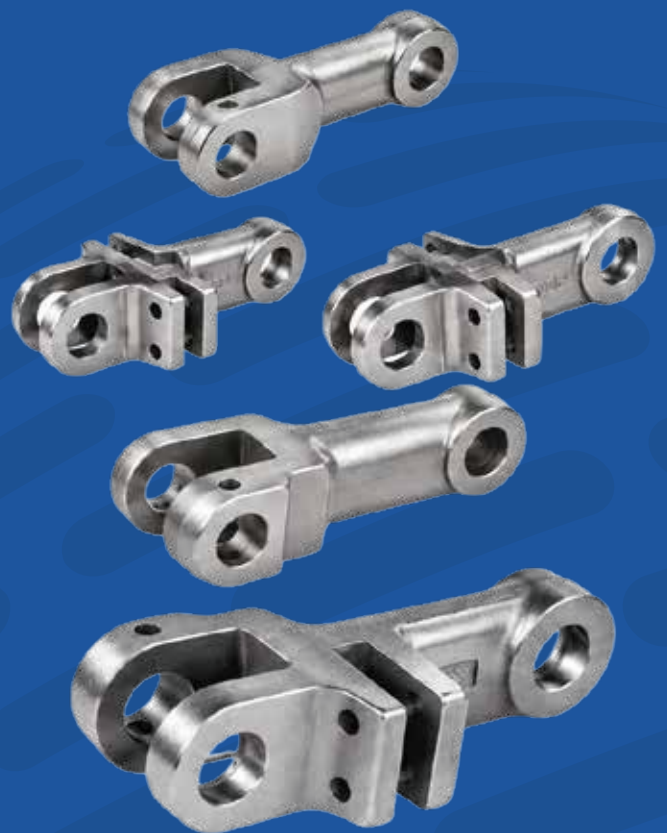




High Strength Drop-Forged Conveyor Chains



www.codemagroup.com

CONVEYOR APPLICATIONS

The Advantages of En-Masse Conveying

The En-Masse Conveyor provides one of the most effective and versatile conveying methods developed to date, and is second in flexibility (in tight installations) only to pneumatic conveying systems.

En-Masse is number one in capacity vs. conveying efficiency compared to all other bulk systems. En-Masse conveyors utilize as much as 90% of the required installation area on the actual conveying of your bulk materials.

One of the features of En-Masse or ‘drag’ style conveyors is their totally enclosed design, which makes them inherently safe, and eliminates the need for additional personnel safety devices, weather considerations or expensive, non-productive dust control systems.

Another feature that sets the En-Masse Conveyor design apart from all but the belt conveyor is in their horsepower efficiency vs. hourly capacity conveyed. By using a skeletal flight and a high quality alloy chain, weight is greatly minimized, reducing wear and horsepower requirements.

Benefits of En-Masse

Totally enclosed design, inherently safe
Highest efficiency in conveying
Reduced horsepower requirements
Combination of conveying directions
High capacities over great distances
Reduced structural supports
Minimal production degradation
Can handle extremely hostile products
Dust and weather tight
Conveying in dual directions

The Results

No auxiliary safety equipment required
First in smallest area vs. capacity
Second only to belt conveying
Second only to pneumatic conveying
Second only to belt conveyors
Second only to pneumatic conveying
First in reduced product contact
First at abrasive, high temperatures
No auxiliary equipment required
Allows for multiple discharge points



What type of products can be handled? Years of application experience and development within En-Masse conveying allows you to handle the majority of products from A to Z. Consult Codema for specific applications relevant to your requirements.

The Advantages of En-Masse Conveying

Under extreme temperatures, conveyor chain is subjected to severe stress, which ultimately results in breakdown of the case-hardened exterior, elongation of the chain link and subsequent failure. Designed for these hostile applications, our base alloy is a high CrMn steel, suitable for handling inlet temperatures to 1000°F (540°C). Should your specific application require even higher temperatures, Codema can formulate alloys that withstand temperatures up to 1000°C.

Ordering conveyor chain

By using the following product designation, Codema can easily provide engineering and pricing information for a specific type of chain:

13" 142 STD BT – 1

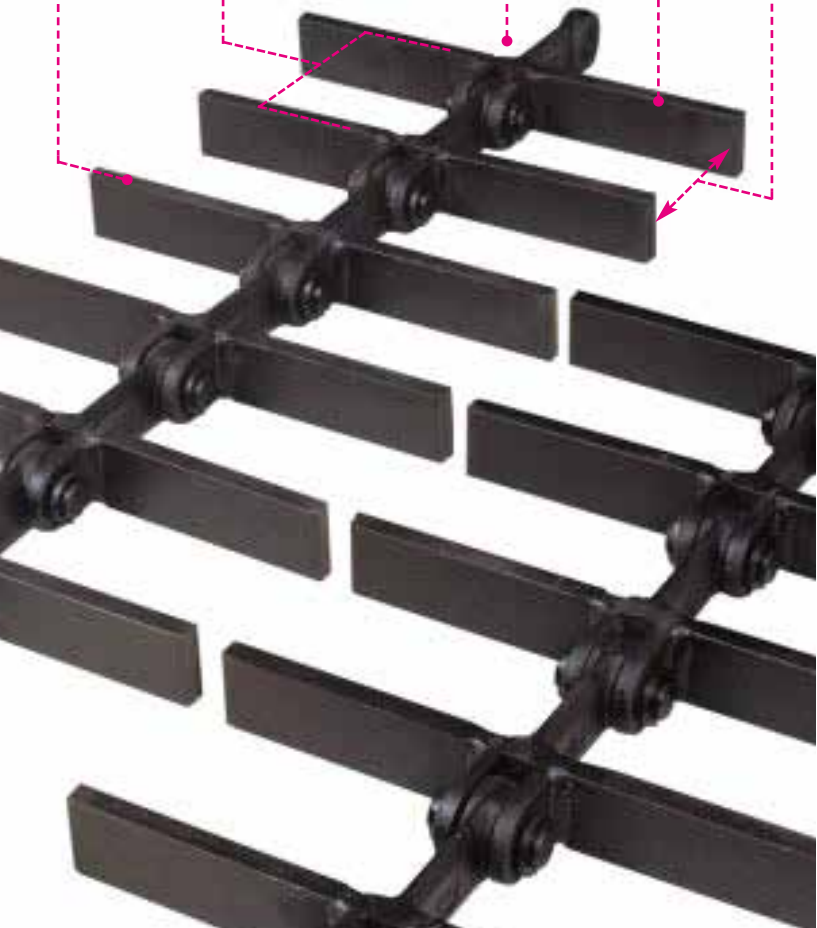
Indicates nominal overall width of flight (in inches)

Indicates chain pitch (in mm)

Indicates standard (STD) or heavy (HVV) duty chain

Indicates style of flight

Indicates flight frequency pattern



Flight Options

Besides a variety of chain link options, Codema offers a combination of flights that cover the entire spectrum of en-masse conveying. In addition to welded steel flights, we also offer materials such as stainless and abrasion-resistant (AR) steels as well as a range of synthetics in nearly unlimited shapes and configurations. See page 8 for details or contact us for more information.



Delivery

Finished conveyor chain orders typically leave our dock pre-assembled into 8-pitch strands, which allows for compact palletizing, lower shipping costs and reduced field assembly time.

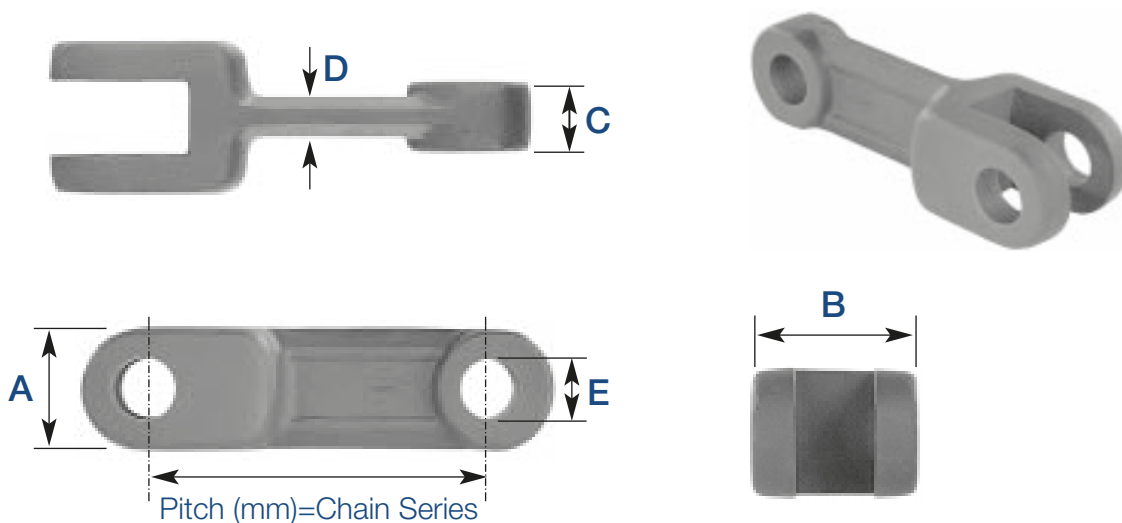


Conveyor data required for proper chain application

1. Horizontal length of conveyor
2. Inclined length and degree of conveyor
3. Vertical height (rise) of conveyor
4. Hourly capacity required
5. Material being handled
6. Bulk density of material
7. Product granulation size
8. Abrasive/corrosive/hygroscopic qualities
9. Product temperature at conveyor inlet
10. Is gas/vapor tight conveyor required?
11. Hours of service per 24 hour day
12. Installation location
13. Physical limitations or restrictions
14. Number of inlets in conveyor
15. Metered or choke feed?
16. Number of discharges in conveyor
17. Is end discharge open?
18. Are intermediate gates required?

With this data, Codema can provide you with the necessary technical data for your particular application, including nominal chain speeds, volumetric efficiencies, BHP requirements and nominal construction techniques.

COMMON SERIES CHAIN



Chain Series	Ultimate Strength	Working Load	Weight	A	B	C	D	E	Recommended Sprocket Type
102 HVY	38,000 Lbs 17,275 Kg	6,900 Lbs 3,135 Kg	.99 .45	1.375" 35mm	1.26 32	.55 14	.354 9	.709 18	Symmetrical ONLY
142 STD	73,000 33,180	13,000 5,910	2.45 1.11	1.97" 50	1.65 42	.75 19	.47 12	.98 25	Symmetrical
142 HVY	99,000 45,000	18,000 8,182	3.74 1.7	1.97" 50	2.44 62	1.14 29	.63 16	.98 25	Symmetrical
142 STD/DBL	73,000 33,180	13,000 5,910	3.41 1.55	See table on page 5 for dimensional information					Non-Symmetrical
142 HVY/DBL	99,000 45,000	18,000 8,182	4.72 2.15	See table on page 5 for dimensional information					Non-Symmetrical
260 STD	150,000 68,180	27,270 12,390	14.0 6.4	2.95" 75	2.76 70	1.18 30	.79 20	1.26 32	Non-Symmetrical

See additional sprocket information on pages 8 and 9.

Engineering Notes

To provide the proper chain strength for your application, the above data illustrates the ultimate strength of the chain along with its recommended nominal working load. Codema uses a 5.5:1 safety ratio for proper application.

Once you have determined your chain speed and brake horse-power requirements, a simple formula (shown to the right) can be used for choosing the proper chain.

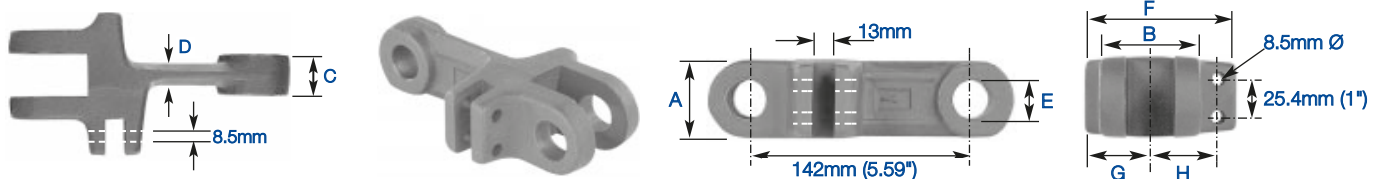
For vertical conveyors, add the chain weight from the conveyor height to the figure derived from this formula. Do not add the return chain to this figure.



$$\frac{\text{Actual BHP}^* \times 33,000}{\text{Chain speed (FPM)}} = \text{Actual working load}$$

*do not use installed motor size

142 DOUBLE SERIES



Chain Series	Ultimate Strength	Working Load	Weight	A	B	C	D	E	F	G	H
142 STD/DBL	73,000 Lbs 33,180 Kg	13,000 5,910	3.41 1.55	1.97" 50mm	1.65 42	.75 19	.47 12	.98 25	3.11 79	1.30 33	1.41 35
142 HVY/DBL	99,000 45,000	18,000 8,182	4.72 2.15	1.97 50	2.44 62	1.14 29	.63 16	.98 25	3.90 99	1.69 43	1.71 43.5

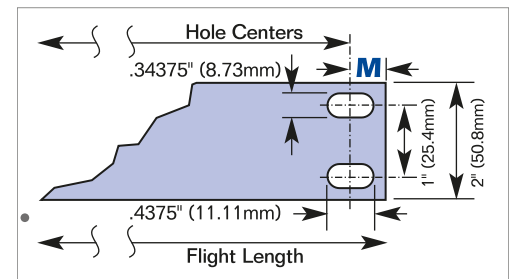
This chain type requires the use of non-symmetrical sprocket plates.
See pages 14-15 for further information.



Chain Style	J	K	L	M
142 STD/DBL	2.60" 66mm	4.39 111	1.06 26.8	.53 13.4
142 HVY/DBL	3.38" 86	5.95 151	.87 22	.43 11

To Calculate:

Sprocket Centers: Subtract **J** from the overall chain width
Flight Length: Subtract **K** from the overall chain width
Hole Centers: Subtract **L** from the overall chain length



Engineering Notes

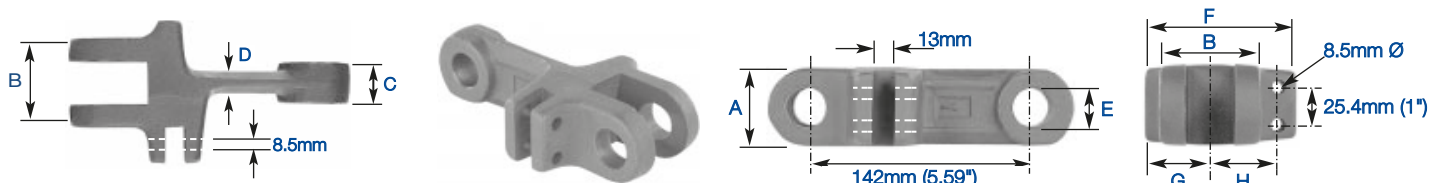
To provide the proper chain strength for your application, the above data illustrates the ultimate strength of the chain along with its recommended nominal working load. Codema uses a 5.5:1 safety ratio for proper application.

Once you have determined your chain speed and brake horse-power requirements, a simple formula (shown to the right) can be used for choosing the proper chain.

For vertical conveyors, add the chain weight from the conveyor height to the figure derived from this formula. Do not add the return chain to this figure.



142 TRIPLE SERIES

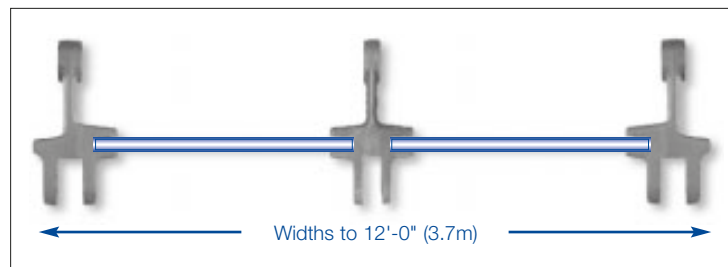


Chain Series	Ultimate Strength	Working Load	Weight	A	B	C	D	E	F
142 STD/DBL	73,000 Lbs 33,180 Kg	13,000 5,910	4.07 1.85	1.97" 50mm	1.65 42	.75 19	.47 12	1.41 35	3.62 92
142 HVY/TBL	99,000 45,000	18,000 8,180	5.40 2.45	1.97 50	2.44 62	1.14 29	.63 16	1.71 43.5	4.42 112.3

This chain type requires the use of non-symmetrical sprocket plates. See pages 14-15 for further information.

Applications

Typical applications for the triple (TPL) series chains include single-strand flight widths up to 30", and, when used in tandem with DBL series chains for triple-strand widths, flight widths reaching up to 12'-0" (3.7 m).



Technical Notes

The retaining mechanisms used to fasten flights onto the TPL link are standard 142 series U-pins or optional 5/16" Grade 8 bolts, identical to those used with the DBL series shown on page 5.

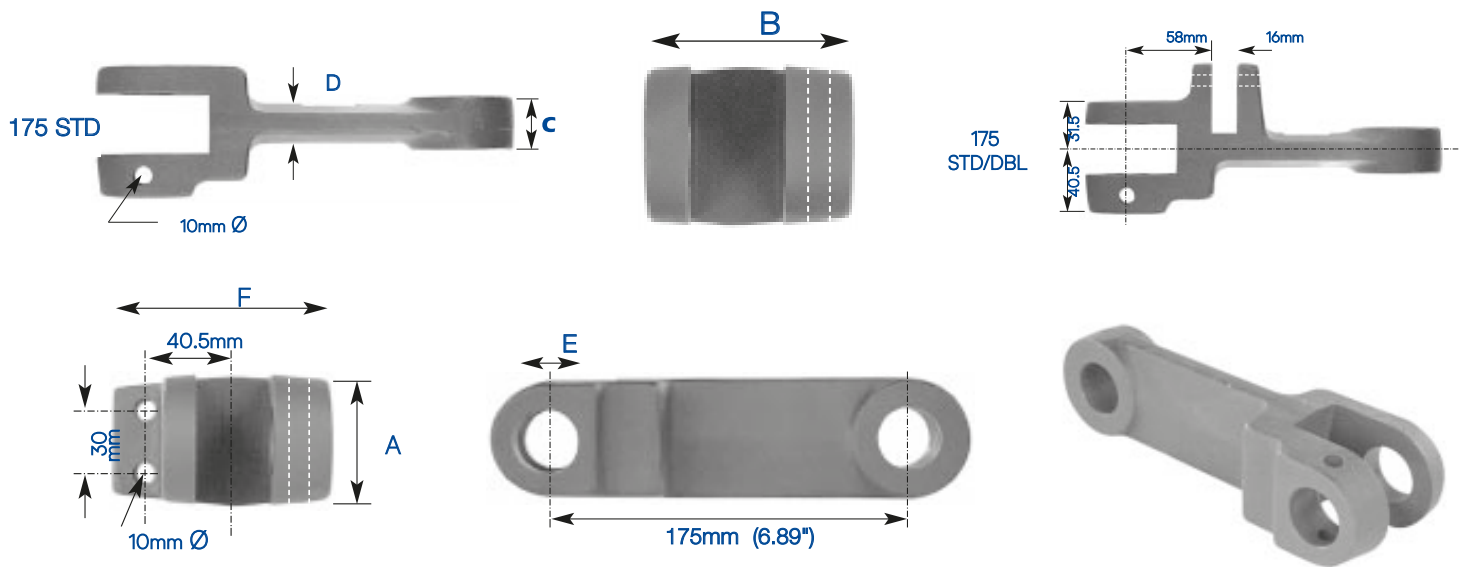
Also available for the TPL link are single-slotted flights that can be manufactured in a variety of materials, shapes, and sizes. These flights can be easily inserted into the groove of the chain link and securely fastened using a set of U-pins.

For more information, please contact Codema.

Due to their unique design, 142 TPL links require the use of non-symmetrical sprockets (TN series), as illustrated on page 14.



175 / 175 DOUBLE SERIES



Chain Series	Ultimate Strength	Working Load	Weight	A	B	C	D	E	F
175 STD	135,000 Lbs 61,360 Kg	24,540 11,150	6 2.73	2.36" 60mm	2.84 72	1.18 30	.87 22	1.18 30	3
175 STD/DBL	135,000 61,360	24,540 11,150	7.13 3.24	2.36 60	2.84 72	1.18 30	.87 22	1.18 30	3.78 96

This chain type requires the use of non-symmetrical sprocket plates.
See pages 14-15 for further information.

Applications

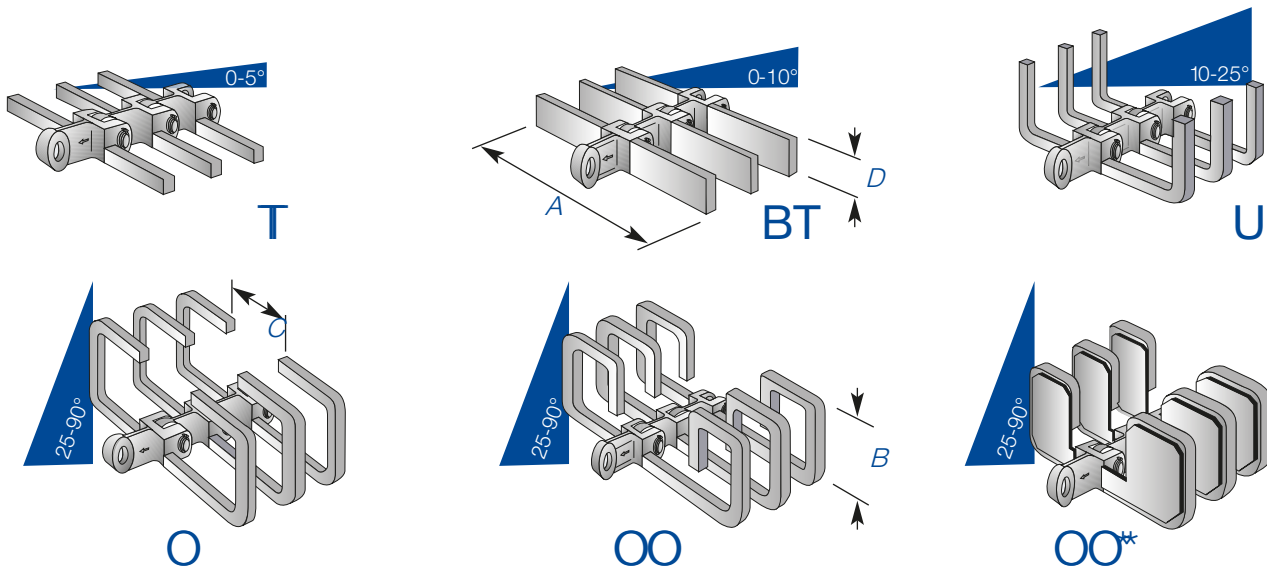
Typical applications for the 175mm single and double strand chains are for conveying systems with flight widths up to 2 meters (78").

Technical Notes

The connecting system used on 175mm series chain links consists of a straight bolt (type ,E™) and spring pin fastener. Only one spring pin is required per connection, which is inserted through a machined bore in the top of the link. This holds the bolt securely in place with a flush fit. When disassembling links, a simple hammer and pin punch is all that is required to remove the spring pin. For further bolt details, see page 10. For detailed information on sprockets and terminal idlers for this chain series, see pages 15-18.



FLIGHT TYPES



Conveyor Size		A	B	C	D	T	BT	Weight U	(Flights only*)		
									O	OO	OO*
102 SERIES	10" 254mm	9.88 250	4.50 114.3	3.00 76.2	1.375 35	-	2.2 Lbs 1 Kg	-	2.5 1.14	2.8 1.27	-
	12" 305mm	11.88 300	4.50 114.3	3.00 76.2	1.375 35	-	2.5 1.14	-	2.8 1.27	3.1 1.41	-
	14" 356mm	13.88 352	4.50 114.3	3.00 76.2	1.375 35	-	2.8 1.27	-	3.3 1.5	3.6 1.6	-
	16" 406mm	15.63 397	4.50 114.3	3.00 76.2	1.375 35	-	3.1 1.41	-	3.5 1.6	3.8 1.7	-
142 STD SERIES	11" 280mm	10.94 278	5.88 149.5	4.75 120.7	2.00 50	1.41 Lbs .64 Kg	2.36 1.07	3.10 1.41	3.62 1.65	4.40 2.0	5.62 2.55
	15" 380mm	14.88 378	7.56 192	5.50 139.7	2.00 50	2.04 .93	3.41 1.55	4.30 1.95	5.45 2.48	6.80 3.09	9.38 4.26
	19" 480mm	18.81 478	10.0 254	6.25 158.7	2.00 50	2.72 1.24	4.45 2.02	5.65 2.59	7.16 3.25	9.27 4.21	14.07 6.40
	25" 635mm	24.69 627	10.0 254	6.25 158.7	2.00 50	3.60 1.64	6.01 2.73	6.60 3.0	9.07 4.12	11.25 5.11	18.19 8.27
	30" 762mm	29.81 757.2	10.0 254	6.25 158	2.00 50	4.43 2.01	7.39 3.36	7.44 3.38	10.66 4.85	12.90 5.86	21.67 9.85

*See pages 4-7 for weight information of specific chain links.

Applications

The flights illustrated above represent the most frequently demanded designs in the industry and are by no means the only styles available. The T and BT style flights are used for horizontal through slight incline applications, normally between 0 to 10°, while the U flight can be used for horizontal/incline combinations through approximately 25°. The Modified BT, O, OO, and OO with filler plates are utilized in horizontal/inclined applications through 90° (vertical).

Technical Data

The flight configurations represented above can handle the majority of your material handling requirements. The letter designator represents the style of the flight, while the number designates its frequency among links. (See page 3 for information on chain specifications.)

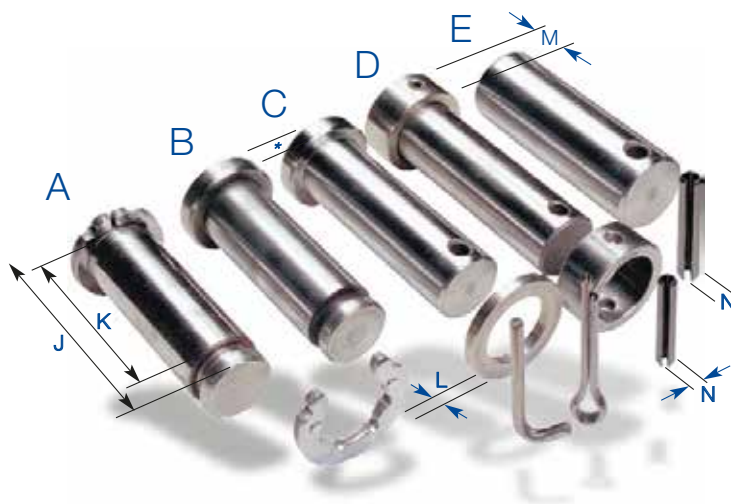
As a rule, granular material can be handled with a reduced number of flights. Finer, pulverized or micron-sized products typically require additional flights or modifications of the standard flight itself. Contact Codema for information regarding customized flights for your specific application.

Designating Flights:

BT-1 = Flight every link

BT-2 = Flight every 2nd link, etc.





A: The most widely used bolt; fastened using one clampwasher at each end.

B: Features an integral head (*8mm) at one end and a clampwasher groove at the other.

C: Features an integral head (*8mm) at one end and uses a flat washer/cotter/TMSTM pin or collar/spring pin combination on the other.

D: (Ring Bolt) This is secured using one collar and spring pin at each end.

E: Uses a single spring pin that fastens directly to the chain link for a flush fit.

	Bolt Type	J	K	L	M	Spring Pin Diameter (N)	Bolt Diameter	Bolt Weight
102 SERIES	A	1.86" 47.3mm	1.38 35	.915 3	S	S	.71 18	.186 Lbs .085 Kg
142 STD SERIES	A	2.56" 65mm	1.77 45	.197 5	S	S	.984 25	.492 .224
	B	2.48" 63mm	1.77 45	.197 5	S	S	.984 25	.567 .258
	C	2.68" 68mm	1.77 45	.157 4	.591 15	.236 6	.984 25	.624 .284
	D	2.953" 75mm	1.77 45	S	.591 15	.236 6	.984 25	.592 .269
142 HVY SERIES	A	3.35" 85mm	2.56 65	.197 5	S	S	.984 25	.656 .298
	B	3.27" 83mm	2.56 65	.197 5	S	S	.984 25	.740 .336
	C	3.465" 88mm	2.56 65	.157 4	.591 15	.236 6	.984 25	.785 .357
	D	3.74" 95mm	2.56 65	S	.591 15	.236 6	.984 25	.770 .350
175 STD SERIES	E	2.835" 72mm	S	S	S	.394 10	1.18 30	.819 .372
260 STD SERIES	D	4.41" 112mm	2.95 75	S	.728 18.5	.394 10	1.26 32	1.444 .656

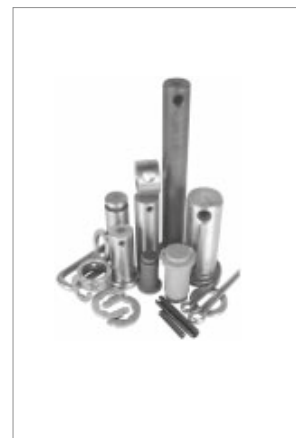
Specifications

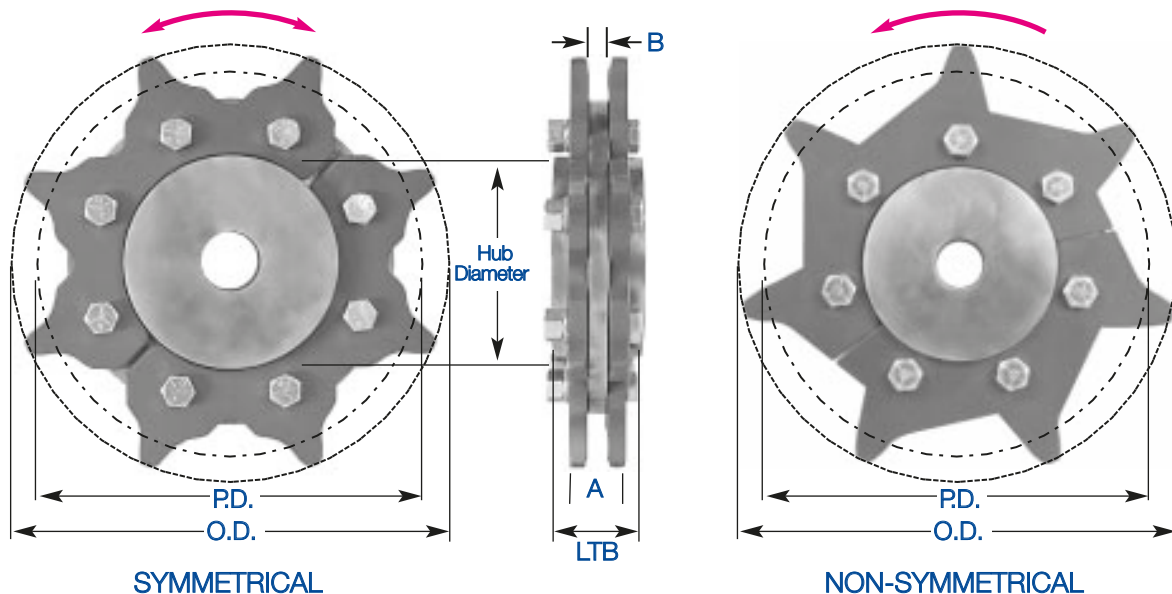
Normal chain bolts are fabricated in a CrMn steel alloy, then machined and heat treated. Core

hardnesses range from 300-400 BHN, with a total carburized case to 550-650 BHN. Effective case depths range from .030" to .040" (.76 to 1.02mm).

Applications

All connecting bolts and accessories are available in stainless steel. Special extended-length bolts can also be manufactured to meet your specific application requirements. Contact Codema for additional information.





Application

Codema drive sprockets provide rugged, reliable service and feature replaceable tooth plates for easy field maintenance. Tooth plates for all 102 and 142 series chain have a reversible, symmetrical tooth profile. 142 DBL, TPL, as well as 175 and 260 series chain use a non-symmetrical tooth profile. All bores and keyways are machined to order.

Non-Symmetrical Sprockets and Tooth Plates

Codema double-strand drive sprockets feature heavy duty, non-symmetrical/non-reversible tooth plates that are field-replaceable for easy maintenance. As always, bores and keyways are machined to order.

All Codema sprocket tooth profiles are induction hardened to 55 Rockwell C and are replaceable. The replacement and maintenance of tooth plate segments does not require removal of the drive shaft, bearings, etc. Codema also designs custom split hub components for retro-fit applications that minimize field labor costs.

Split Hub & Retrofit Kits

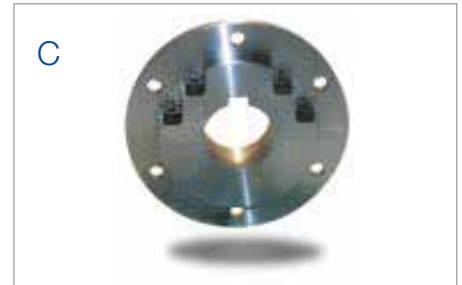
All styles of sprockets and idlers can be purchased in a split hub design, which allows for ease in retrofitting existing conveyors. Once installed, these hubs mate with replacement tooth plates and idler rims for easy field maintenance. Please consult Codema with your application-specific requirements.

Custom sprocket components

A: Replacement sprocket tooth plates (non-symmetrical version shown.)

B: 6-piece split hub kit

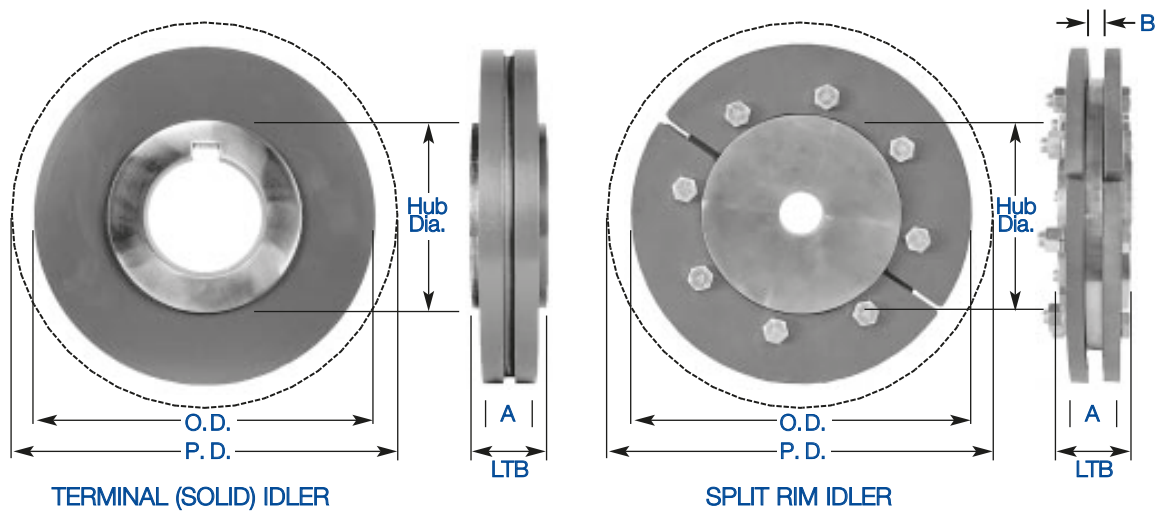
C: 2-piece split-hub kit



	Tooth/ Bolt	P.D.	O.D.	Chain O.D.	A	B	Max. Bore	Hub Diameter	LTB	Weight
102 SERIES SYMMETRICAL ONLY	6TS/6B	8.03" 204mm	8.50 216	9.375 238	1.375 35	.50 12.7	2.4375 62	3.375 86	2.250 57	13 Lbs 5.9 Kg
	8TS/8B	10.49" 266	11.00 280	11.625 295	1.375 35	.50 12.7	3.4375 87	5.25 133	2.25 57	30 13.65
	10TS/10B	12.99" 330	13.50 343	14.375 365	1.375 35	.50 12.7	3.9375 100	7.50 190	2.25 57	50 22.7
142 STD SERIES SYMMETRICAL	6TS/6B	11.18" 284mm	11.8 300	13.25 337	1.97 50	.67 17	3.0 76.2	4.25 108	2.75 70	35 Lbs 15.90 Kg
	7TS/7B	12.88" 327	13.5 343	15.0 381	1.97 50	.67 17	3.9375 100	5.875 149.2	2.75 70	50 22.73
	8TS/8B	14.6" 371	15.25 387	16.69 424	1.97 50	.67 17	5.75 146	7.87 200	2.75 70	84 38.18
	9TS/9B	16.35" 415	17.0 432	18.43 468	1.97 50	.67 17	5.75 146	7.87 200	2.75 70	87 39.55
	10TS/10B	18.09" 459	19.25 489	20.19 513	1.97 50	.67 17	6.50 165	9.50 241	2.75 70	140 63.64
	11TS/11B	19.84" 504	21.06 535	21.94 557	1.97 50	.67 17	7.0 178	11.0 279	3.15 80	165 75
	14TS/14B	25.12" 638	26.37 670	27.24 692	1.97 50	.67 17	7.0 178	11.0 279	4.72 120	255 115.90
142 STD SERIES NON SYMMETRICAL	6TN/6B	11.18" 284mm	11.8 300	13.25 337	1.97 50	.67 17	3.0 76.2	4.25 108	2.75 70	35 Lbs 15.90 Kg
	7TN/7B	12.88" 327	13.5 343	15.0 381	1.97 50	.67 17	3.9375 100	5.875 149.2	2.75 70	50 22.73
	8TN/8B	14.6" 371	15.25 387	16.69 424	1.97 50	.67 17	5.75 146	7.87 200	2.75 70	84 38.18
	9TN/9B	16.35" 415	17.0 432	18.43 468	1.97 50	.67 17	5.75 146	7.87 200	2.75 70	87 39.55
	10TN/10B	18.09" 459	19.25 489	20.19 513	1.97 50	.67 17	6.50 165	9.50 241	2.75 70	140 63.64
	11TN/11B	19.84" 504	21.06 535	21.94 557	1.97 50	.67 17	7.0 178	11.0 279	3.15 80	165 75
	14TN/14B	25.12" 638	26.37 670	27.24 692	1.97 50	.67 17	7.0 178	11.0 279	4.72 120	255 115.90
142 HVY SERIES SYMMETRICAL	7TS/7B	12.88" 327mm	13.5 343	15.0 381	2.75 70	.75 19.05	3.9375 100	5.875 149.2	3.54 90	80 Lbs 36.4 Kg
	8TS/8B	14.6" 371	15.25 387	16.69 424	2.75 70	.75 19.05	5.75 146	7.87 200	3.54 90	98 44.55
	9TS/9B	16.35" 415	17.0 432	18.43 468	2.75 70	.75 19.05	5.75 146	7.87 200	3.54 90	119 54.09
	10TS/10B	18.09" 459	19.25 489	20.19 513	2.75 70	.75 19.05	6.50 165	9.50 241	3.54 90	164 74.55
	11TS/11B	19.84" 504	21.06 535	21.94 557	2.75 70	.75 19.05	7.0 178	11.0 279	3.54 90	210 95.45
	14TS/14B	25.12" 638	26.37 670	27.24 692	2.75 70	.75 19.05	7.0 178	11.0 279	4.72 120	320 145.45

142 HVY SERIES NON SYMMETRICAL	7TN/7B	12.88" 327mm	13.5 343	15.0 381	2.75 70	.75 19.05	3.9375 100	5.875 149.2	3.54 90	80 Lbs 36.4 Kg
	8TN/8B	14.6" 371	15.25 387	16.69 424	2.75 70	.75 19.05	5.75 146	7.87 200	3.54 90	98 44.55
	9TN/9B	16.35" 415	17.0 432	18.43 468	2.75 70	.75 19.05	5.75 146	7.87 200	3.54 90	119 54.09
	10TN/10B	18.09" 459	19.25 489	20.19 513	2.75 70	.75 19.05	6.50 165	9.50 241	3.54 90	164 74.55
	11TN/11B	19.84" 504	21.06 535	21.94 557	2.75 70	.75 19.05	7.0 178	11.0 279	3.54 90	210 95.45
	14TN/14B	25.12" 638	26.37 670	27.24 692	2.75 70	.75 19.05	7.0 178	11.0 279	4.72 120	320 145.45
175 STD SERIES NON SYMMETRICAL ONLY	6TN/6B	13.78" 350mm	14.0 356	16.14 410	2.44 62	1.18 30	4.9375 125	7.28 185	4.72 120	105 Lbs 47.73 Kg
	8TN/8B	17.99" 457	18.25 464	20.35 517	2.44 62	1.18 30	6.5 165	10.0 254.0	4.72 120	175 79.55
	10TN/10B	22.28" 566	22.6 574	24.65 626	2.44 62	1.18 30	9.0 228.6	13.5 343	4.72 120	305 138.6

TERMINAL & SPLIT RIM IDLERS



Terminal Idlers

Solid one-piece terminal idlers are the current industry standard and offer rugged durability for nearly all conveying applications. This design is available for use with any of the chain series, sizes and styles. All idlers are machined to the correct keyway and bore size at time of order.

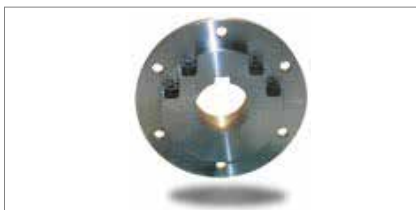
Split Rim Idlers

Removable rim design terminal idlers allow for easy replacement of the worn outer idler contact surface without removing the idler hub and shaft from the conveyor. All rim plates are manufactured and induction hardened to 55 Rockwell C, providing durability and extended life. Replacement rim sets can be purchased separately.

Split Hub & Retrofit Kits

Custom built split hubs are designed for retrofitting most existing conveyors and can be machined with a bolt hole pattern that matches the most suitable sprocket tooth plates or idler rims for your particular application.

Custom-made split rim idlers allow for easy replacement of current conveying system components without removing conveyor shaft assemblies, and can be designed to mate with almost any hub type. Please consult Codema for more information.



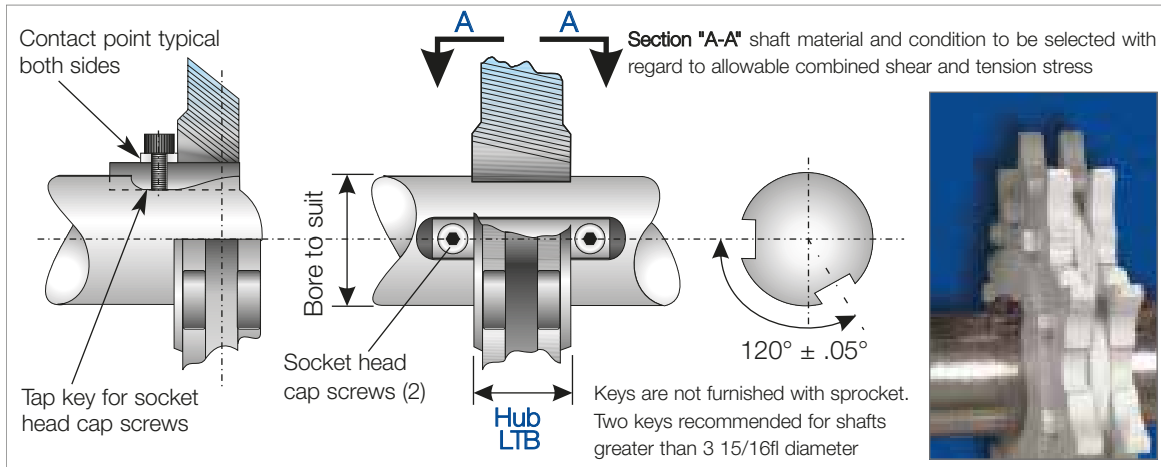
	Idler Size	Idler O.D.	P.D.	Chain O.D.	A	Hub Diameter	LTB	Max. Bore	Bolts Req ^{TMd}	Weight
102 SERIES SOLID ONLY	145	5.70" 145mm	8.00 203	9.375 238	1.25 31.75	QD	1.25 31.75	2.625 66.7	S	10 Lbs 4.5 Kg
	213	8.40" 213	10.48 266	11.625 295	1.25 31.75	QD	1.25 31.75	2.625 66.7	S	20 9.1
	277	10.90" 277	12.83 326	14.17 360	1.25 31.75	QD	1.25 31.75	2.625 66.7	S	30 13.6
142 STD SERIES SOLID	198	7.80" 198mm	11.25 286	13.39 340	1.97 50	4.72 120	2.36 60	2.94 75	S	25 Lbs 11.4 Kg
	289	11.375" 289	14.49 368	16.61 422	1.97 50	7.087 180	2.75 70	3.94 100	S	63 28.6
	321	12.625" 321	15.63 397	17.76 451	1.97 50	7.087 180	2.75 70	3.94 100	S	75 34.1
	345	13.58" 345	16.54 420	18.66 474	1.97 50	9.45 240	3.15 80	6.50 165	S	100 45.5
	437	17.20" 437	19.96 507	22.09 561	1.97 50	9.45 240	3.15 80	6.50 165	S	150 68.2
	557	21.93" 557	24.53 623	26.65 677	1.97 50	8.0 203	4.0 102	6.50 165	S	245 111.4
142 STD SERIES SPLIT RIM	289 SR	11.375" 289mm	14.49 368	16.61 422	1.97 50	7.87 200	2.75 70	3.94 100	8	63 Lbs 28.6 Kg
	321 SR	12.625" 321	15.63 397	17.76 451	1.97 50	7.87 200	2.75 70	3.94 100	8	75 34.1
	345 SR	13.58" 345	16.54 420	18.66 474	1.97 50	7.87 200	2.75 70	6.50 165	8	100 45.5
	437 SR	17.20" 437	19.96 507	22.09 561	1.97 50	9.50 241	2.75 70	6.50 165	10	150 68.2
	557 SR	21.93" 557	24.53 623	26.65 677	1.97 50	11.0 279	3.15 80	6.50 165	11	245 111.4
142 HVY SERIES SOLID	198	7.80" 198mm	11.25 286	13.39 340	2.75 70	S	2.75 70	2.94 75	S	35 Lbs 15.9 Kg
	289	11.375" 289	14.49 368	16.61 422	2.75 70	S	2.75 70	3.94 100	S	75 34.1
	321	12.625" 321	15.63 397	17.76 451	2.75 70	S	2.75 70	3.94 100	S	95 43.2
	345	13.58" 345	16.54 420	18.66 474	2.75 70	9.45 240	3.15 80	6.50 165	S	110 50
	437	17.20" 437	19.96 507	22.09 561	2.75 70	9.45 240	3.15 80	6.50 165	S	185 84.1
	557	21.93" 557	24.53 623	26.65 677	2.75 70	8.0 203	4.0 102	6.50 165	S	305 138.6

142 HVY SERIES SPLIT RIM	289 SR	11.375" 289mm	14.49 368	16.61 422	2.75 70	7.87 200	2.75 70	3.94 100	8	75 Lbs 34.1 Kg
	321 SR	12.625" 321	15.63 397	17.76 451	2.75 70	7.87 200	2.75 70	3.94 100	8	95 43.2
	345 SR	13.58" 345	16.54 420	18.66 474	2.75 70	7.87 200	2.75 70	6.50 165	8	110 50
	437 SR	17.20" 437	19.96 507	22.09 561	2.75 70	9.50 241	2.75 70	6.50 165	10	185 84.1
	557 SR	21.93" 557	24.53 623	26.65 677	2.75 70	11.0 279	3.15 80	6.50 165	11	305 138.6
175 STD SERIES SOLID ONLY	243	9.567" 243mm	13.779 350	16.14 410	2.84 72	7.28 185	3.54 90	4.9375 125	S	80 Lbs 36.4 Kg
	362	14.252" 362	17.992 457	20.35 517	2.84 72	10.0 254	3.54 90	6.5 165	S	175 79.6
	479	18.858" 479	22.283 566	24.65 626	2.84 72	13.5 343	3.54 90	9.0 228.6	S	295 134.1

INSTALLATION & SPARE PARTS

Sprocket and Idler Installation

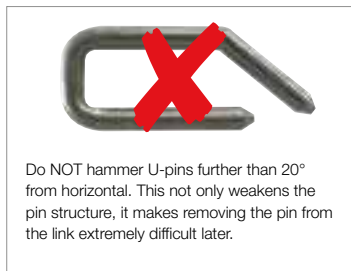
The diagram below illustrates the optimal positioning of the drive sprockets and terminal idler wheels. The key is drilled and tapped completely through and equipped with one socket-head cap screw on each side of the sprocket or idler hub. The head of the socket screw should make contact with the hub and be slightly longer than the key depth itself. (Loctite® or equal should be applied to socket head screws.) Since the key is captured in the keyway, the sprocket or idler is mechanically held in place, eliminating lateral shifting which can cause irreparable damage to the chain.



U-Pin Installation

When using U-pins to connect DBL-series chain links and flights, it is important to always insert the U-pin with the two pointed ends facing away from the direction of travel; that is, towards the yoke (double) end of the chain link. The longer of the stems should be on top (or whichever side is more accessible.)

Once inserted, the U-pin is securely fastened with a few taps from a hammer, bending the upper stem downwards between 15-20°.



CLAMPWASHER INSTALLATION

Applications

Clampwashers are used in combination with our most popular fiAfl style chain bolt, and are easily crimped into the existing groove on either side of this bolt. This fastener has proven its worth over years of service in countless applications, and is for this reason the most popular and cost-effective method of securing chain bolts to links. For corrosive and other specific applications, clamp-washers are also available in stainless steel.

The Fastening Tool

The tool best suited for manually fastening clampwashers is a standard 8-12" cutting nipper, which has been modified with 18-24" tube extensions for increased leverage. This tool, along with instructions for modifying the extensions, is available from Codema.



Precautions

While Codema normally ships conveyor chain assembled into manageable, 8-pitch strand lengths, final field connection of the strands is required. It is imperative that the clampwasher be installed correctly (as illustrated to the left). The two tabs of the clamp-washer must make contact at the time of installation or chain damage will eventually occur.

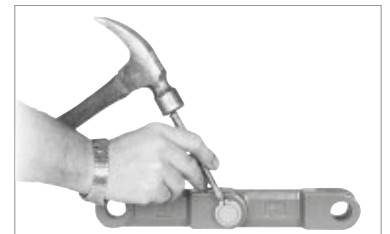
The use of tools such as Vise Grips® or Channel-Locks® will not insure proper installation and should therefore not be used.



Removing Clampwashers

Make sure the links to be separated are on a sturdy, level working surface. Using a cold chisel and hammer, spread the tabs of the clampwasher apart far enough to slide clamp from the connecting pin groove.

REMEMBER: Removing just one clampwasher per pin is necessary to separate chain links.



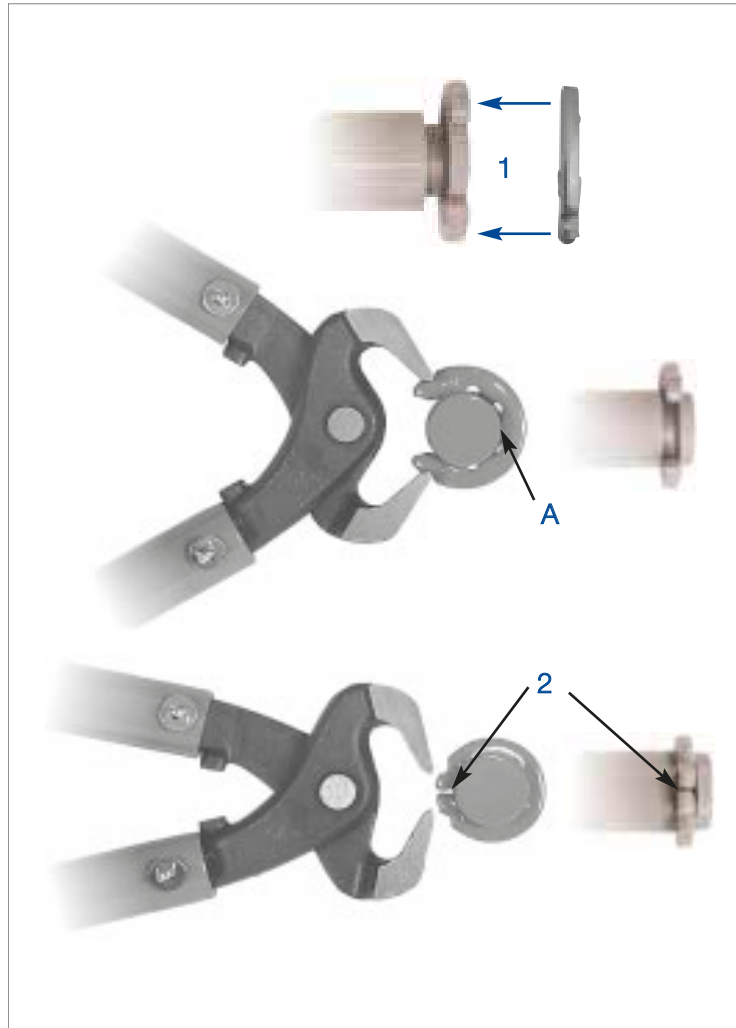
Fastening Clampwashers

Manually position the clampwasher (1) by sliding it over the end of the chain bolt and seating it in the bolt groove so that contact is made at point "A".

Next, crimp the clampwasher with nipper tool until the two tabs touch together (2).

Finally, make sure the clampwasher is firmly and uniformly seated in the groove. If this is not the case, remove the clamp-washer and repeat these steps using a new clamp.

NEVER re-use clampwashers.





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