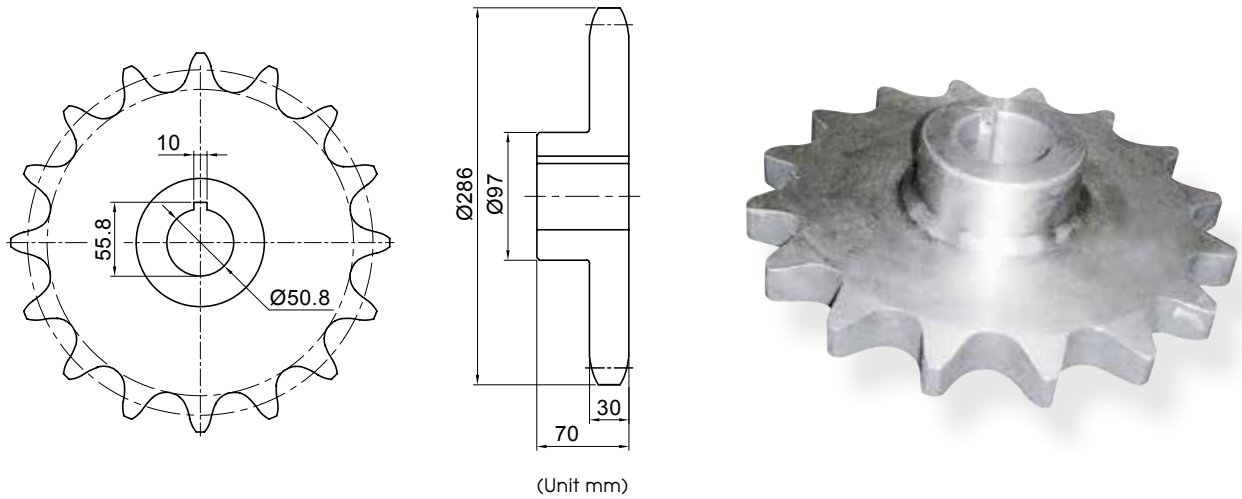
Item NO. 5014463004

Material | SAE1045  
Surface Finishing | Anti-Rust Oil



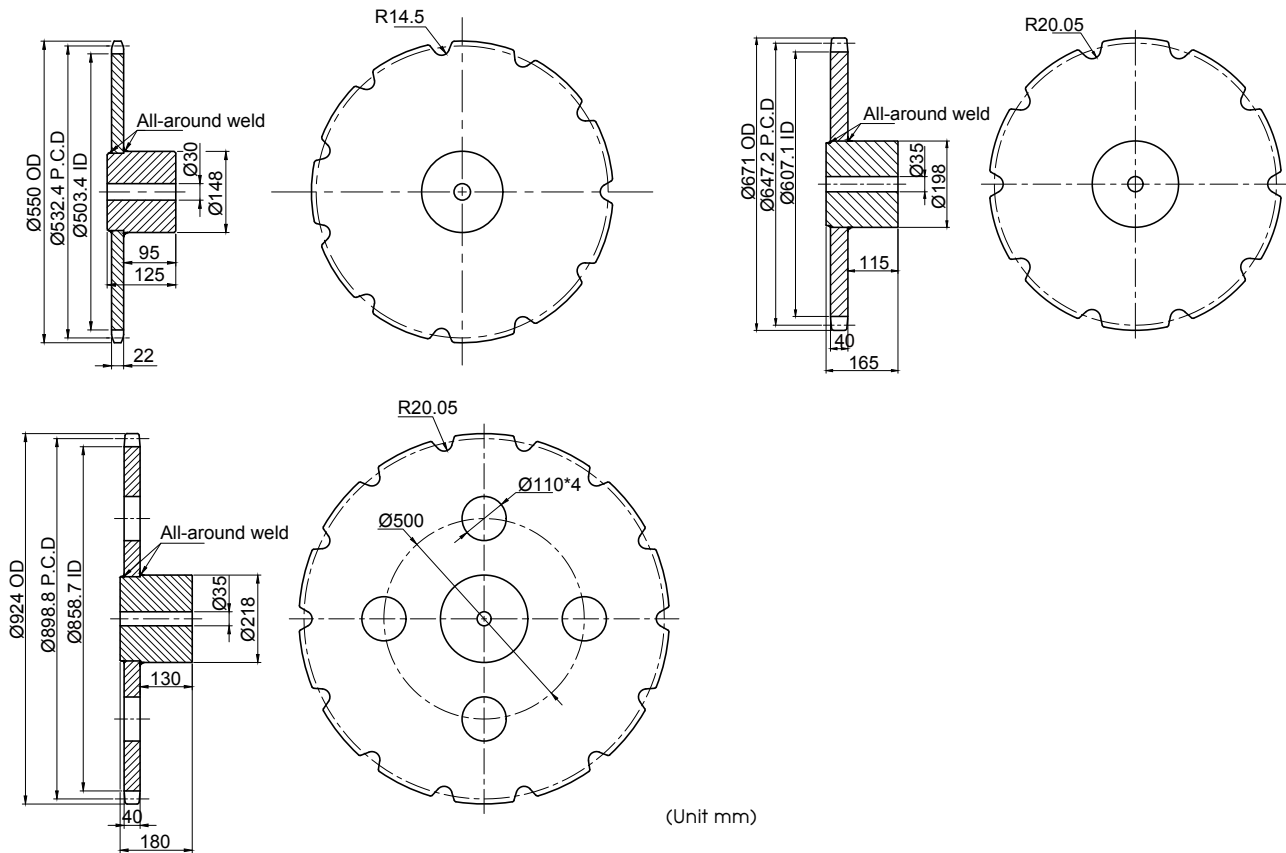
(Unit mm)

## Drive Chain Sprocket



Item NO.	Description	Material	Surface Finishing
50620290001	RS 160-1B-16T Sprocket	Carbon Steel	Anti-Rust Oil
50620080006	RS 160-1B-16T Sprocket	Carbon Steel	Anti-Rust Oil

## Drive Chain Sprocket

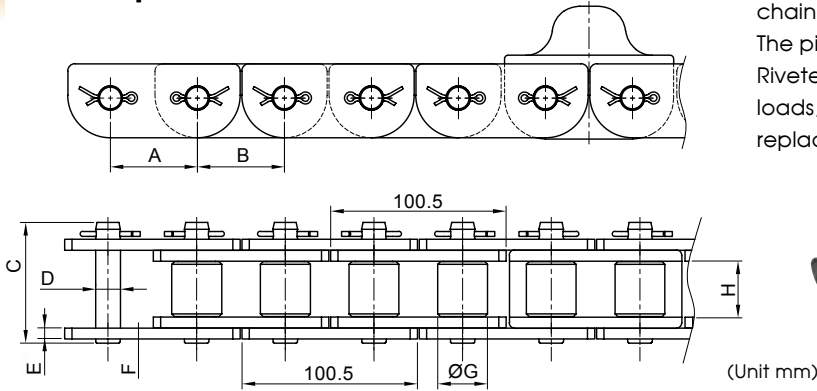


Item NO.	Description	Material	Surface Finishing
50610250003	RF 10150S-BW-11T	SAE 1045	Anti-Rust Oil
50610250004	RF 17200S-BW-10T	SAE 1045	Anti-Rust Oil
50610250005	RF 17200S-BW-14T	SAE 1045	Anti-Rust Oil

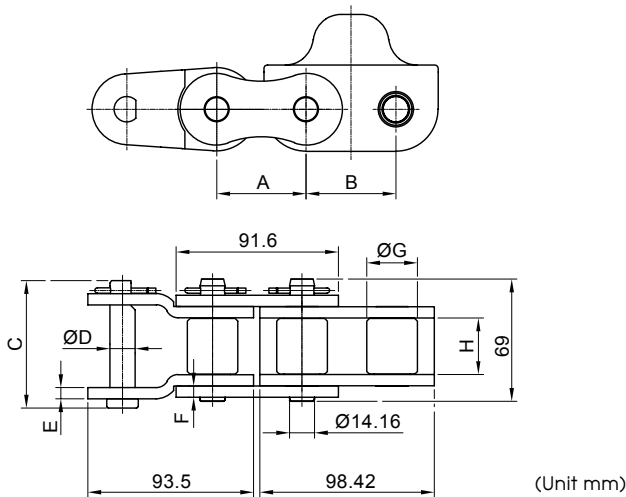


### Caterpillar Drive Chains

We offer two types of caterpillar drive chains: the lambda chain link (Standard) and D-type chain link (Heavy-duty). The pin assembly can be constructed using Cotter Pins or Riveted Pins. The riveted type is generally used for heavy loads, while the cotter pin allows operators the ease of replacing the chain links or chain dog by themselves.



Item NO.	Description	A	B	C	D	E	F	G	H	Material	Surface Finishing	Min. Ultimate Tensile Strength (kgf)
6014542007	X-348 D Type Caterpillar Drive Chain (10 Dogs)	50.8	50.8	69	14.16	6.35	6.35	28.5	32	SAE1045	Anti-Rust Oil	22740
6014543003	X-458 D Type Caterpillar Drive Chain (15 Dogs)	50.8	50.8	69	14.16	6.35	6.35	28.5	32	SAE1045	Anti-Rust Oil	22740
6014544003	X-678 D Type Caterpillar Drive Chain (10 Dogs)	50.8	50.8	69	14.16	6.35	6.35	28.5	32	SAE1045	Anti-Rust Oil	22740



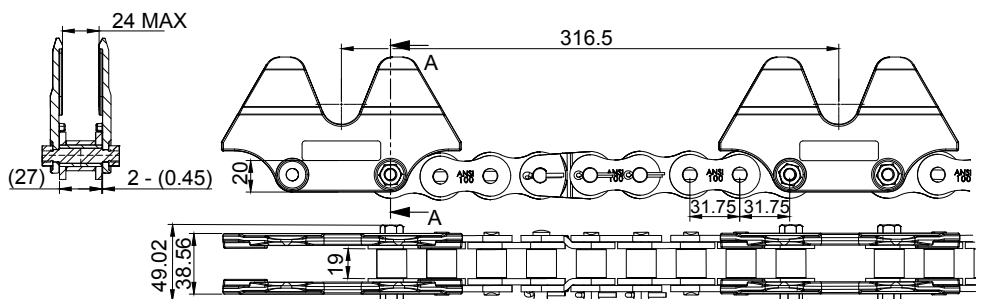
X-348 Caterpillar Drive Chain

Item NO.	Description	A	B	C	D	E	F	G	H	Material	Surface Finishing	Min. Ultimate Tensile Strength (kgf)
6014542010	X-348 Caterpillar Drive Chain (10 Dogs)	50.8	50.8	72	14.24	6.35	6.35	28.5	32	SAE1045	Anti-Rust Oil	22740
6014542002	X-348 Caterpillar Drive Chain (20 Dogs)	50.8	50.8	72	14.24	6.35	6.35	28.5	32	SAE1045	Anti-Rust Oil	22740

#### • Caterpillar Drive Chains

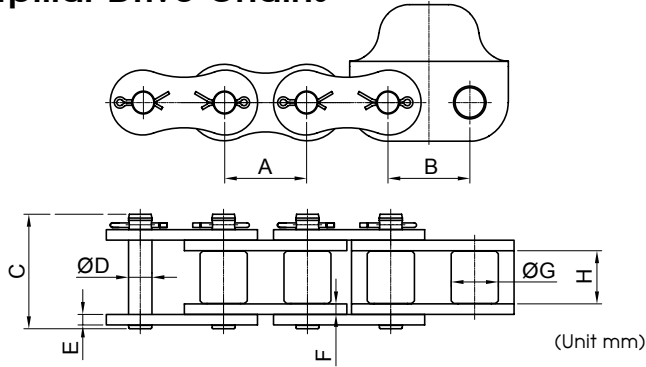
Item NO. 601421403000

Material | SAE1045  
Surface Finishing | Anti-Rust Oil

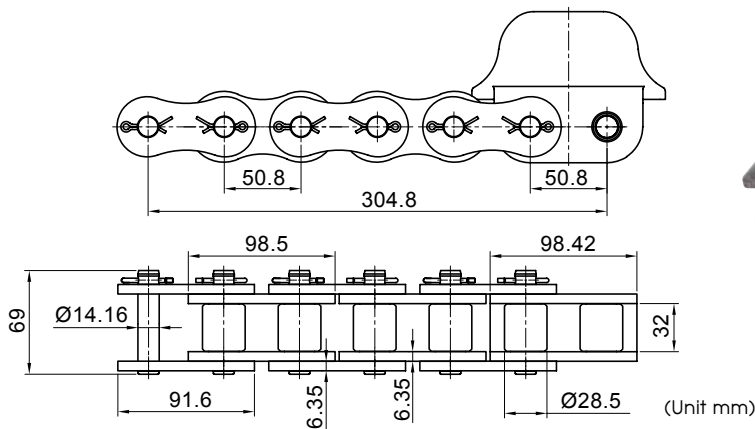




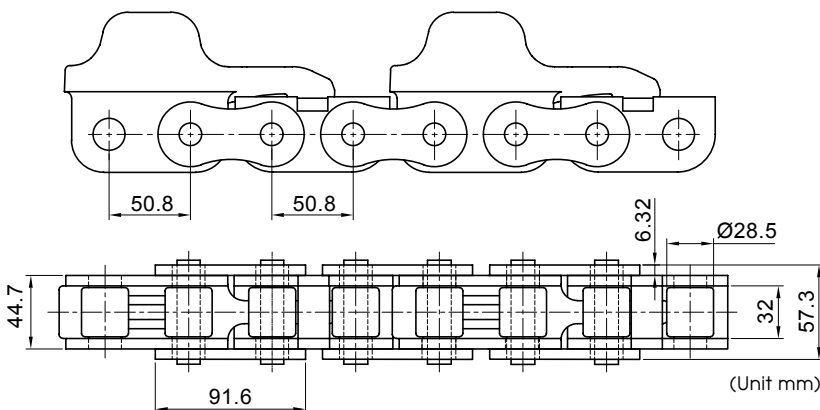
## Caterpillar Drive Chains



Item NO.	Description	A	B	C	D	E	F	G	H	Material	Surface Finishing	Min. Ultimate Tensile Strength (kgf)
6014543002	X-458 Caterpillar Drive Chain (15 Dogs)	50.8	50.8	69	14.16	6.35	6.35	28.5	32	SAE1045	Anti-Rust Oil	22740
601450301000	X-458 Caterpillar Drive Chain (15 Dogs)	50.8	50.8	69	14.16	6.35	6.35	32	32	SAE1045	Anti-Rust Oil	22740
6014551001	KS-100 Caterpillar Drive Chain (15 Dogs)	50	50	69	14.16	6.35	6.35	28.5	32	SAE1045	Anti-Rust Oil	22740
60142021013	RS120 Caterpillar Drive Chain (11 Dogs)	38.1	38.1	53.8	11.11	4.8	4.8	22.23	25.22	SAE1045	Anti-Rust Oil	12755



Item NO.	Description	Material	Surface Finishing	Min. Ultimate Tensile Strength (kgf)
6014544002	X-678 Caterpillar Drive Chain (10 Dogs)	SAE1045	Anti-Rust Oil	22740



Item NO.	Description	Material	Surface Finishing	Min. Ultimate Tensile Strength (kgf)
5014471004	CE19 Caterpillar Drive Chain (4 Link/64 Dogs)	SAE1045	Anti-Rust Oil	17100

## X-348/458/678 Conveyor Equipment

### • Vertical Curves

Item NO.	Description
5011410101	X-348 Vertical Curve
5011410102	X-458 Vertical Curve
5011410103	X-678 Vertical Curve



### • Horizontal Roller Turns

This device is designed to keep the chain and the trolley correctly vertical while negotiating horizontal turns. The roller turn angle can be adjusted according to the customers design. Optional angles: 30 degrees, 45 degrees, 60 degrees, 90 degrees and 180 degrees.

The roller turn assembly consists of a frame, I-beam rails, rollers and segment bars. The frame is designed as a welded steel construction guide to minimize dimensional errors during assembly. The rollers are fixed to the segment bars by roller bolts to form a roller segment bar assembly, which is then bolted to the roller turn frame. This feature allows for easy replacement of either the entire roller or individual rollers. There is a grease fitting in place under each of the roller bolts for ease of lubrication and to extend the longevity of the ball bearings.

Item NO.	Description	Item NO.	Description	Item NO.	Description
5011204205	X-348 Horizontal Curve (Roller Turn)	5011206703	X-458 Horizontal Curve (Roller Turn)	5011208701	X-678 Horizontal Curve (Roller Turn)



X-458 Horizontal Curve (Roller Turn)



X-458 Inverted Conveyor System (Roller Turn 180 Degree)



X-458 Horizontal Curve (Sprocket Type)



## X-348/458/678 Conveyor Equipment

### Horizontal Traction Wheel Turns

This type of turn serves the same function as the horizontal roller turn. However, it is more suitable to be used in hazardous environments. Heating furnaces or areas that are difficult to maintain, such as dirty, corroded or high temperature working environments. The device can also be made according to the customer's design with optional angles: 30 degrees, 45 degrees, 90 degrees, and 180 degrees.

All traction wheel turns are made with a separate mounting frame from which both the conveyor track and the traction wheel shaft mounts are supported. These turns are made of solid discs with self-lubricating brass bearings. Although the traction wheel is more expensive than roller turns, it provides a smoother operation at high conveyor speeds. This wheel requires less maintenance due to reduced chain wear and chain pull.

Item NO.	Description
5011204705	X-348 Horizontal Curve (Traction Wheel Turn)
5011206704	X-458 Horizontal Curve (Traction Wheel Turn)
5011208702	X-678 Horizontal Curve (Traction Wheel Turn)



X-348 Horizontal Curve (Traction Wheel Turn)



X-458 Horizontal Curve (Traction Wheel Turn)

### Caterpillar Drive Units

Selecting the appropriate drive unit to drive the entire conveyor system is critical in achieving a reliable and efficient conveyor system. Generally, the drive unit is installed alongside a horizontal straight run of track where the highest chain tension occurs. One conveyor system only requires one drive unit. It is recommended to use a take-up device, which can be installed 100-120 meters away from the drive unit, to work alongside with the drive unit. However, as the conveyor line gets longer or more complicated, it would be necessary to place multiple drive units with a coaxial or synchronous motor.

Item NO.	Description	Item NO.	Description	Item NO.	Description
601260601	X-348 Drive Device	601270601	X-458 Drive Device	601280601	X-678 Drive Device



601260601  
X-348 Drive Device



X-348 Caterpillar Drive (Floating Type)



X-458 Drive Device

• Take-Up Units

As chains become worn out, the chain length will extend and it also stretches when subjected to tension. Therefore, in order to maintain continuous and smooth operations, it is necessary to apply force to the chain after the chain leaves the drive unit. This is where the Take-Up device comes into play. It absorbs the elongation of the chain, and maintains proper chain tension. This helps ensure smooth conveyor operation and reduces the possibility of chain blockages.

Take-Up devices can be used with pneumatic, counter-weight, and spring-operated tension adjustment methods to meet the needs of a variety of applications.

Item NO.	Description	Item NO.	Description
601260002	X-348 Take-Up Device (Spring Type)	5011101116	X-348 Expansion Tube Set
601270002	X-458 Take-Up Device (Spring Type)	5011101117	X-458 Expansion Tube Set
601280002	X-678 Take-Up Device (Spring Type)	5011101118	X-678 Expansion Tube Set



X-348 Take-Up Device



X-458 Take-Up ( Roller Turn)



Inverted Conveyor System (Take-Up Device)



X-348 Take-Up Device



X-458 Expansion Tube Set



X-458 Inverted Conveyor System



X-348 Take-Up Device (Counter Weight)



X-458 Inverted Take-Up Device





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