



# Drop Forged Rivetless Chains

## Features of Drop Forged Rivetless Chain from U.S. Tsubaki

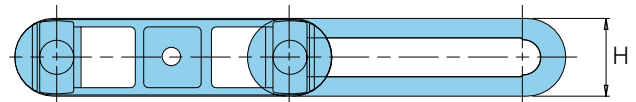
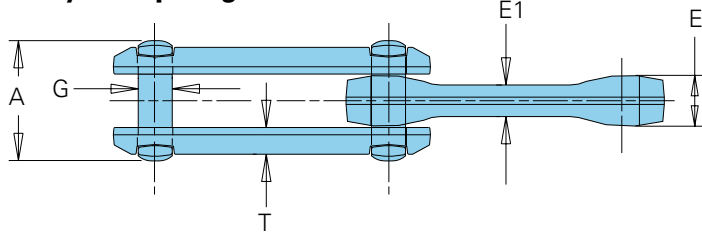
- Precise pitch control provides consistency and reliability, especially for automated systems.
- Smooth bearing areas extend the wear life of the chain.
- Heat-treated parts provide hardness where it matters and reduce the chance of line break.
- Simple design permits quick assembly or dismantling without tools.

Drop Forged Rivetless Chains from the Union Chain Division are available in a range of alloy materials or standard carbon steel. Links can be matched and tagged, magnafluxed, and plated to precise specifications, either as parts or assembled into chains of any length. Union also offers a full line of attachments, matching sprockets, and caterpillar drive chains for all forged rivetless chains.

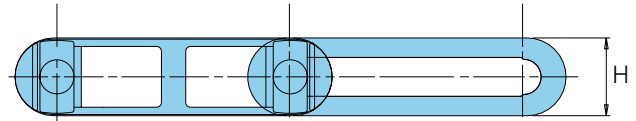
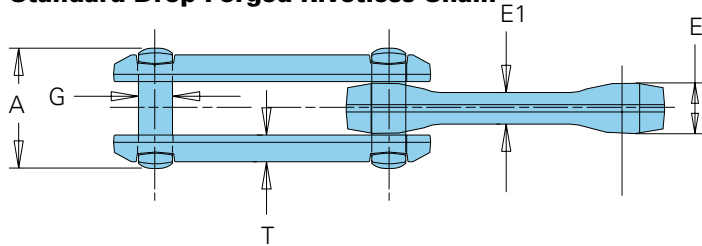
Specify Union Drop Forged Rivetless Chain whenever dependable material handling is required: Power and free units, multi-lane operations, trolley conveyors and overhead handling systems.



**X-Style Drop Forged Rivetless Chain**



**Standard Drop Forged Rivetless Chain**



**X-Style and Standard Drop Forged Rivetless Chain**

All dimensions are in inches unless otherwise indicated.

Chain Number	Pitch	Chain Width			Pin Diameter	Sidebars		Min. Side Flex Radius (in.)	Average Ultimate Strength (lbs.)		Max. Work Load (lbs.)		Avg. Pitches (ft.)	Approx. Weight (lbs./ft.)
		Overall	Inside			Thick.	Height		Alloy Heat-Treated <sup>1</sup>	Heat-Treated	Normal	Freq. Flex.		
			A	E	E1									
X-348 <sup>2</sup>	3.015	1.73	.75	.50	.50	.41	1.09	10.0	24,000		2,600	1,200	3.95	2.2
X-458 <sup>2</sup>	4.031	2.19	1.00	.63	.63	.47	1.38	24.0	60,000	48,000	4,000	1,900	2.98	3.2
468	4.031	3.19	1.59	1.13	.75	.41	1.88		70,000			2,98	7.5	
X-658 <sup>2</sup>	6.031	2.19	1.00	.63	.63	.47	1.38		48,000			1,99	2.7	
X-678 <sup>2</sup>	6.031	3.03	1.28	.81	.88	.72	2.00	35.0	100,000	85,000	7,100	3,300	1.99	6.7
698	6.031	3.75	1.56	1.00	1.13	.56	2.56		150,000	130,000	10,800	5,200	1.99	11.4
998	9.031	3.75	1.56	1.00	1.13	.63	2.53		150,000	130,000	10,800	5,200	1.33	9.0

Indicates this chain is normally stocked. All others are made-to-order.

Note: Magna-flux inspected chain is available.

Component hardness: BHN 344 (Nom.) = Carbon steel chains; BHN 380 (Nom.) = Alloy steel chains.

<sup>1</sup>ANSI/SAE 8642

<sup>2</sup>The prefix "X" designates a design proportioned to flex transversely on a shorter radius. The outside bars are made with a mid-pitch panel that strengthens the sidebar and prevents material from falling through the link. X-Styles are used on overhead conveyors and other special applications. Attachments shown on the following pages fit both Standard and X-Style Chain.

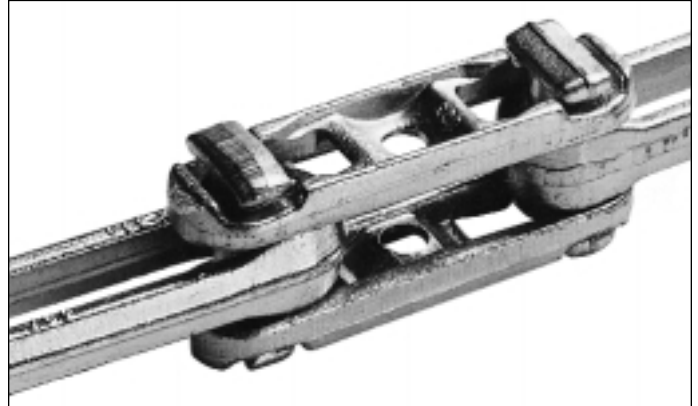
To locate compatible sprockets for your chain, refer to the Product Cross-Reference in Section D.

Note: Dimensions are subject to change. Contact Union Chain to obtain certified prints for design and construction.



# UNION CHAIN DIVISION - DROP FORGED RIVETLESS CHAINS

## UWL Drop Forged Rivetless Chain



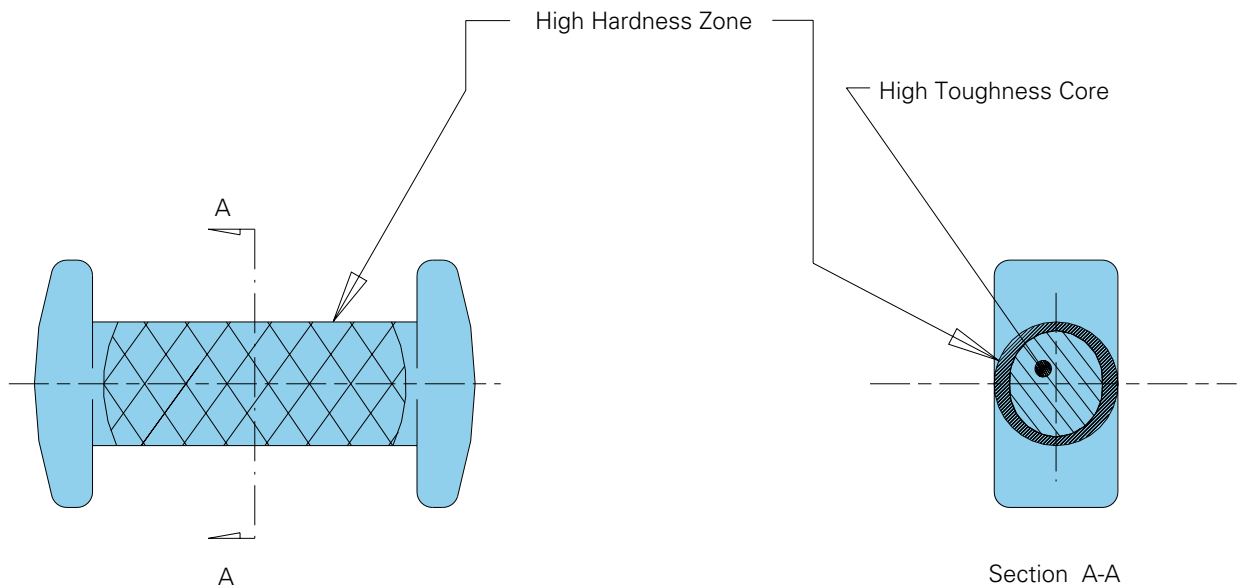
### UWL (Ultra Wear Life) Drop Forged Rivetless Chains

Ultra Wear Life Drop Forged Rivetless Chain extends wear life of rivetless chain. Tests under real-life conditions have proven that UWL chain lasts 40 to 50 percent longer than ordinary rivetless chain.

This extraordinary performance has been achieved with special steels and a proprietary pin hardening process. Since pin wear is the major limiting factor with rivetless chain, Union's specially produced pins greatly increase the chain's wear life.

UWL Drop Forged Rivetless Chain is available in X-348, X-458, X-678, 698 and barloop styles.

### Higher Hardness Pin for "Ultra Wear Life" Performance



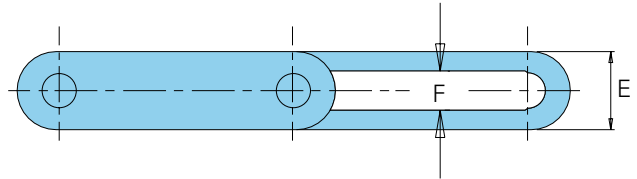
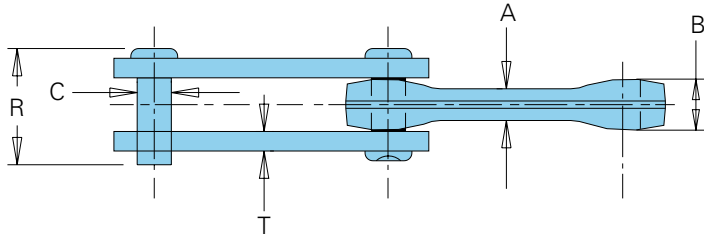
## Barloop Chains

Barloop Chains consist of a standard forged rivetless inside block, fabricated steel sidebars, and cold drawn steel pins.

Barloop Chain offers the advantage of a flat sidebar for welding attachments. The pin is securely locked in the sidebars

eliminating both the wear between the pin and sidebar and the possibility of the chain coming apart when slack exists.

Union offers Barloop Chain with a nut and bolt assembly that rotates. This permits easy assembly and quick replacement.



## Barloop (Bar Link) Chains

All dimensions are in inches unless otherwise indicated.

Chain Number	Pitch	Dimensions							Average Ultimate Stgth.(lbs.)	Average Pitches per Foot	Approx. Weight (lbs./ft.)
		A	B	C	E	F	T	R			
S-348 <sup>1</sup>	3.015	.50	.75	.50	1.06	.53	.25	1.75	24,000	3.95	2.4
S-458	4.031	.63	1.02	.63	1.38	.69	.31	2.06	48,000	2.98	3.5
S-678	6.031	.81	1.31	.88	2.00	1.00	.50	3.00	85,000	1.99	8.6
S-698	6.031	1.00	1.56	1.13	2.69	1.25	.50	3.13	130,000	1.33	13.2
S-998	9.031	1.00	1.56	1.13	2.69	1.25	.50	3.13	130,000	1.33	10.4

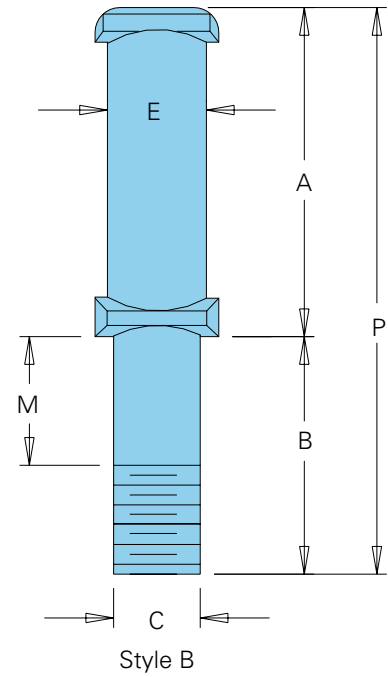
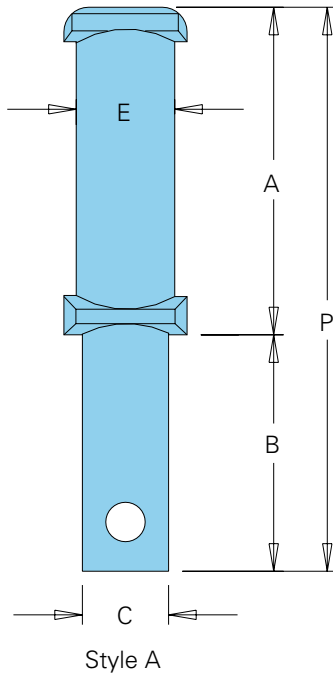
Indicates this chain is normally stocked. All others are made-to-order.

<sup>1</sup>Standard chain inventory features nut and bolt construction.

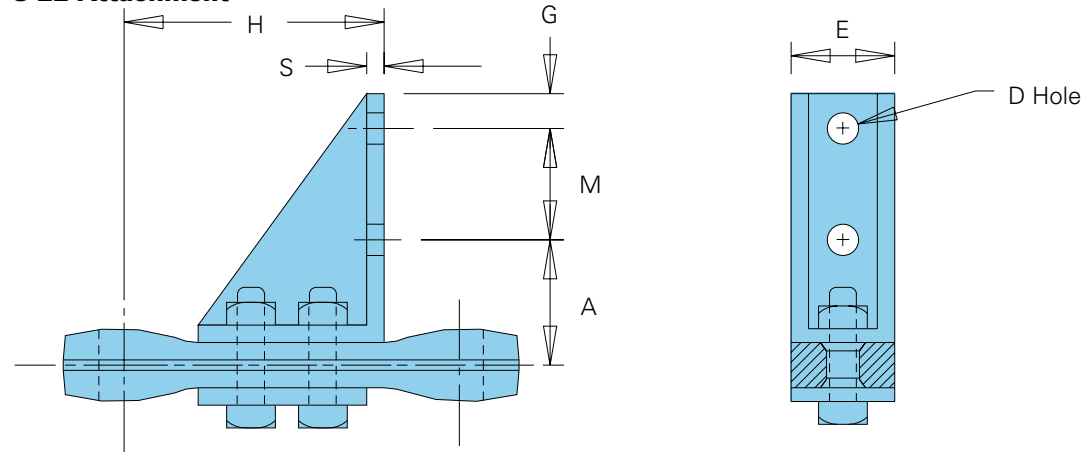
To locate compatible sprockets for your chain, refer to the Product Cross-Reference in Section D.

Note: Dimensions are subject to change. Contact Union Chain to obtain certified prints for design and construction.

### Extended Pin



### S-22 Attachment



### Drop Forged Rivetless Chain Attachments

All dimensions are in inches unless otherwise indicated.

Attach. Number	Chain Number	A	B	C	D	E	G	H	M	P	S	Approx. Weight (lbs./ft.)
Extended Pin <sup>1</sup>	X-458	2.25	1.13	.50		.63			.31	3.38		.3
	X-678	3.13	1.50	.75		.88			.19	4.63		1.5
	X-678	3.13	1.50	.88		.88			.19	4.63		1.6
	998	3.88	1.75	.75		1.13			.38	5.63		1.9
S-22	X-458	2.25			.56	1.38	.63	3.18	2.00		.31	2.0
	X-678	2.88			.68	1.81	.88	4.75	2.25		.31	4.7

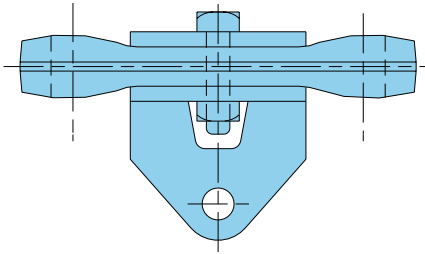
<sup>1</sup>Attachment pins also available with hexnut and lock washer.  
Attachments other than those shown available upon request.

To locate compatible sprockets for your chain, refer to the Product Cross-Reference in Section D.

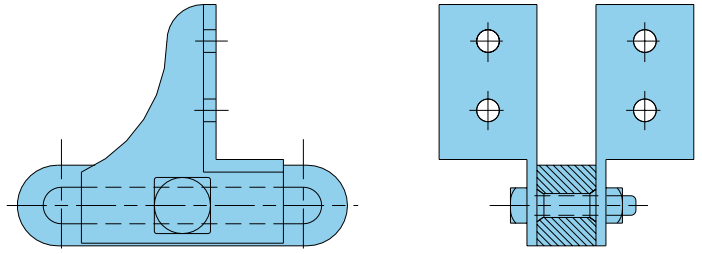
Note: Dimensions are subject to change. Contact Union Chain to obtain certified prints for design and construction.

The following are examples of additional attachments available with Drop Forged Rivetless Chain. Attachments are also available for special applications.

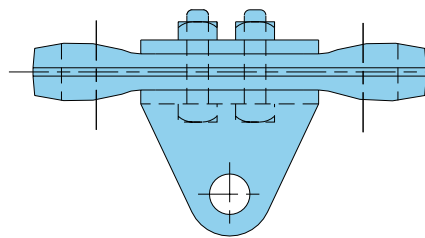
**A-22 Attachment**



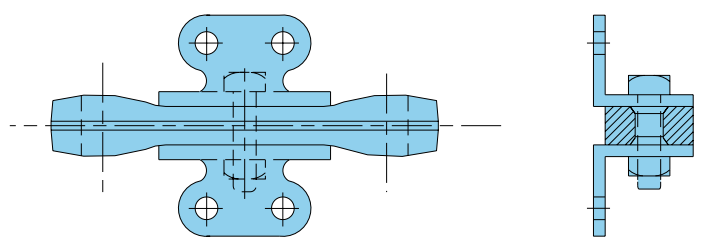
**F-2 Attachment**



**A-53 Attachment**



**K-2 Attachment**

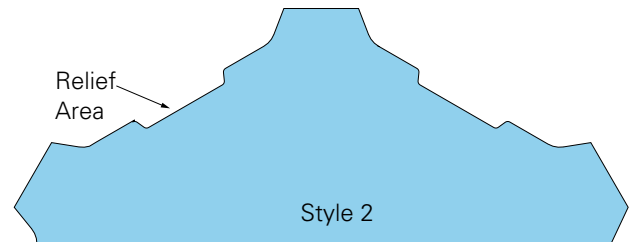
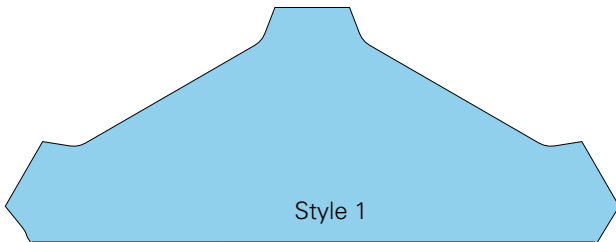


**Sprockets for Drop Forged Rivetless Chain**

Drop Forged Rivetless Sprockets are designed to work with the chain and attachments. Some setups, such as slider attachments on overhead slaughter house lines, require extra clearance that is not part of standard sprocket construction (Style 1).

Our specially developed sprocket (Style 2) has a "relief area". This keeps the chain from riding out of the sprocket pocket and reduces premature joint wear.

Select the right sprocket for your application. Contact Union Chain if you have any questions.



Standard sprockets are not designed for some applications like overhead slaughter house lines where the attachment requires extra clearance.

Drop Forged Rivetless Sprockets from Union have a "relief area" that allows for attachment protrusion. This means better articulation and longer wear life.



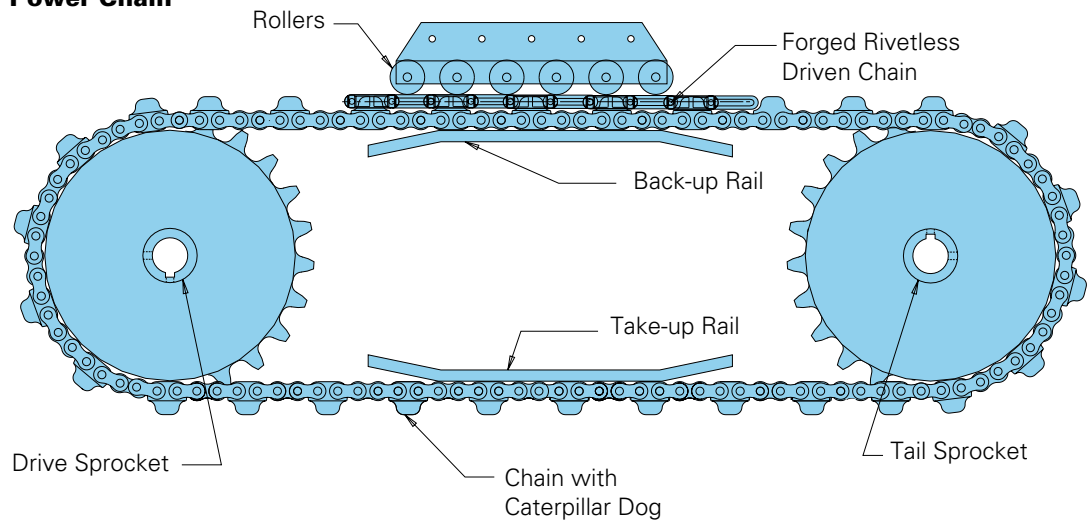
# UNION CHAIN DIVISION - DROP FORGED RIVETLESS CHAINS

## Caterpillar Drive (Power) Chains

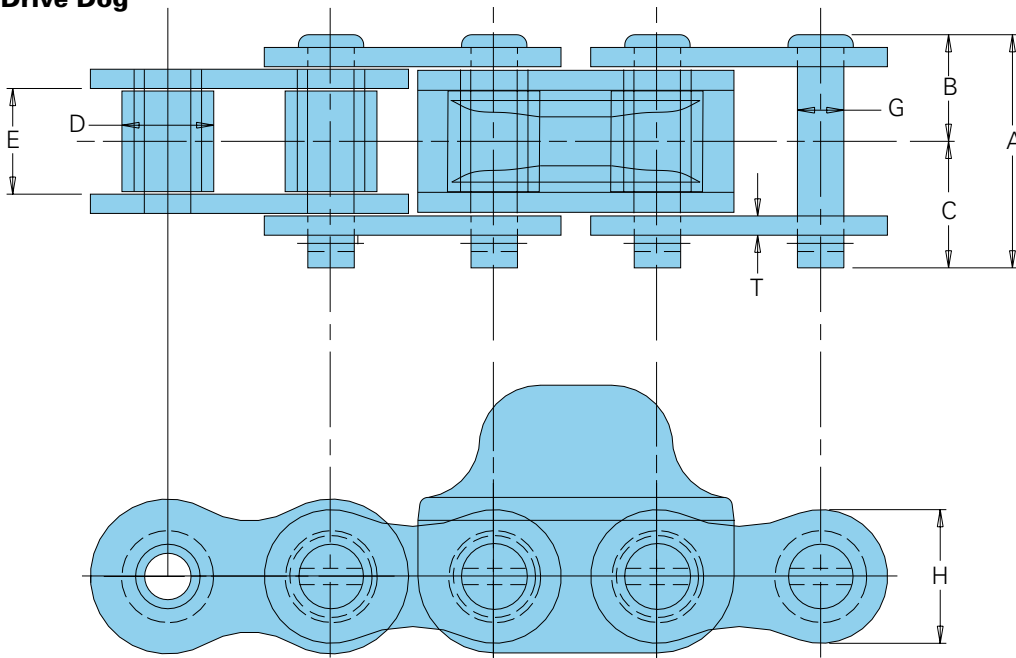
Caterpillar Drive Chains are vital in driving drop forged chain conveyors, so they must deliver fatigue-free operation. The Union Caterpillar Drive Chain features high-quality roller chain with drive dogs made of one-piece forged, induction-hardened steel. The entire assembly is designed to operate flawlessly in combination with our forged rivetless chain. Our chain also meets ANSI standards.



### Power Chain



**Drive Dog**



**Caterpillar Drive Chain**

All dimensions are in inches unless otherwise indicated.

Chain Number	Pitch	Chain Width				Diameter		Sidebars		Drive Dog Pitch Spacing	Avg. Ult. Strength (lbs.)	Approx. Weight (lbs./ft.)
		Overall	Pin Head to CL	Pin End to CL	Inside Width	Roller	Pin	Thickness	Height			
		A	B	C	E	D	G	T	H			
160/348	2.000	2.64	1.23	1.41	1.25	1.13	.56	.25	1.90	6	58,000	8.3
160/458	2.000	2.64	1.23	1.41	1.25	1.13	.56	.25	1.90	4 or 6	58,000	8.3 or 10.0
160/678	2.000	2.64	1.23	1.41	1.25	1.13	.56	.25	1.90	6	58,000	9.8

Indicates this chain is normally stocked. All others are made-to-order.

Note: Power chains are available with "cam yokes" (normally every 4th pitch) or outboard rollers (normally every 6th pitch).

To locate compatible sprockets for your chain, refer to the Product Cross-Reference in Section D.

Note: Dimensions are subject to change. Contact Union Chain to obtain certified prints for design and construction.