MicroSpan Chain

MicroSpan®
Chain

SpanTech®

Contents

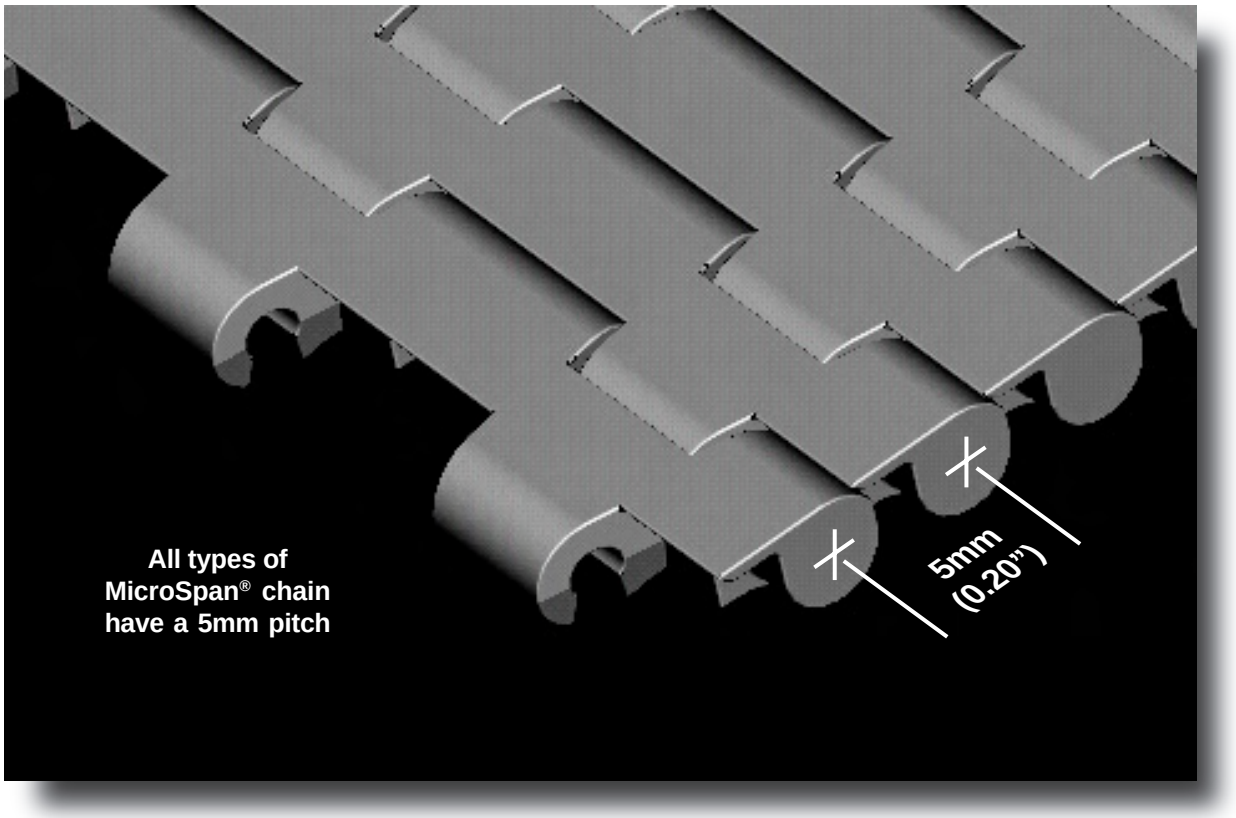
MicroSpan® Chain

Overview

SpanTech has developed a new concept in plastic chains. MicroSpan® chain was developed for the company's Powered Transfer program. Powered Transfers are devices that fill the space between the end of one conveyor and the next. They are used when "end to end" product movement is required and conventional chutes or idler rollers will not work. To learn more about SpanTech's Powered Transfer program, visit our website at **www.spantechllc.com**.

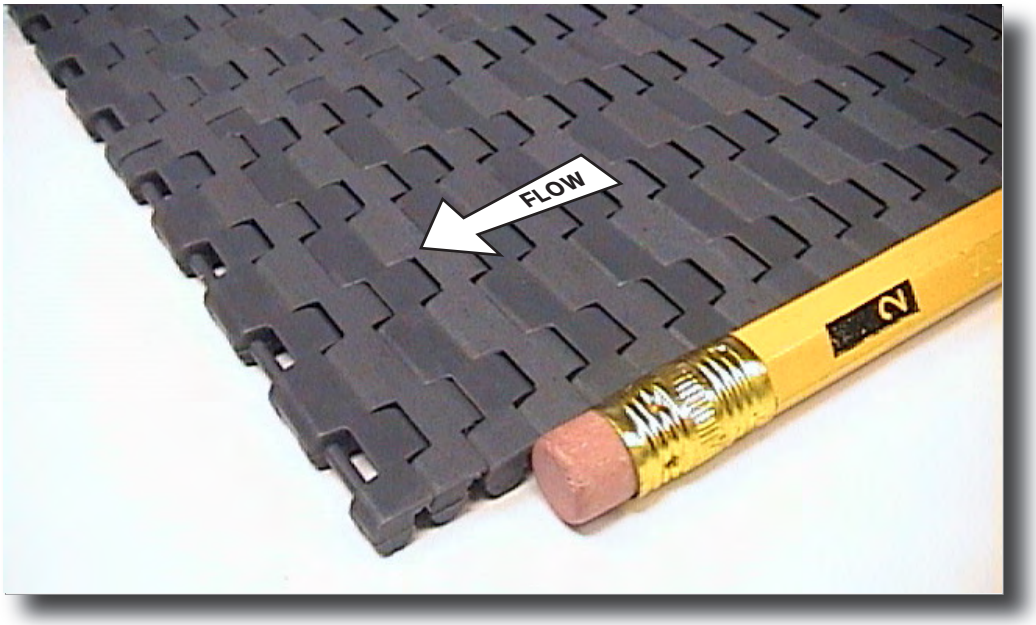
MicroSpan® Chain Types

MicroSpan® chain is made of acetal plastic, and has a charcoal grey color. It is a very small, all-metric design available in 4mm (0.16") and 6mm (0.24") thicknesses. It has a 5mm (0.20") chain pitch (*below*).

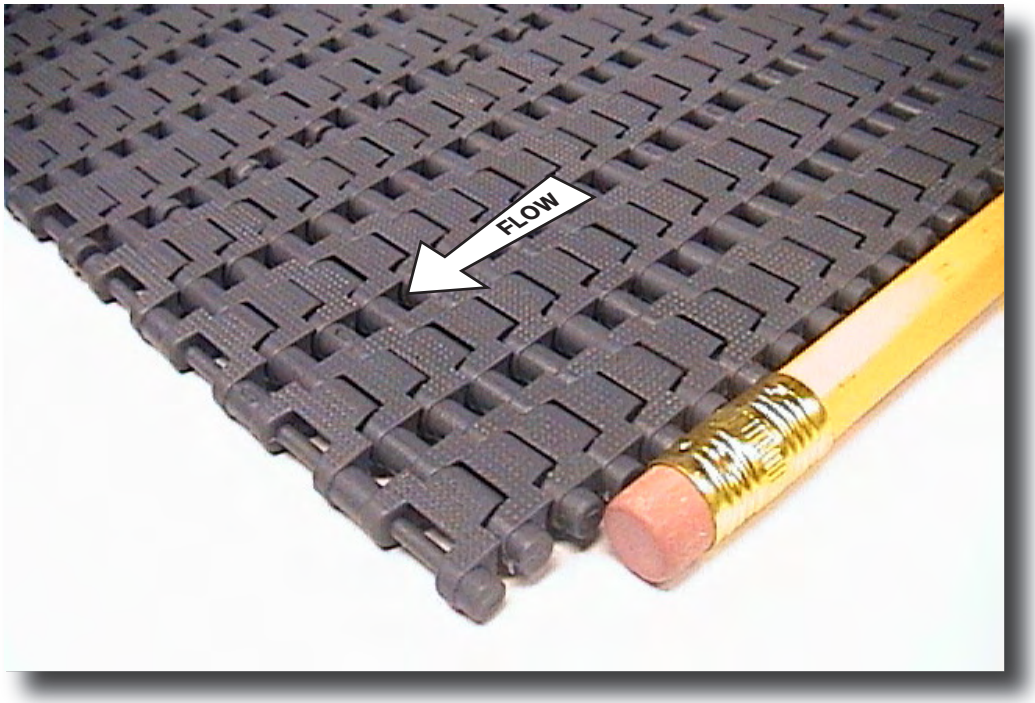


There are **four** basic types of MicroSpan® chain: 4mm Flat Top, 4mm Raised High Friction, 6mm Raised High Friction, and now 6mm Flat Top.

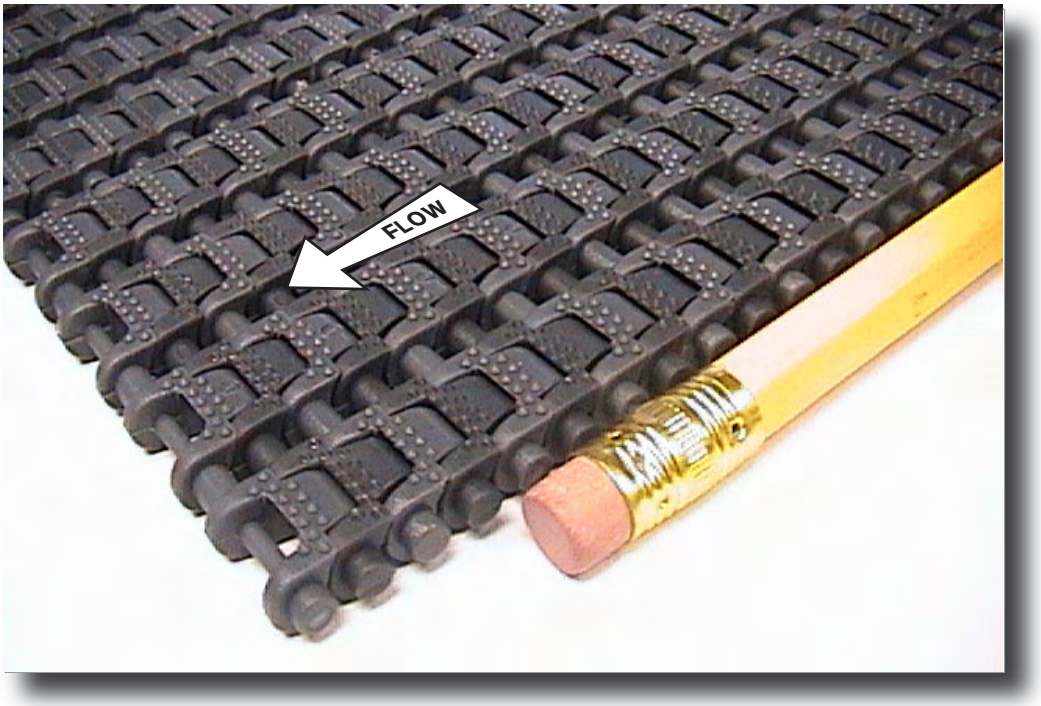
- **4mm Flat Top** MicroSpan® (*below*). This chain is 4mm (0.16”) thick and features a smooth surface.



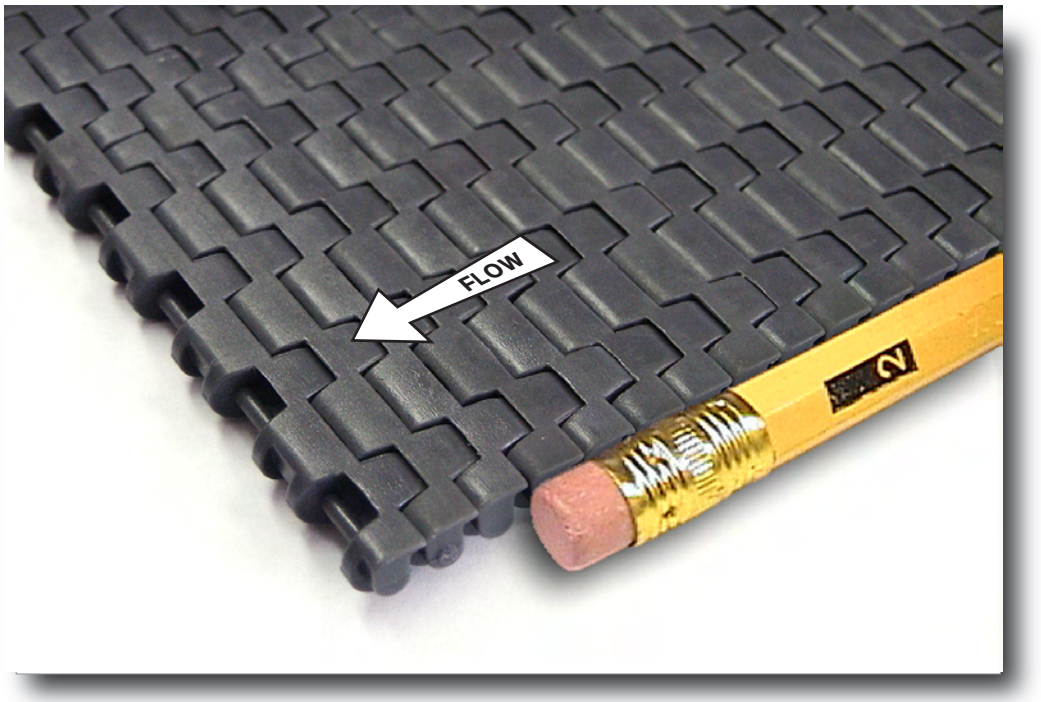
- **4mm Raised High Friction** MicroSpan® (*below*). This chain is 4mm (0.16”) thick and has raised points on its surface. It is used on inclines where the product surface is soft and the points can aid in gripping the product. Note the open rod segments in the photo (*below*); the drive sprocket teeth interface with and drive the chain at this point. This open feature allows more debris to pass through the chain.



- **6mm Raised High Friction** MicroSpan® (*below*). Used in applications where a stronger chain is required; 6mm chain is more than twice as strong as 4mm chain.

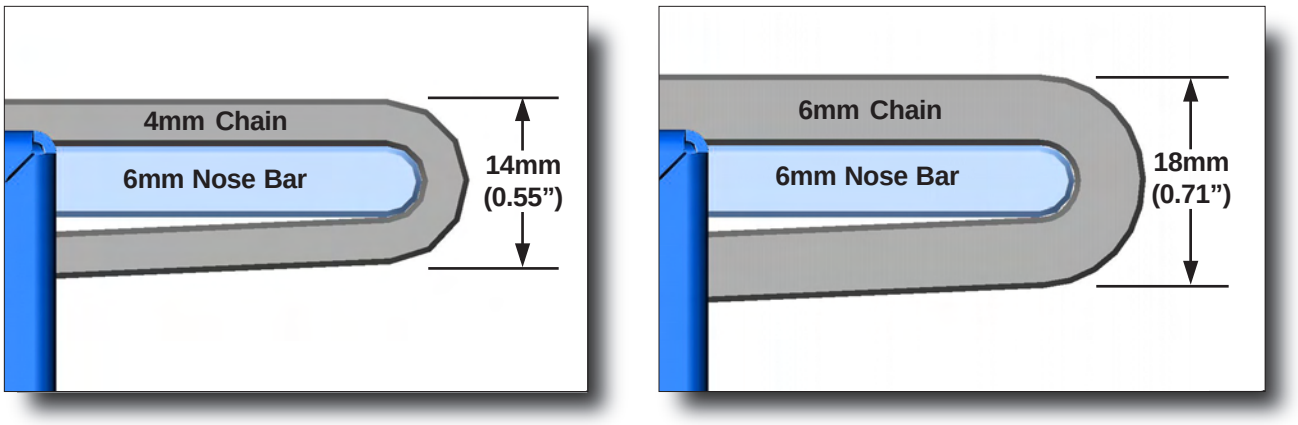


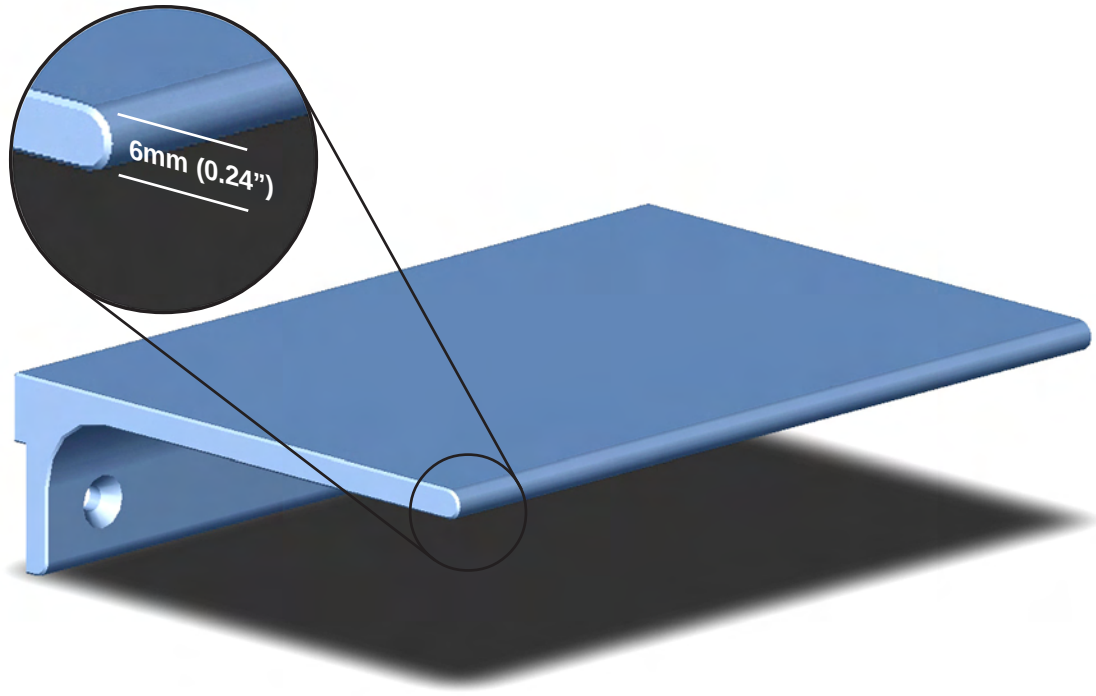
- **6mm Flat Top** MicroSpan® (*below*). The 6mm chain available in a Flat Top design.



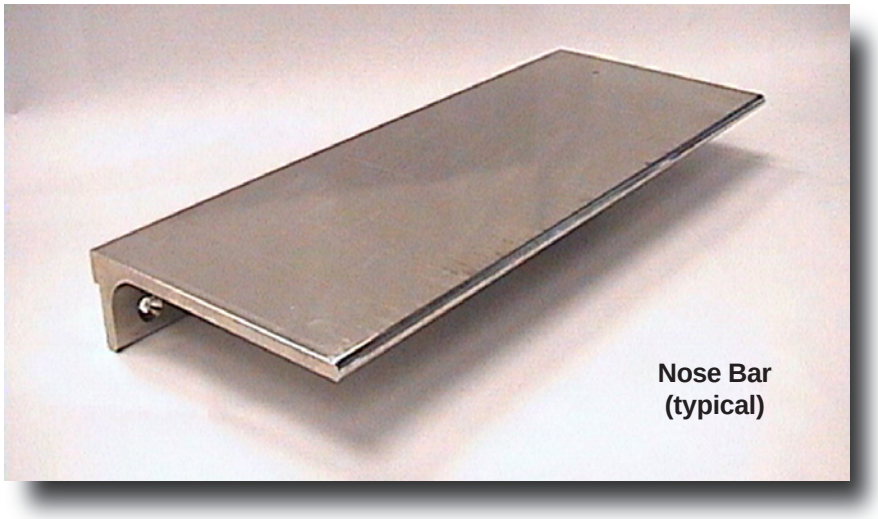
The Nose Bar

MicroSpan® chain is designed to run on a small Nose Bar. The Bar thickness is 6mm (0.24”) with a 3mm (0.12”) radius on the end.

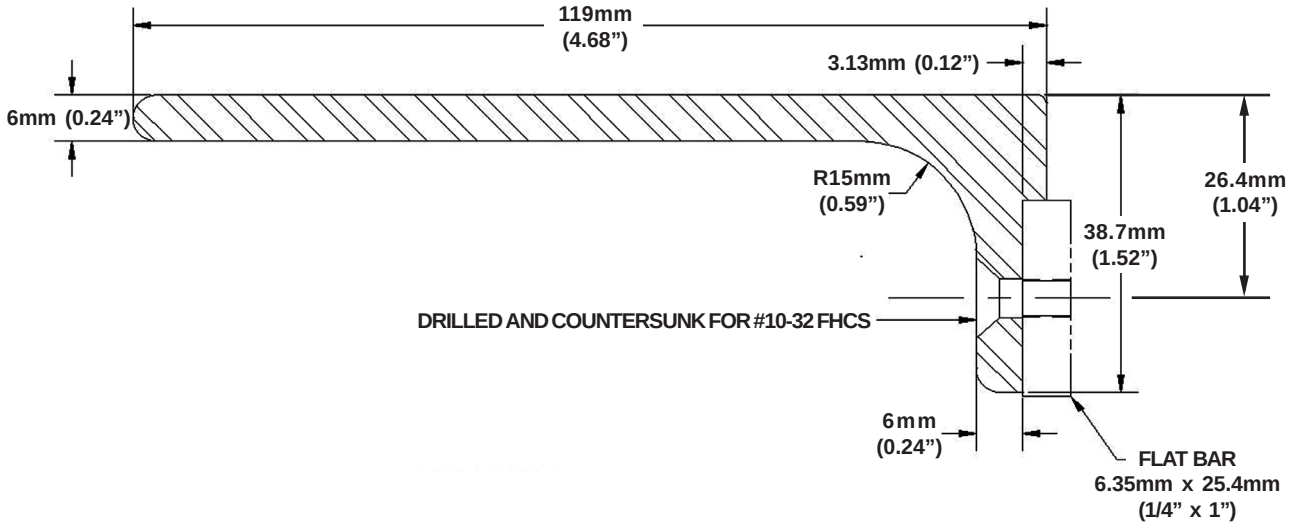




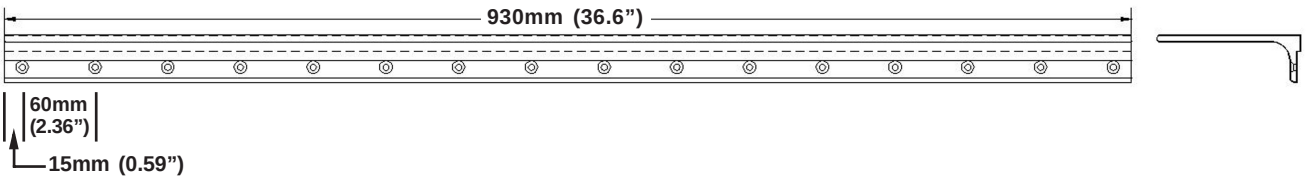
The Nose Bar (*above*) has been developed by SpanTech to withstand the high wear and heat generated by the application. The Nose Bar is made of extruded #6063 aircraft grade aluminum. The extrusion is drilled and countersunk, then hard plated with a nickel alloy. This nickel plating can withstand high pressure washdown applications.



Nose Bar Section View

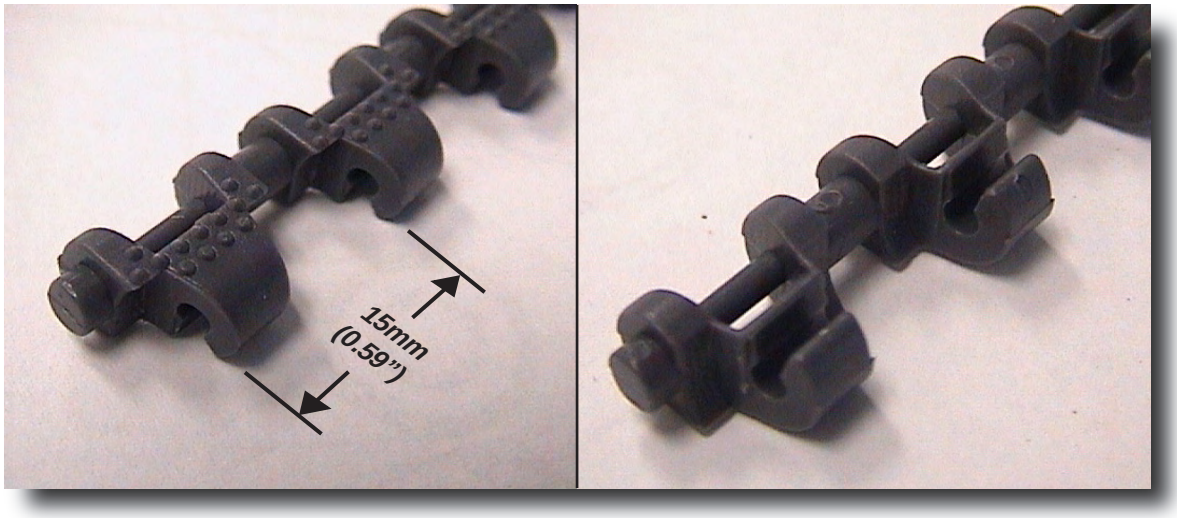


Nose Bar
(Stock Extrusion)



Chain Fabrication

MicroSpan® chain has a snap fit design. One side of the link has a hook; the other side has a pin (*below*). There is no independent rod.

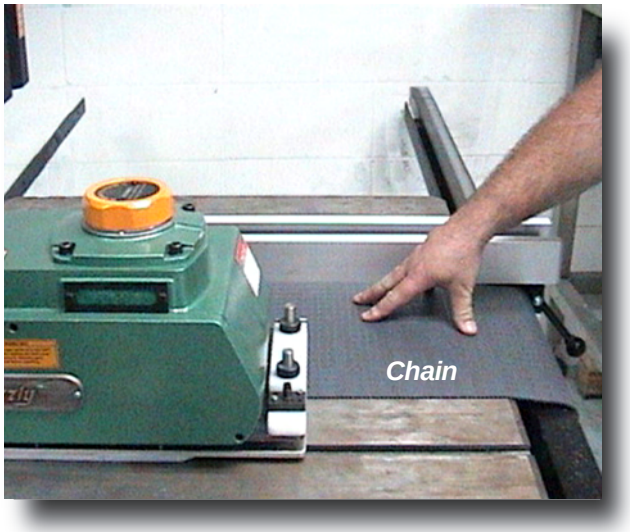


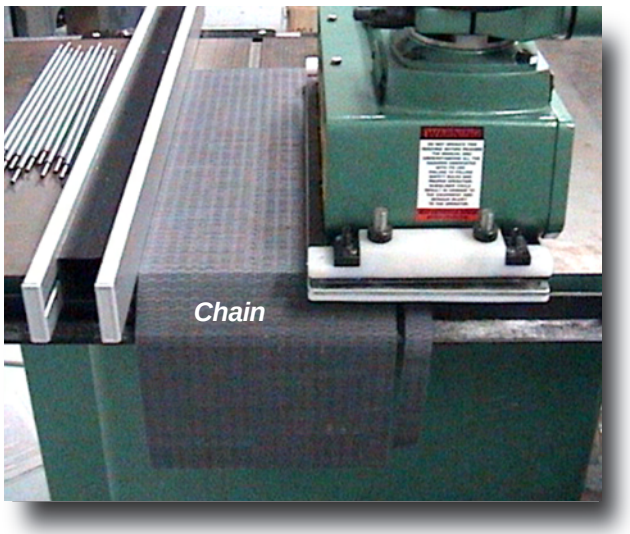
The chain elements are molded in two lengths: 60mm (2.36") and 120mm (4.72"). The width module (*above*) is 15mm (0.59").

The chain is assembled in a "brickwork" pattern. The standard width for MicroSpan® stock is 300mm (11.81"); a standard roll is 15.24m (50 ft.) in length.

Chain Widths

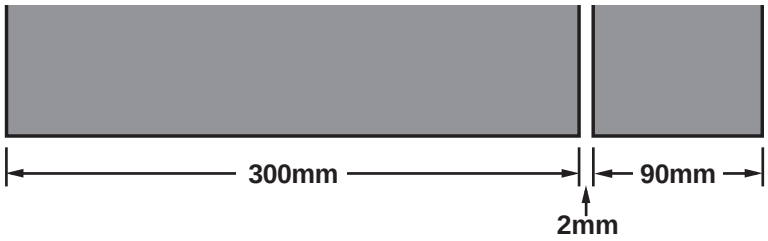
MicroSpan® chain stock is 300mm (11.81") wide, and is cut to width on a conventional table saw. Span Tech uses a special blade, but conventional carbide-tipped wood blades can also be used. A top piece is used to hold down the chain and ensure a smooth cut. SpanTech uses a power feeder for additional safety and convenience.





The chain can be cut to widths starting at 90mm (3.54”) and increasing in 15mm (0.59”) increments.

Effective chain widths greater than 300mm can be achieved by combining the 300mm (11.81”) chain with an additional chain (90mm [3.54”] shown as example, *below*), with a 2mm (.08”) gap in between.



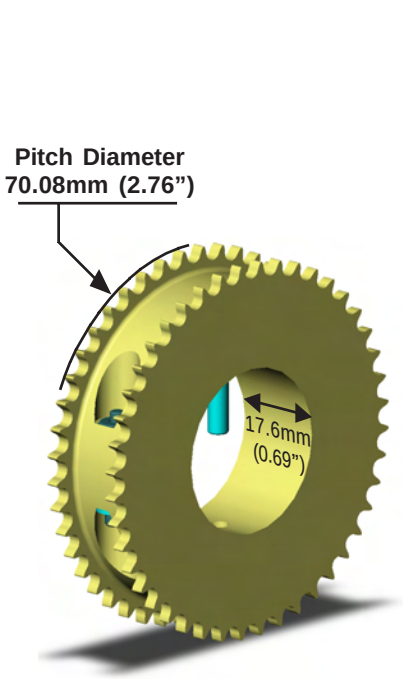
In this way, a given facility can have many different MicroSpan® conveyor widths, all made with the same convenient, single-width product.

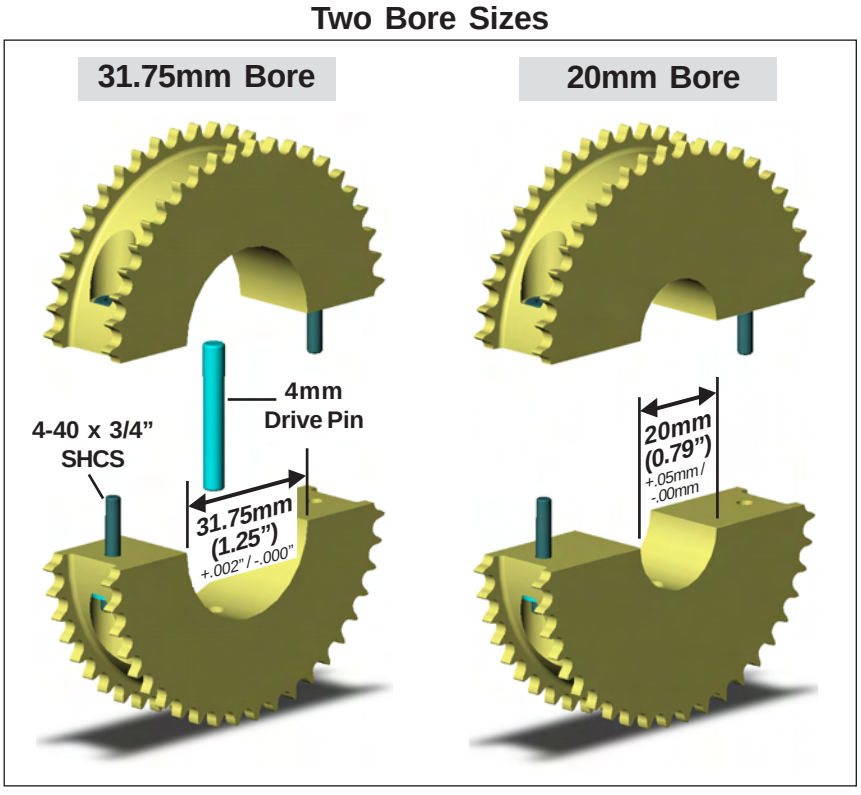
Metric	English
90mm	3.54”
105mm	4.13”
120mm	4.72”
135mm	5.31”
150mm	5.90”
165mm	6.50”
180mm	7.09”
195mm	7.68”
210mm	8.27”
225mm	8.86”
240mm	9.45”
255mm	10.04”
270mm	10.63”
285mm	11.22”
300mm	11.81”

MicroSpan® Sprockets

Standard Split Sprocket

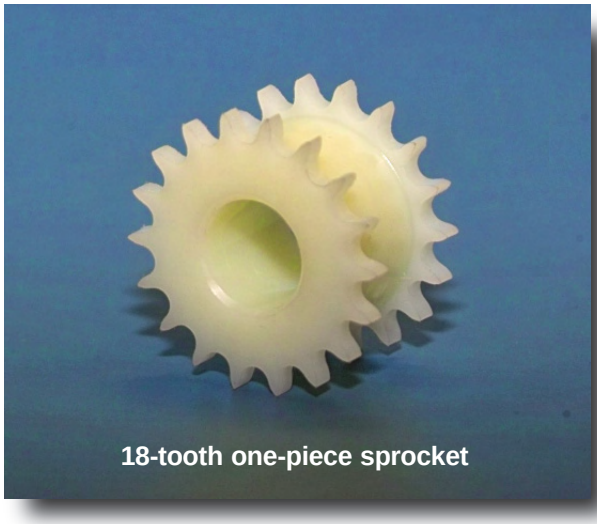
The standard MicroSpan® Sprocket is a two-piece, bolt-together design. The 44-tooth sprocket is made of Nylon, and has a light beige color. It is available in two bore sizes: 31.75mm (1.25”) and 20mm (0.79”). The two sprocket halves are identical.

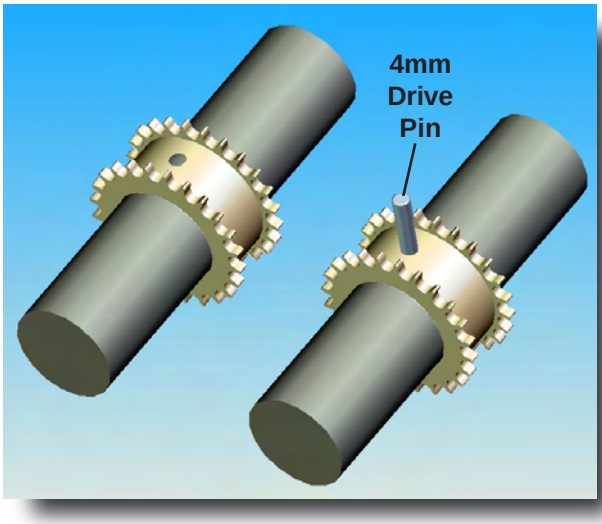




Special One-Piece Sprockets

SpanTech can provide machined one-piece sprockets for various applications.

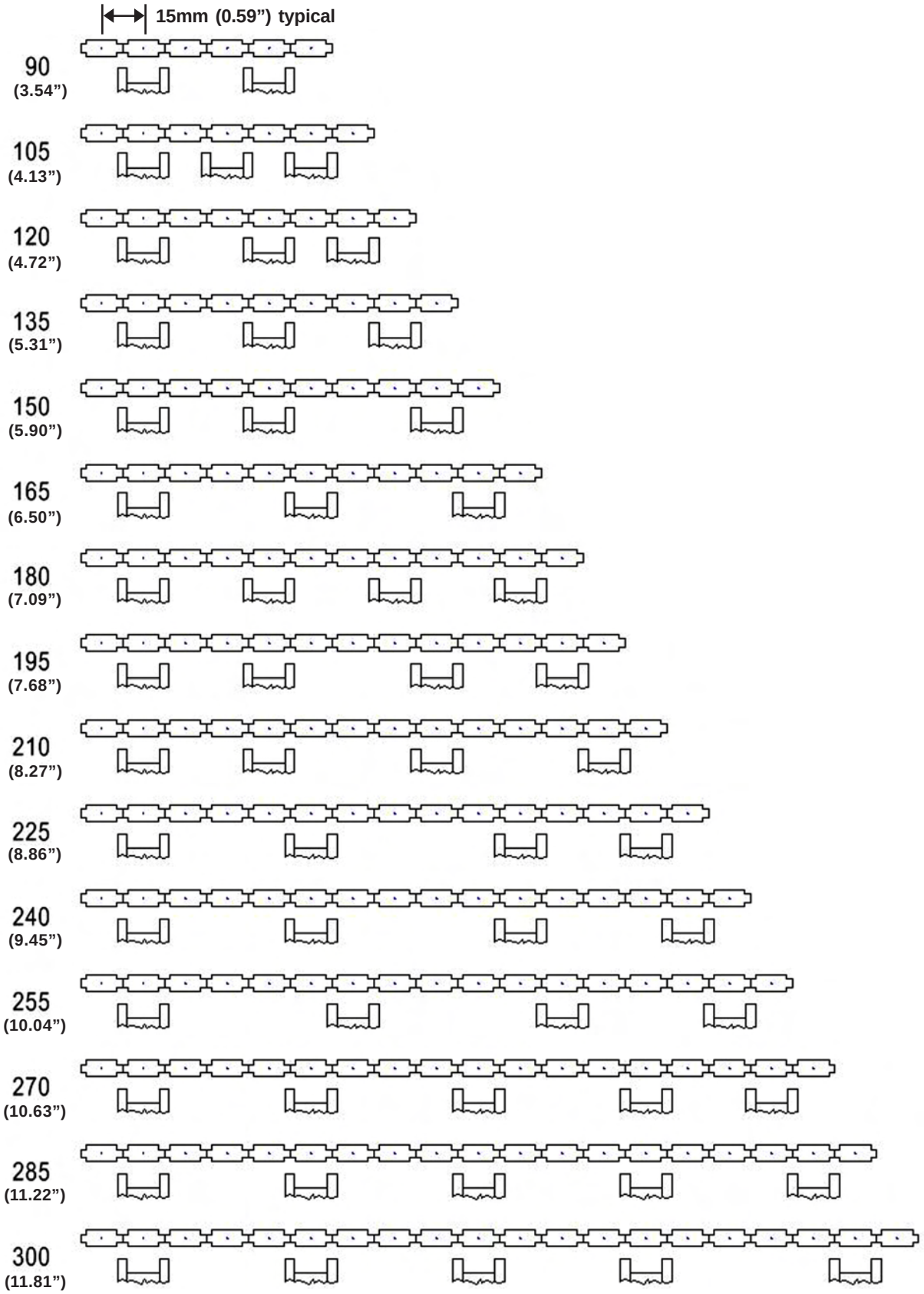




MicroSpan® One-Piece Sprocket Specifications

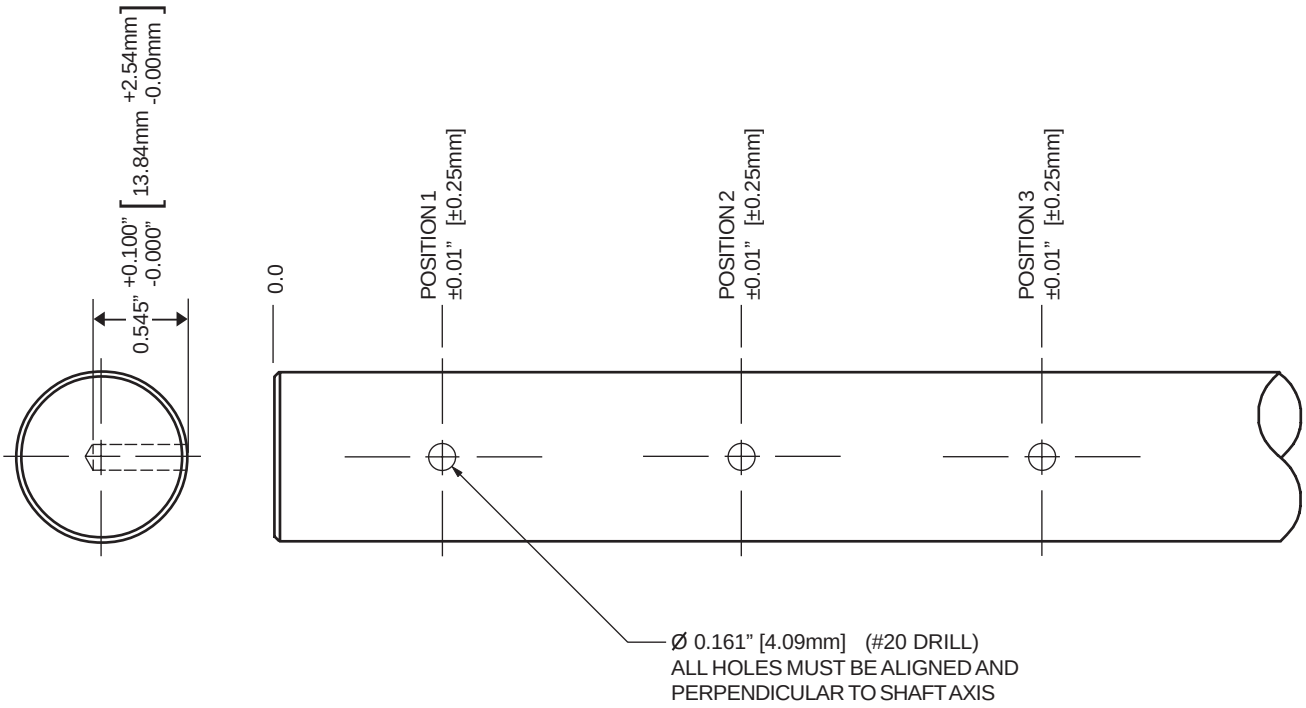
Number of Teeth	Pitch Diameter	Outside Diameter	Standard Bore +.05mm / -.00mm (+.002" / -.000")
29	46.24mm (1.8206")	48.97mm (1.928")	31.75mm (1.25")
28	44.65mm (1.7581")	47.37mm (1.865")	31.75mm (1.25")
27	43.07mm (1.6956")	45.77mm (1.802")	25.40mm (1.0")
26	41.48mm (1.6331")	44.17mm (1.739")	25.40mm (1.0")
25	39.89mm (1.5706")	42.57mm (1.676")	25.40mm (1.0")
24	38.30mm (1.5081")	40.97mm (1.613")	25.40mm (1.0")
23	36.72mm (1.4456")	39.37mm (1.550")	19.05mm (0.75")
22	35.13mm (1.3832")	37.77mm (1.487")	19.05mm (0.75")
21	33.54mm (1.3207")	36.17mm (1.424")	19.05mm (0.75")
20	31.96mm (1.2583")	34.57mm (1.361")	19.05mm (0.75")
19	30.37mm (1.1959")	32.94mm (1.297")	12.70mm (0.5")
18	28.79mm (1.1336")	31.34mm (1.234")	12.70mm (0.5")
17	27.21mm (1.0712")	29.74mm (1.171")	12.70mm (0.5")
16	25.63mm (1.0090")	28.12mm (1.107")	12.70mm (0.5")

Standard Sprocket Layout
90mm (3.54”) through 300mm (11.81”) Chain Widths

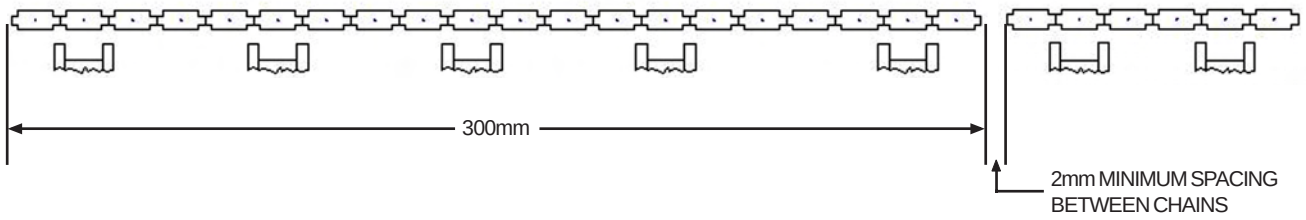


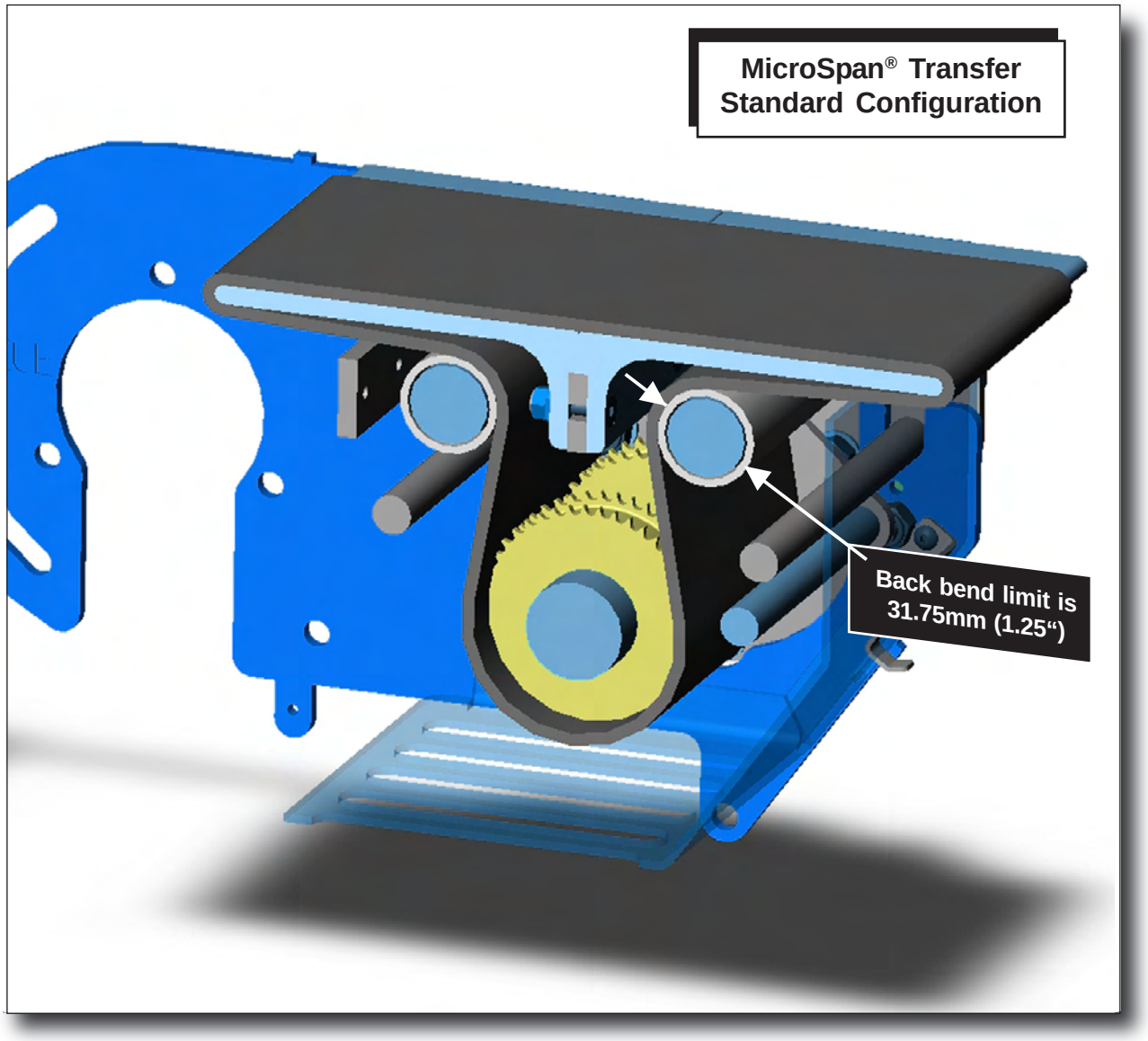
MICROSPAN® SPROCKET
MOUNTING SPECIFICATIONS

Sprocket Locations on Shaft



Chain Widths Exceeding 300mm





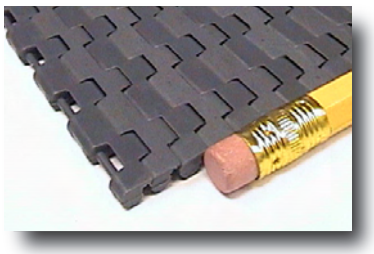
Note on Torque Values

All torque values provided on the following pages are based upon a MicroSpan® Transfer having a standard chain path configuration (above). The stated values reflect the maximum operational torque. Any variations or modifications of the standard configuration will alter the actual torque values.

Consult SpanTech for information regarding applications greater than 300mm (11.81”) in width.

Note on Maximum Load Values for 6mm Raised Chain

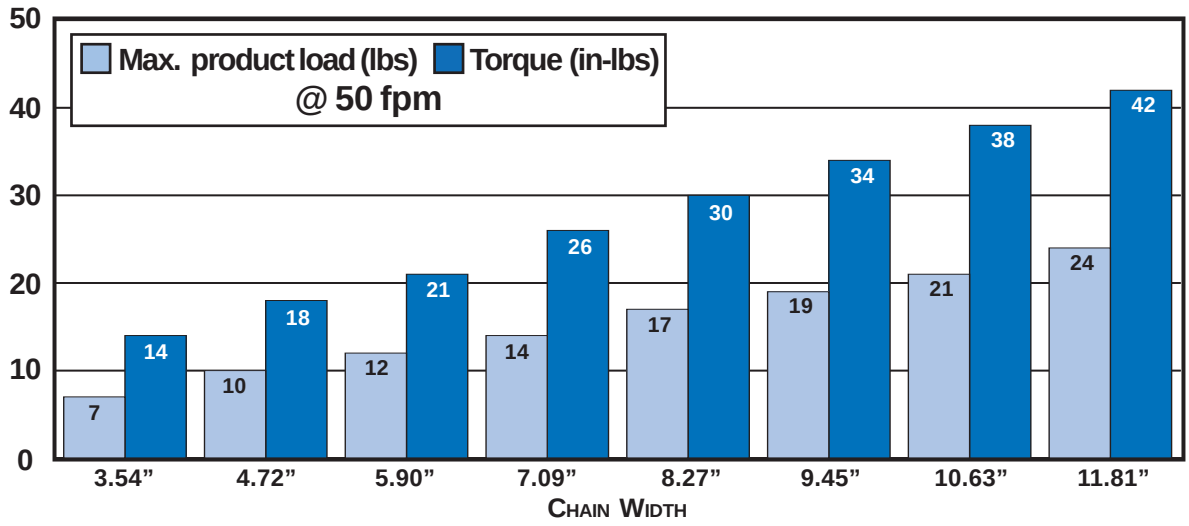
The Maximum Load data for 6mm Raised Chain, shown on ***pages 18 and 19****, is based on the actual performance of a MicroSpan® test conveyor that is 2.29m (7.5 ft.) in length. The test conveyor has a center drive and standard plated aluminum nose bars on each end. A dead load is applied to the midpoint of the unit; the load is held in accumulation. Torque is measured with a dynamometer. The Maximum Load values shown in the charts are based on 40 percent of the failure point. The center drive has standard 44-tooth sprockets on standard spacing. The chain wrap on the drive sprocket ranges from 113 degrees to 138 degrees.*

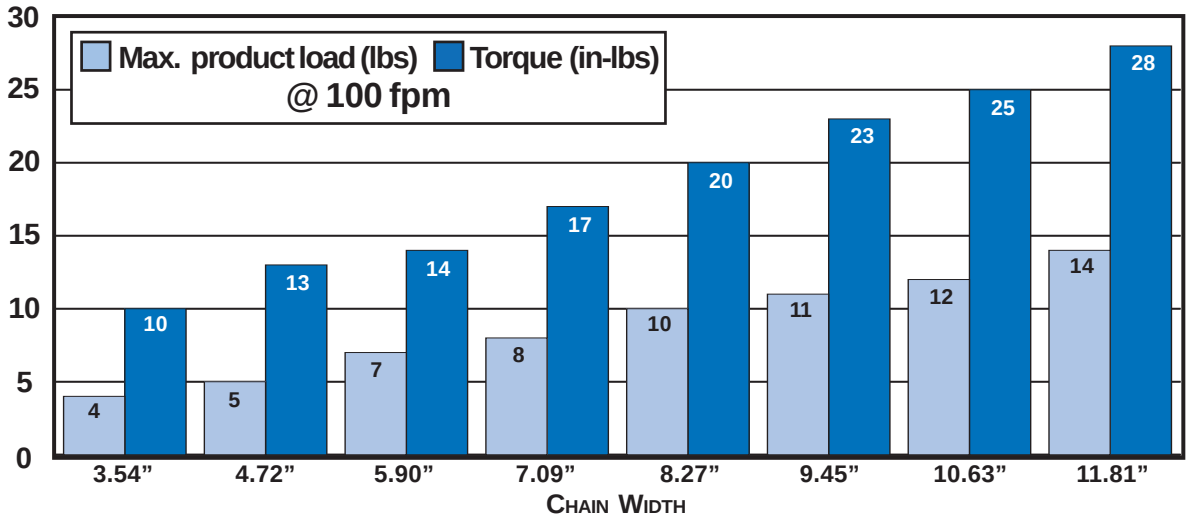


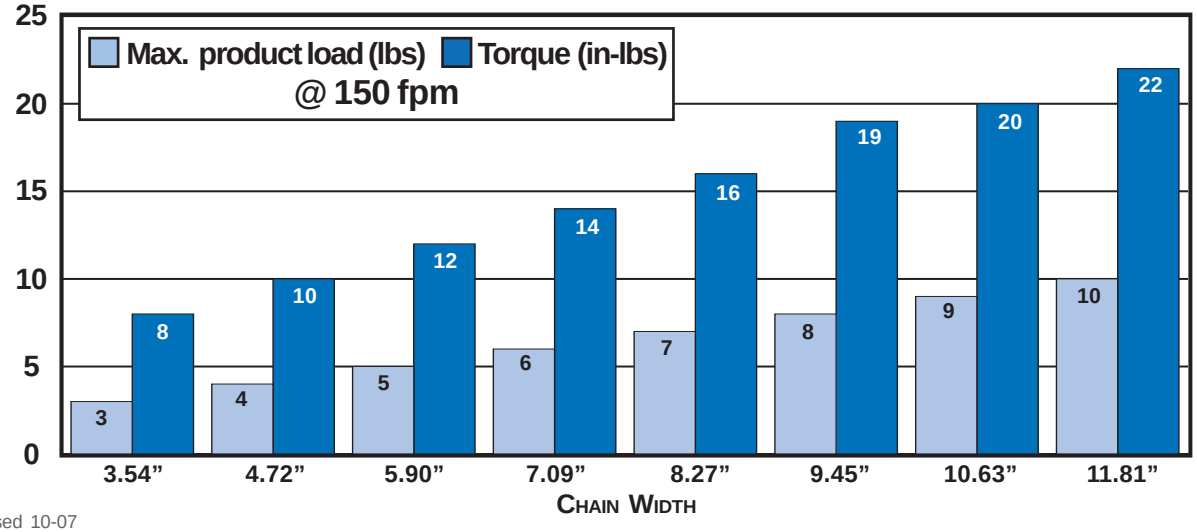
Maximum Load and Torque Ratings

U.S. STANDARD UNITS

4MM FLAT TOP CHAIN – 3.54" THROUGH 11.81" WIDTHS







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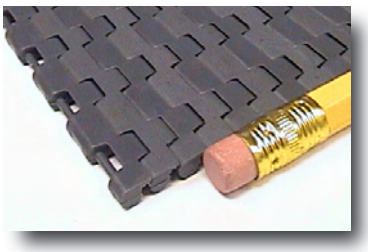
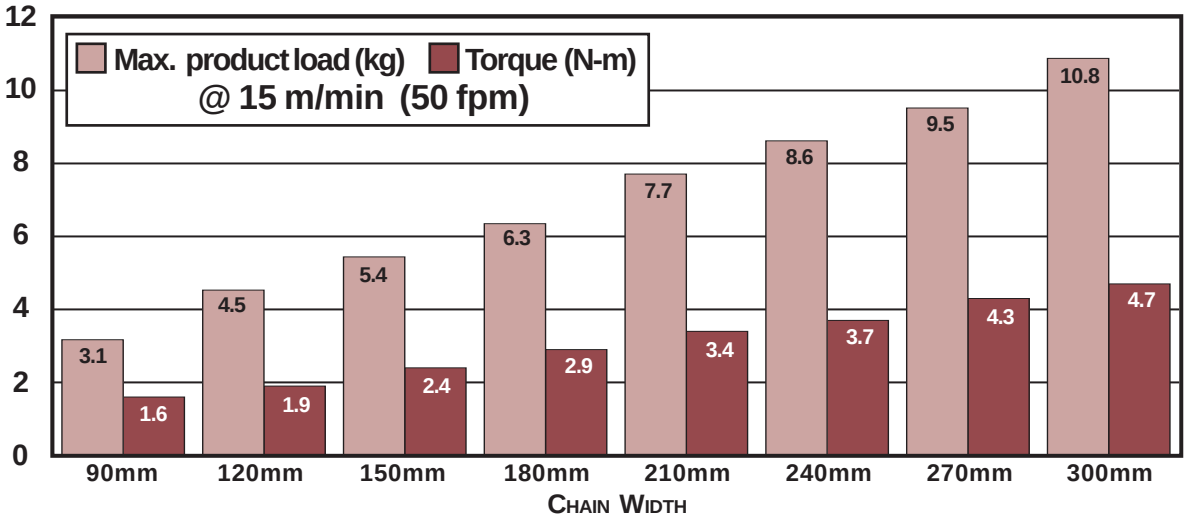
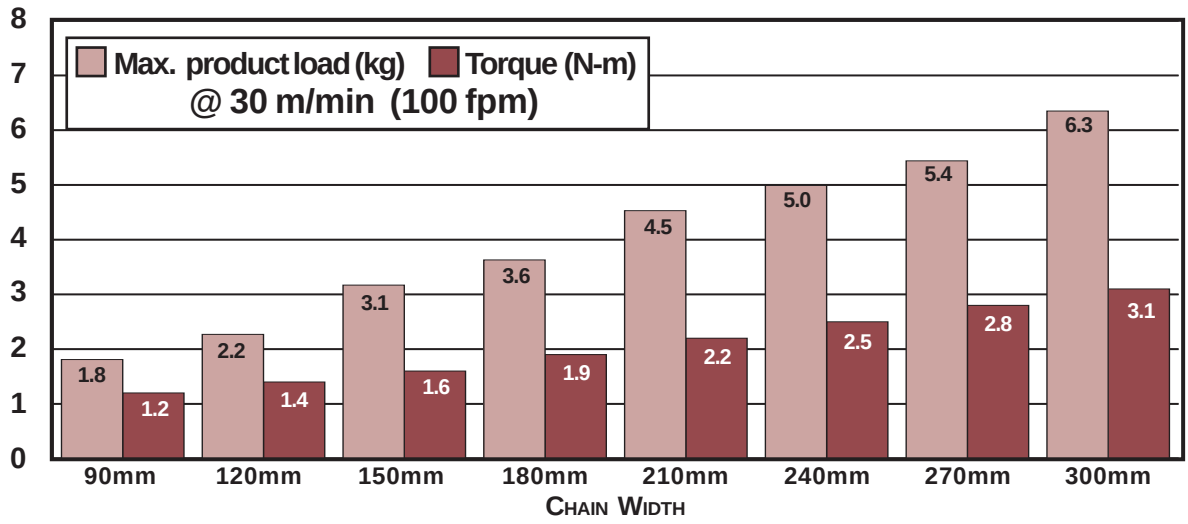


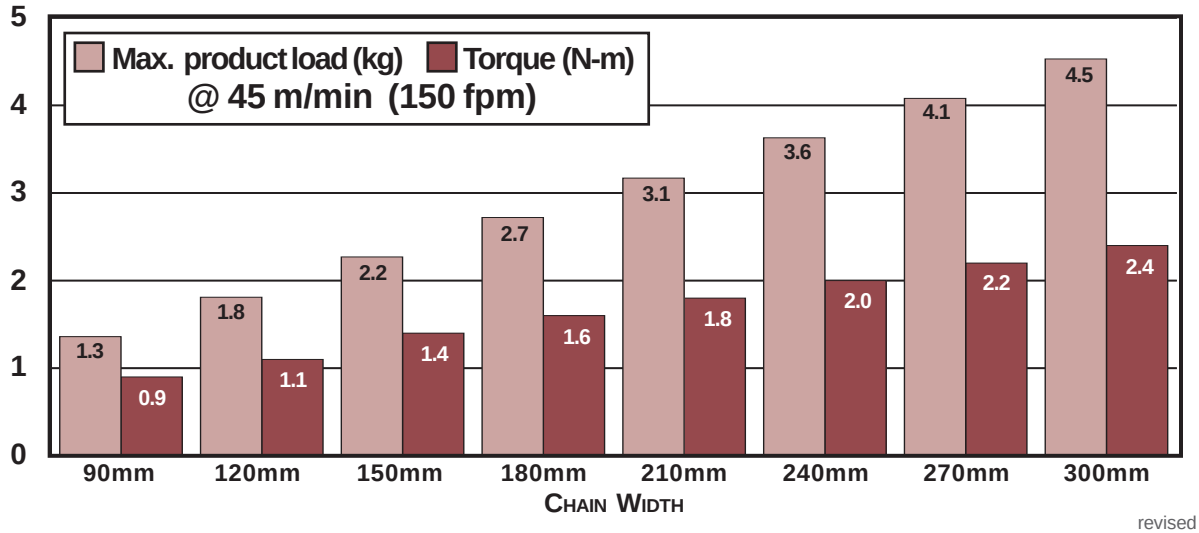
Maximum Load and Torque Ratings

METRIC UNITS

4mm Flat Top Chain – 90mm through 300mm Widths







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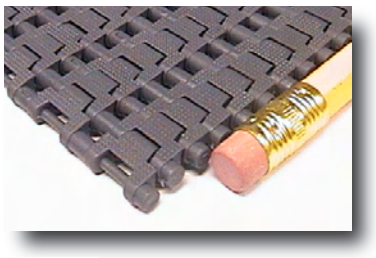
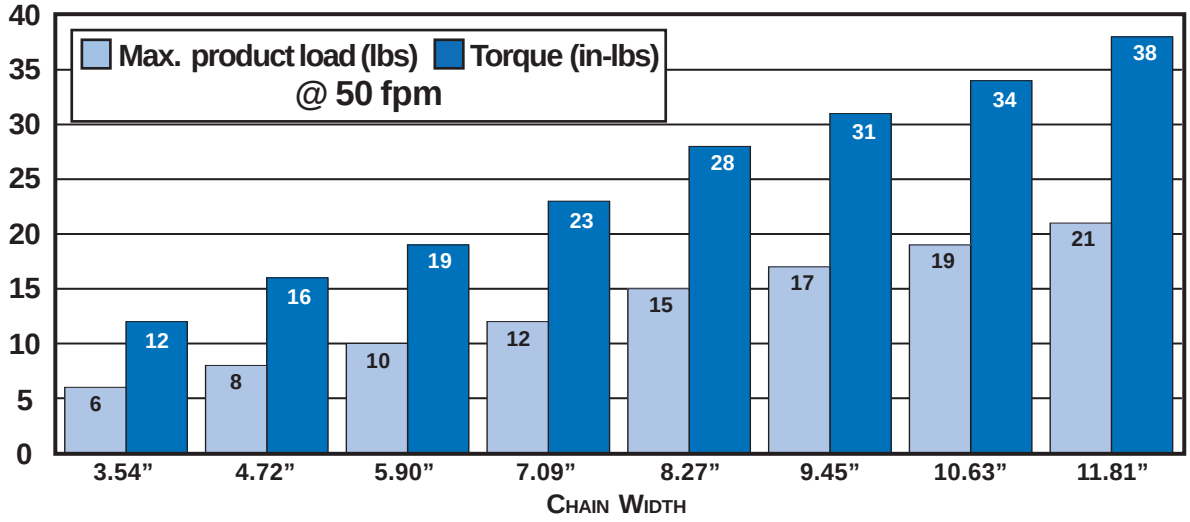
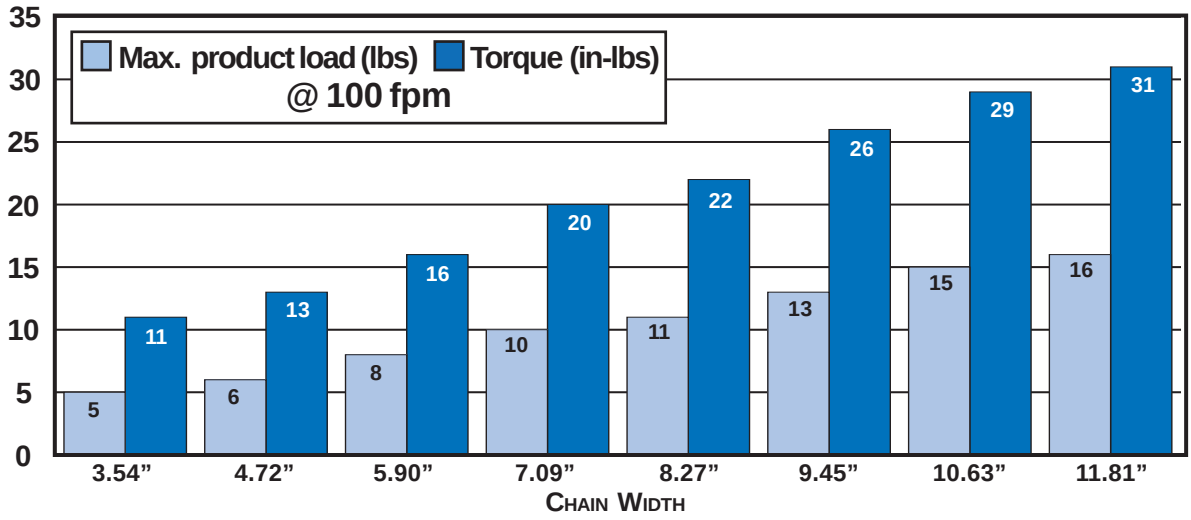


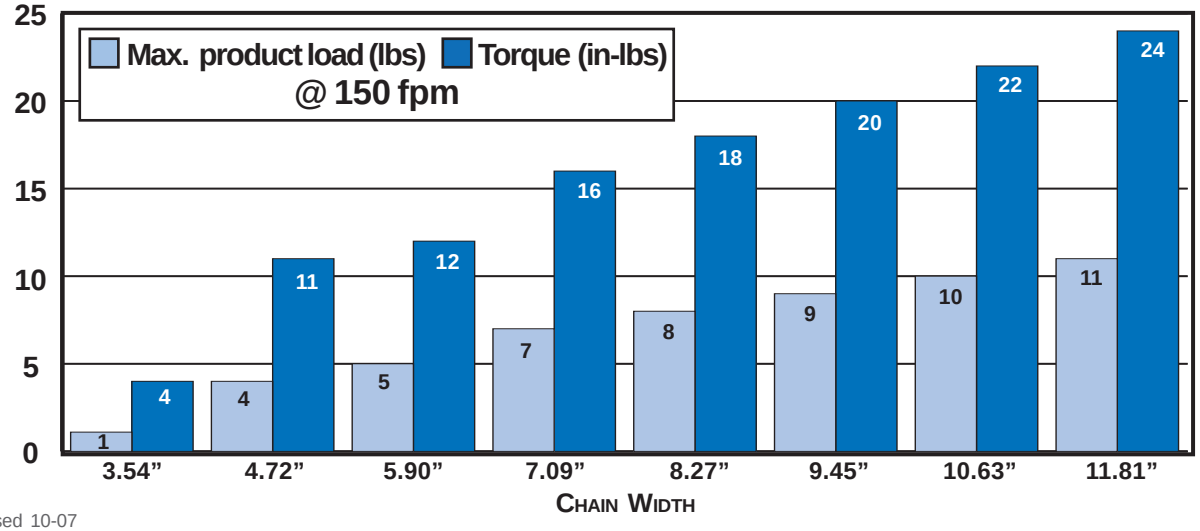
Maximum Load and Torque Ratings

U.S. STANDARD UNITS

4MM RAISED CHAIN – 3.54" THROUGH 11.81" WIDTHS







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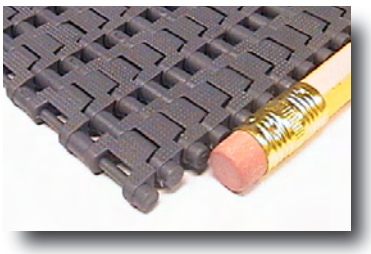
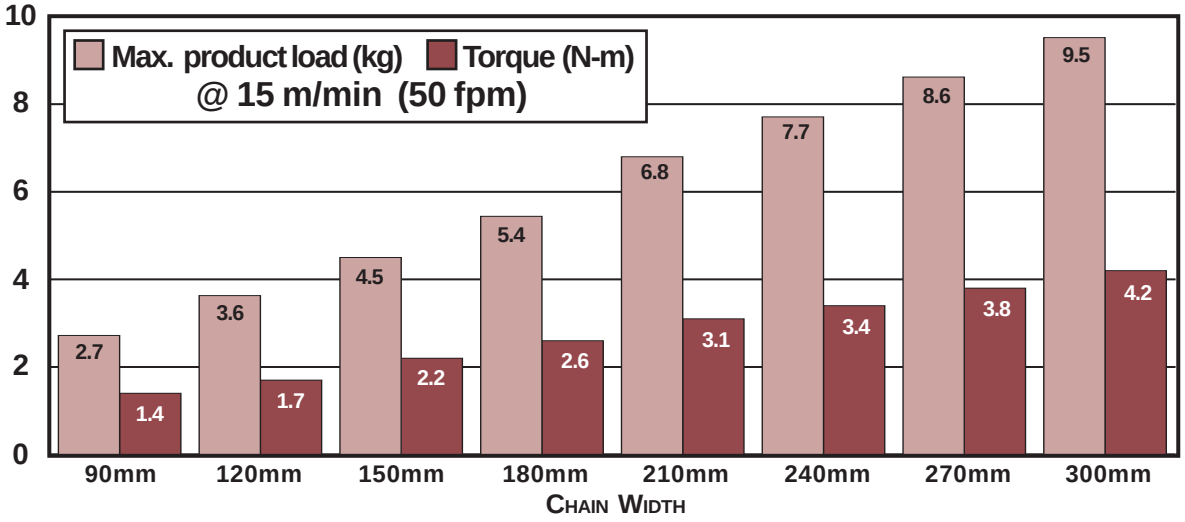
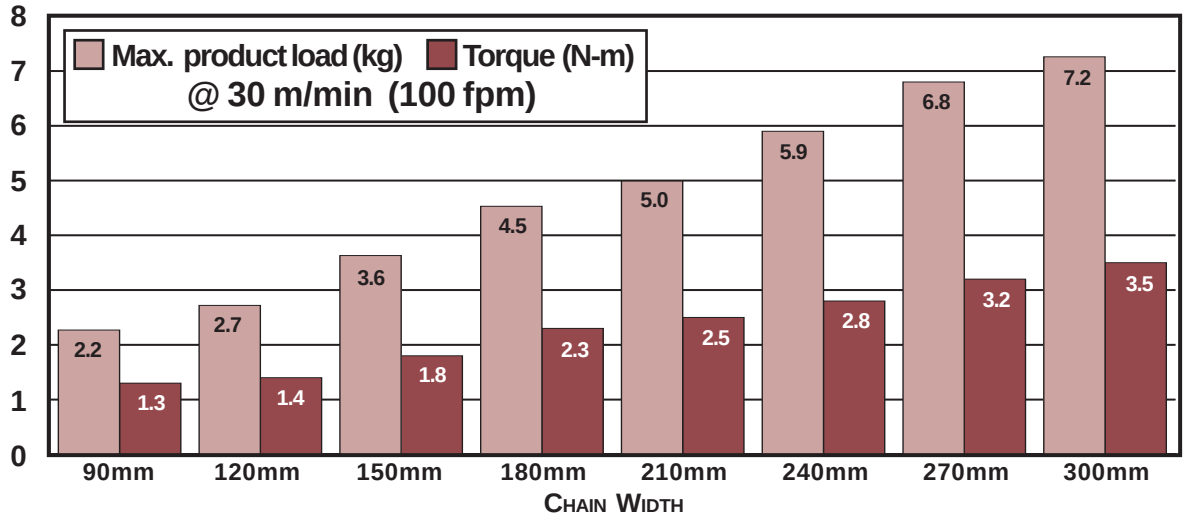


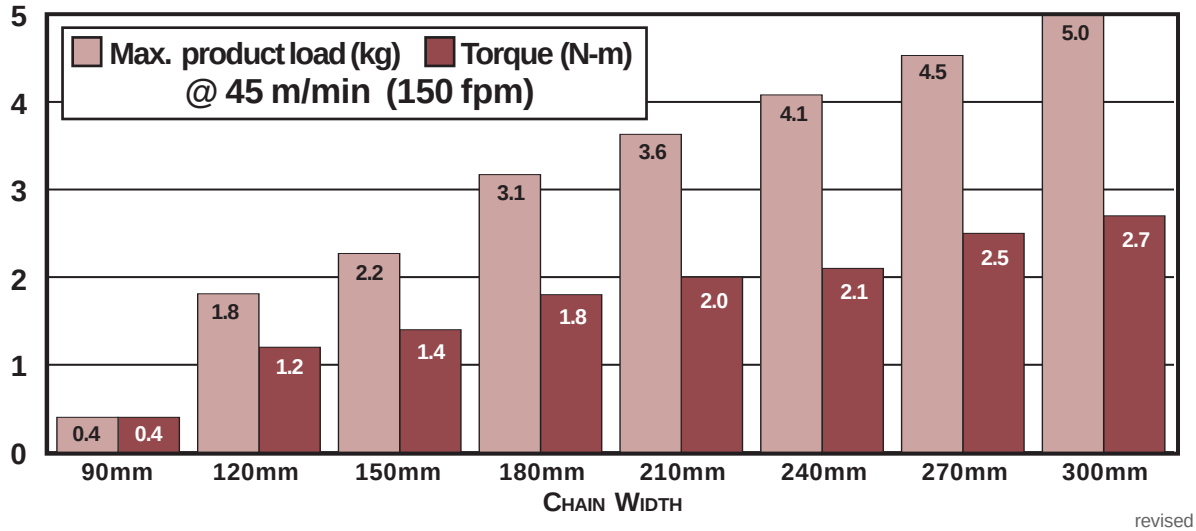
Maximum Load and Torque Ratings

METRIC UNITS

4mm Raised Chain – 90mm through 300mm Widths







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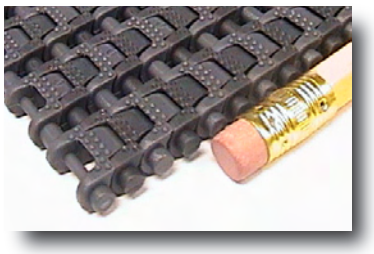
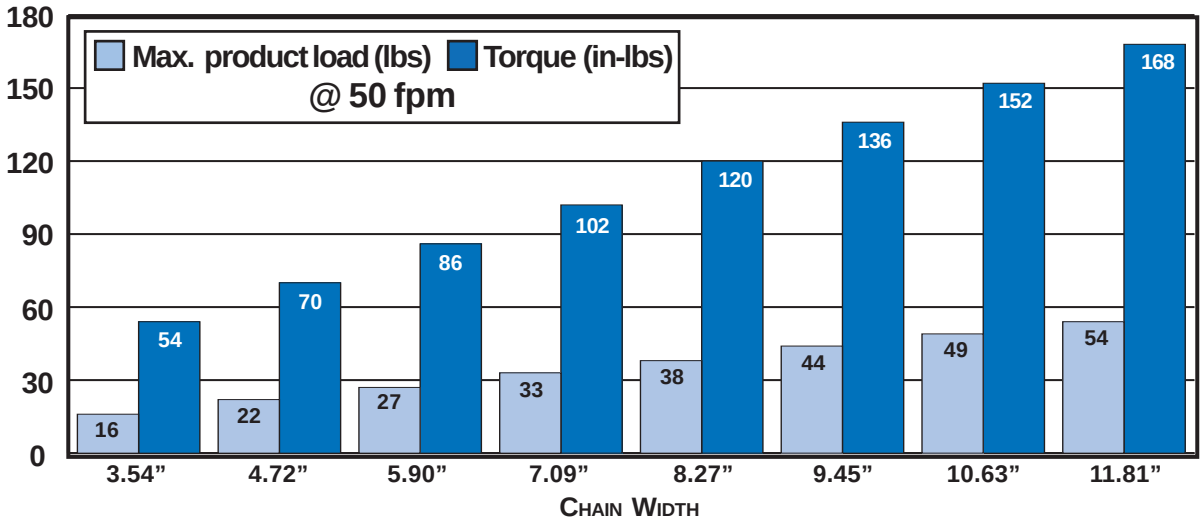
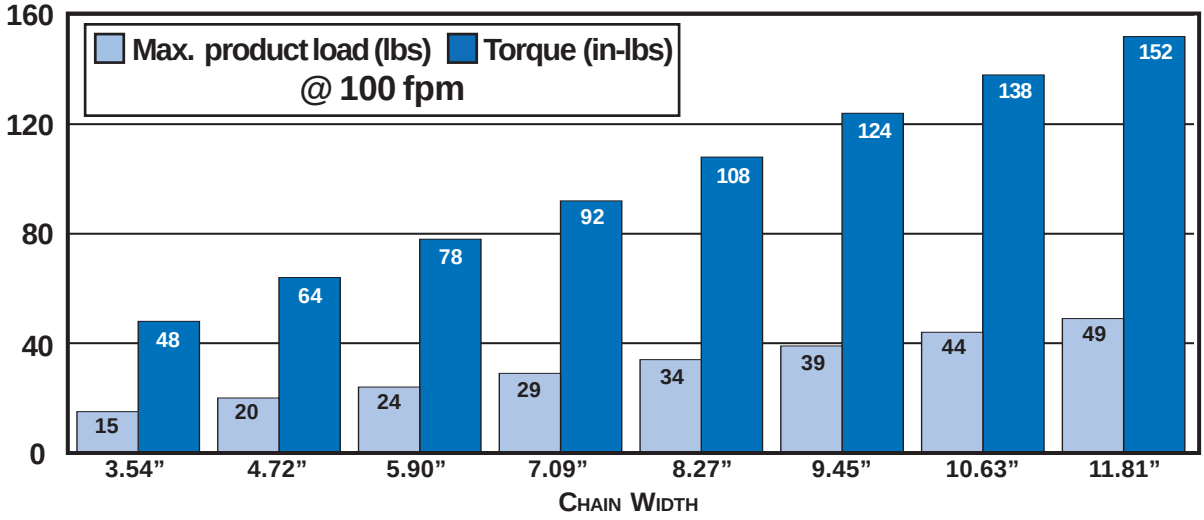


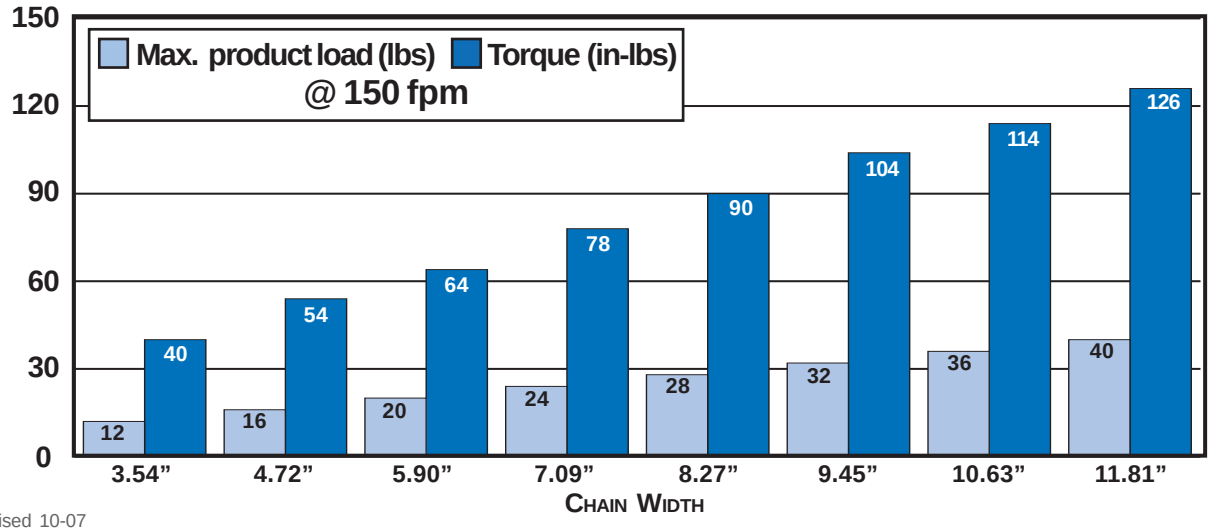
Maximum Load and Torque Ratings

U.S. STANDARD UNITS

6MM RAISED CHAIN – 3.54" THROUGH 11.81" WIDTHS







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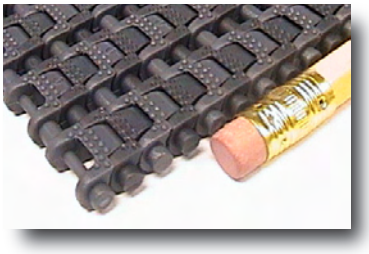
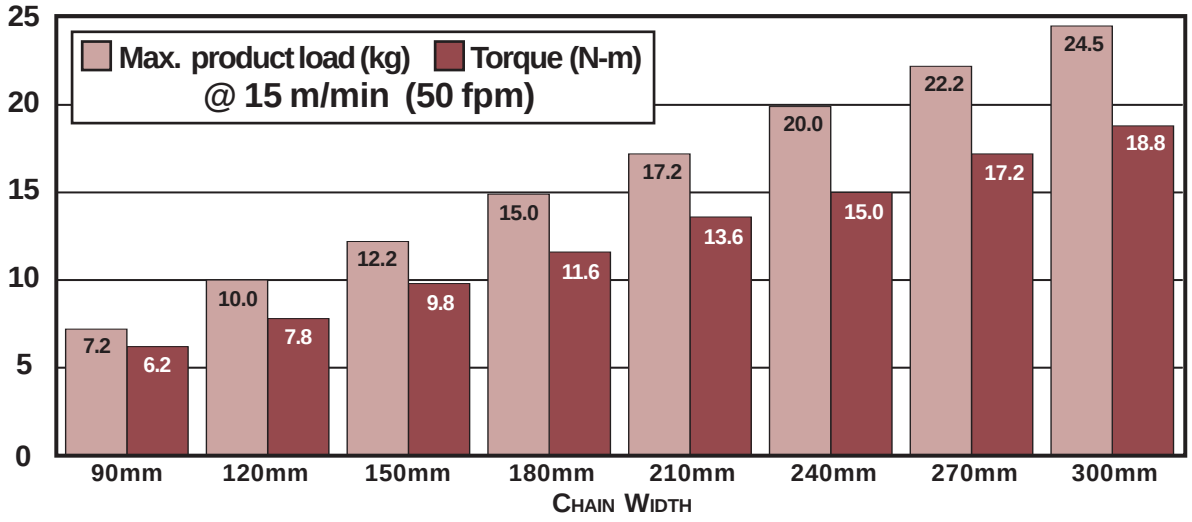
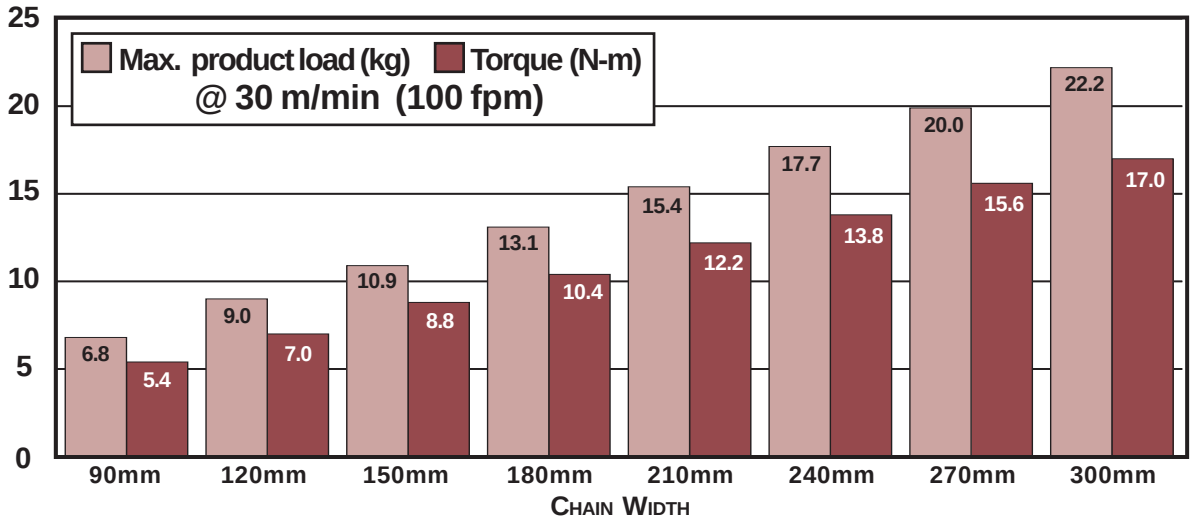


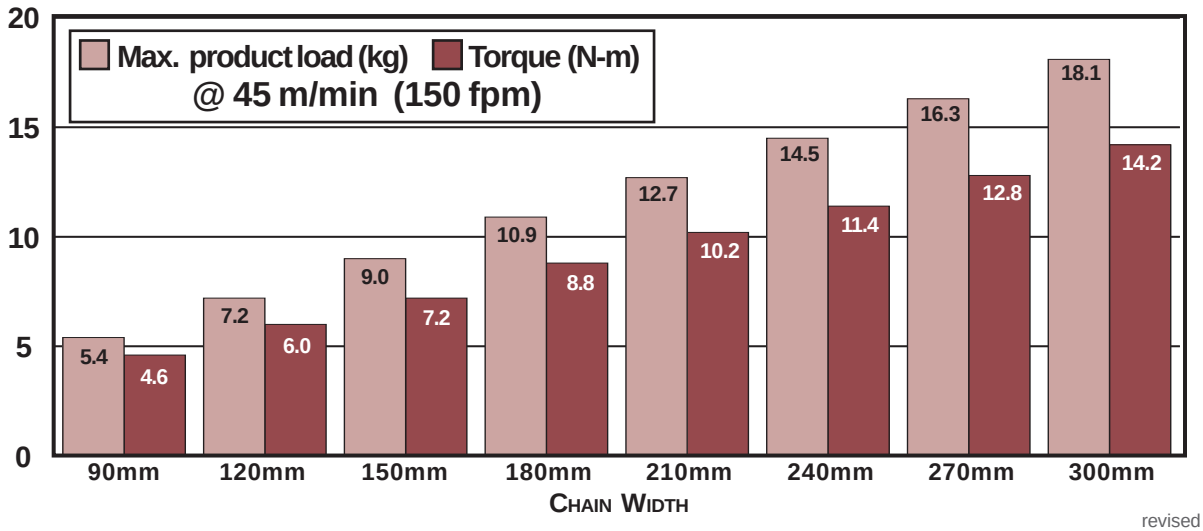
Maximum Load and Torque Ratings

METRIC UNITS

6mm Raised Chain – 90mm through 300mm Widths







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