







Introduction

Since 1971, F. N. Sheppard & Co. has offered one of the most diverse lines of belting products available in the global market.

Our endless innovation, and unequaled capabilities have allowed us to deliver unique solutions to even the most complex requirement and demanding tolerances. We are enjoying the growing reputation and market presence as one of the most unique belting companies in the world.

We have many manufacturing locations to serve the national and international market. We are well equipped with CNC machining equipment, custom coating and fabricating equipment, urethane processing equipment, and custom grinding centers.

Our biggest asset and best attribute, however, is our people. We feel our strength is our expertise and experience. We invest heavily in training, quality control, health and safety, continuing education, computer training, and self-improvement classes resulting in people who care.

With our people, processes and products, we feel that we can offer everything and anything that you may require in specialty belting products. This allows you more flexibility, and originality in your equipment design.











F. N. Sheppard & Co. is a remarkable organization serving the needs of manufacturers around the world.

Based in Erlanger, Kentucky (that's right across the river from Cincinnati, Ohio), we're practically in the shadow of the Cincinnati-Northern Kentucky International Airport – one of the busiest major hub airports in North America.

Although Erlanger is our home, our reach is truly global.

We have many other branch locations, and our sales and service representatives are located far and wide – there's one close to you.













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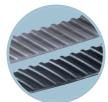
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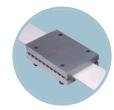
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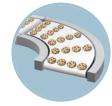
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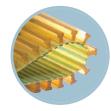
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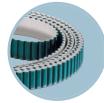
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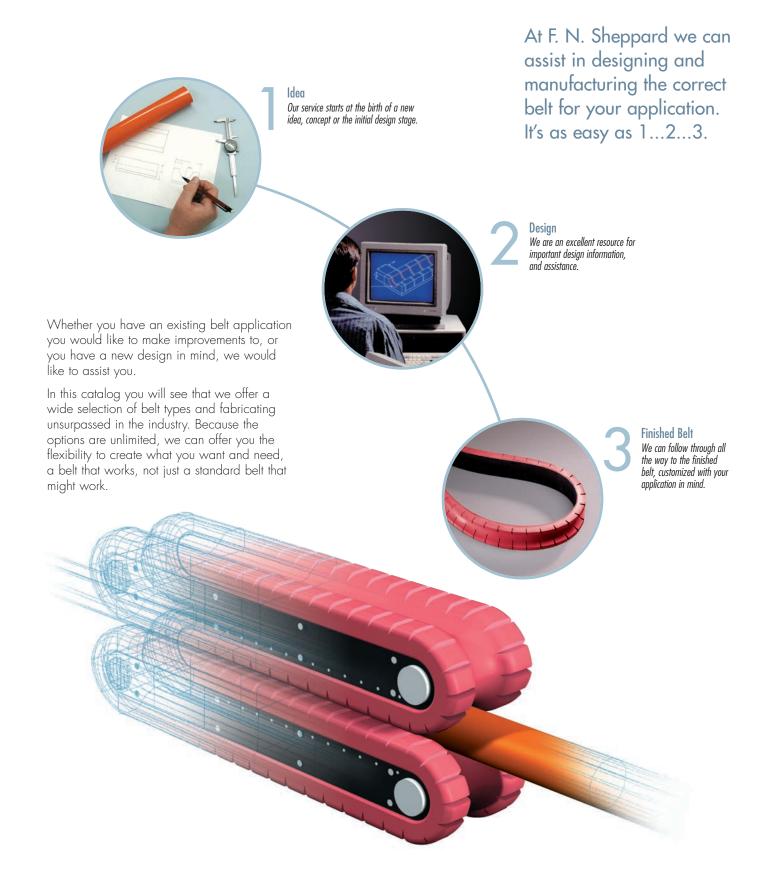


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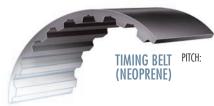
DESIGN YOUR OWN BELT



BASE BELTS



METRIC	INCH
T2.5	.080"/MX
T5	.200"/XL
T10	.375"/L
T20	.500"/H
AT5	.875"/XH
AT10	
ΔT20	

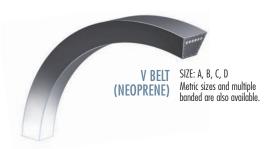


.080" / MXL .200" / XL .375" / L .500" / H .875" / XH









Belt Covering - Flexibility Graph Selection Process

- 1. Measure outside pulley diameters and note the size on the bottom of the graph.
- 2. Select belt backing material thickness on the left of the graph and note what group it is in (A,B or C).
- Determine the maximum recommended thickness for the material at the pulley diameter.
- 4. If a greater thickness is required than what is recommended, we can machine or cut stress relieving slots as necessary to allow for better flexibility.

"A" Material - Most Flexible

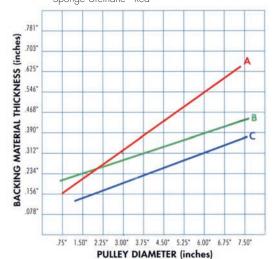
- Linatex® Red38 D.
- Linatex® White FDA 38 D.
- Natural Rubber Tan & White 40 D.
- Neoprene Black 20-40D
- Urethane Various Colors 20-40 D.
- Sponge Natural Orange
- Sponge Urethane Blue
- Sponge Neoprene Black
- Sponge Fabric Cover Dark Blue & Black
- Sponge Fabric Cover Blue Lycra
- Ruff-Top Blue PVC
- Ruff-Top Neoprene Brown
- Knurled Impression
- Nipple #5004 PVC Clear
- Nylon Fabric Green

"B" Material - Moderate Flexibility

- Linard® Red 60 D.
- Neoprene Black & White 45-70 D.
- Nitrile & Buna-N Rubber White 55 D.
- Urethane Various Colors 45-70 D.
- PVC Various Colors 40-70 D.
- Chicken Plucker Urethane White
- Scrubber SBR Black
- Sponge Urethane RRG Tan
- Sponge Urethane Green
- Sponge Silicone Orange

"C" Material - Less Flexible

- Neoprene Black & White 75-85 D.
- Urethane Various Colors 75-85D.
- PVC 75-85 D.
- Silicone Orange 40-70 Duro.
- Sponge Urethane Red



BELT COVERINGS



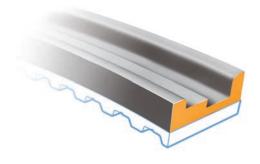
Additional coverings can be applied virtually to any base belt. Contact our Technical Department for further information.

FABRICATING



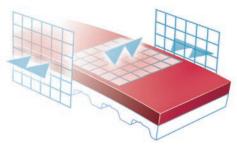
We delight in coming up with creative solutions to new challenges. Let us know

what you need, or what you want your belt to do, and we'll take it from there.



Profiling

Contouring - Slots - Grooves. Precision contours: radius, rectangular, square, V-shape or any custom shape. Belts include all types: Flat Conveyor, Timing Belts, Transmission V-belts, Poly-V, HTD®. Profiling to the shape of a product helps maximize grip and control, minimizing crushing. This is frequently done for tube pulling applications, rubber or cable pulling. Virtually any shape of extrusion may be accommodated with matching upper/lower belt profiles.



Grinding

Machining any belt surface-side, top and/or bottom - to precise tolerances. The bottom of the belt or timing teeth may be ground with grooves or slots to assist in tracking guidance. Belts with additional covers, extra wide belts and very long length belts can be custom ground. Worn or aged belt covers can be ground to create a new fresh gripping surface. Belts include all types: Flat Conveyor, Timing Belts, V-belts, Poly-V, HTD®.



Serrating

Slotting - Notching - Slitting - Knife Cut. This can be for stress relief for better longitudinal flexibility around smaller pulley diameters or providing profiles for high precision indexing or positioning.

Mechanically Pin Splice - Urethane Timing Belts

Urethane timing belts with "Pin Splice". The strongest mechanical splice for timing belts. Ideal for quick belt installations, which reduces machine downtime. Easily installed by hands with pliers. Quiet running because there are no exposed metal parts to come in contact with pulleys. Can run on your existing belt and can operate with back bend idlers. Precision fit, therefore eliminating gaps other wise seen in competing designs. Strong enough for all conveying applications and can be custom designed according to the application strength needed. Available on most pitches, making it a "must have" for all conveying applications.



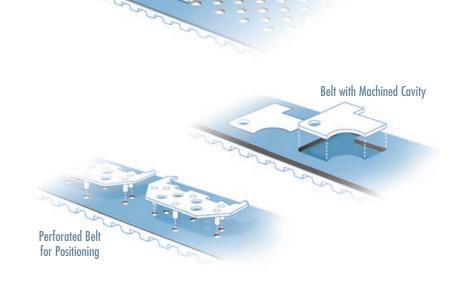
Vacuum Timing Belt

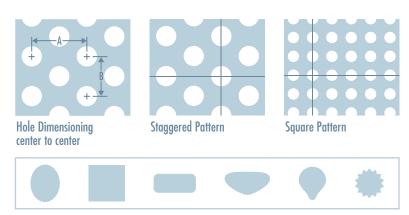
Hole Patterns & Shapes

Vacuum Belts provide positive holding power for very light weight products, such as paper, plastic film and fabrics.

Hole size and pattern (percentage of open air) can be modified to meet the application's need. There are endless possibilities. There are some standard patterns available, but usually each unique application requires its unique hole pattern. A simple drawing with dimensioning is all that is required to have a die made for perforating. Please contact our Technical Department.

Note: For vacuum applications, it is possible under certain circumstances, to extrude urethane timing belts with cord spacing that allows for placing the holes between cords so that the cords are not cut during perforation.

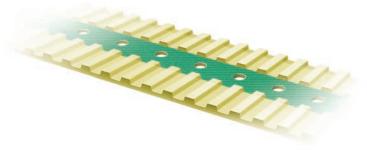




Any shape available: Standard & Custom

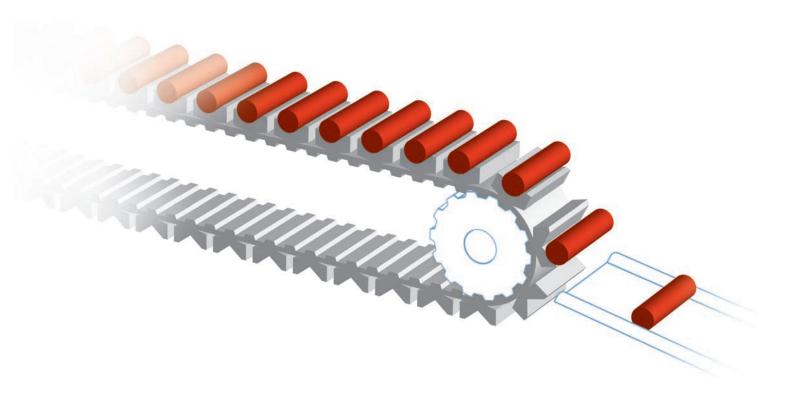
Tooth Removal

Teeth can be removed in any configuration or grouping in order to; assist in tracking, provide smooth-running surface for slider bed or as a means of creating a vacuum seal. Low friction fabric and coatings can be applied to a smooth ground surface to reduce the coefficient of friction between the belt and running surface.



PROFILE BELTS

Just like people, profiles are all unique, coming in many different shapes and sizes. We offer hundreds of standard and custom configurations. Illustrated on the next few pages are just some of the common urethane profiles and concepts.



This information is intended for you, the design engineer. Herein you will find application examples and design guidelines for creating your own timing belts with profiles.

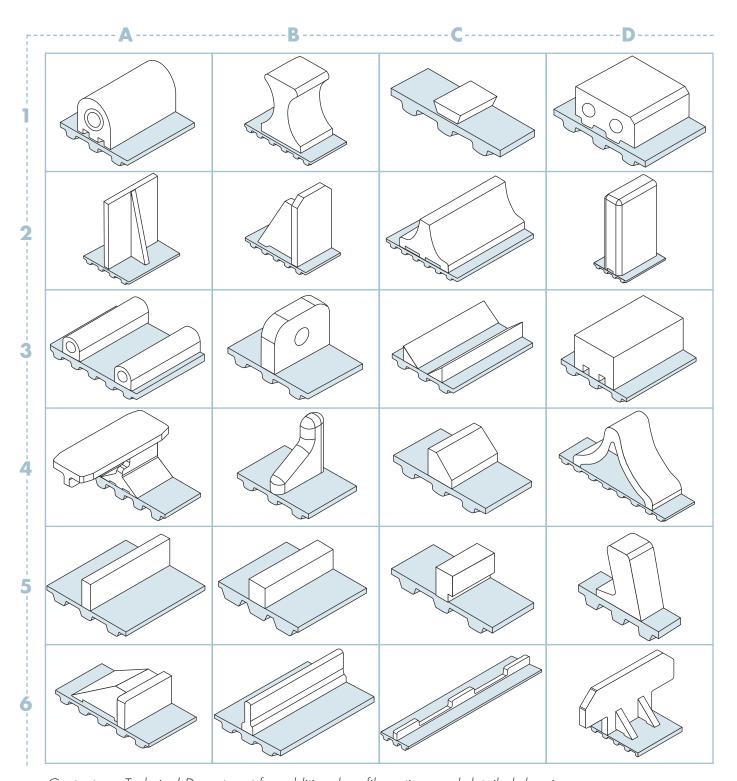
Timing Belts can provide exceptionally accurate synchronized conveying of products. Ideal for assembly, packaging, inserting and other automation applications. Timing belts are available in any length and can be specified in one tooth increments.

F. N. Sheppard timing belts have been used extensively as reliable profiled timing belts. The requirements in automation and material handling are diverse. Often, the designer is challenged to come up with innovative concepts to solve differing requirements depending on the product to be conveyed and function to be solved.

We offer an extensive line of synchronous belts and a wide selection of stock profiles. It allows for innovative design solutions for dividing, stepping and positioning.

When you are confronted with a drive or conveying problem, just call on us. A quick phone call can allow us to assist you in finding the desired solution or we can provide you with our suggestions.

EXAMPLES



Contact our Technical Department for additional profile options and detailed drawings.

PROFILES

Profiles are commonly referred to as lugs, cleats, pockets and attachments. Profiles are transverse raised sections on the outer surface of a belt used to hold, stabilize, position or transport a product. Profiles are available in many compounds and are applied in various ways. Various ways include: molding, thermal-welding, bonding and machining. Hundreds of profile designs are available from F. N. Sheppard's mold inventory. Our Applications Engineers can work with you to design any profile to meet your specific requirements. Tooling charges are minimal for most new customized designs. Drawings of some of the profiles are shown in this catalog. Profiles allow for precise indexing with accurate placement on synchronous base belts. This synchronization is not attainable with flat belts.

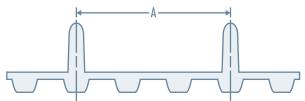


PROFILE SPA	CING TOLERAN	NCE
Profile Spacing	Over Tooth Non-cumulative	Not Over Tooth
0.2" ≤ A < 1.0"	±0.015"	±0.020"
5mm ≤ A < 25.4mm	±0.38mm	±0.5mm
1.0" ≤ A < 9.0"	±0.020"	±0.025"
25.4mm ≤ A < 228.6mm	±0.5mm	±0.6mm
9.0" ≤ A < 18.0"	±0.025"	±0.030"
228.6mm ≤ A < 457.2mm	±0.6mm	±0.8mm
18.0" ≤ A < 27.0"	±0.030″	±0.035"
457.2mm ≤ A < 685.8mm	±0.8mm	±0.9mm
27.0" ≤ A < 36.0"	±0.035"	±0.040"
685.8mm ≤ A < 914.4mm	±0.9mm	±1.0mm

For spacing greater than 36.0", add 0.006" per ft.

For spacing greater than 914.4mm, add 0.15mm per 305mm.

Tighter tolerances on profile spacing are available. Please contact an F. N. Sheppard Applications Engineer for more information.



Spacing of Profiles

It is recommended but not necessary that the profile spacing (A) correspond with the pitch of the belt teeth. This allows for the best spacing tolerances, and minimizes the effects of the belt's overall length tolerance on the profile spacing.

Profiles can be spaced on other than pitch increments. However, if non-pitch spacing is used, the cumulative tolerance of the belt length must be considered.

Position and Thickness of Profiles

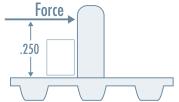
The most important consideration while dimensioning a profile is the size of the base of the profile, (the "foot" of the profile), and the position of the profile on the belt.

The profile thickness can effect the flexibility of the belt and can determine the minimum allowable pulley diameter. The flexibility of the belt can be maximized, however, by positioning the profile directly over the tooth of the belt. As the thickness of the foot of the profile increases, the minimum pulley diameter must be increased according to the table.

Urethane

OVER A TOOTH MINIMUM NUMBER OF PULLEY TEETH FOR PROFILES												
Profile "Foot" Thickness	Inch mm	1/16 1.60	1/8 3.00	3/16 5.00	1/4 6.00	5/16 8.00	3/8 10.00	7/16 11.00	1/2 13.00	5/8 16.00	3/4 19.00	
Pitch XL		10	10	18	25	40	50	60	100	-	-	
L		12	12	12	18	30	40	50	60	100	-	
Н		14	14	14	14	18	25	35	45	80	100	
XH		18	18	18	18	18	18	18	20	35	50	
T5 & AT5		12	12	18	25	40	50	60	100	-	-	
T10, AT10, ATL10		16	16	16	16	18	25	35	45	80	100	
T20, AT20, ATL20		18	18	18	18	18	18	18	20	35	50	
HTD® 5 & STD 5		12	12	16	25	40	50	60	100	-	-	
HTD® 8 & STD 8		14	14	14	18	30	40	50	60	100	-	

	OT OVE TOOTH			MINIMU	IM NUM	BER OF	PULLEY	TEETH F	OR PRO	FILES	
Profile "Foot" Thickness	Inch mm	1/16 1.60	1/8 3.00	3/16 5.00	1/4 6.00	5/16 8.00	3/8 10.00	7/16 11.00	1/2 13.00	5/8 16.00	3/4 19.00
Pitch XL		12	30	45	50	60	100	-	-	-	-
L		12	20	40	45	55	60	70	80	100	-
Н		14	14	25	30	45	50	55	65	80	100
XH		18	18	20	30	40	45	50	54	58	60
T5 & AT5		12	30	45	50	60	100	-	-	-	-
T10, AT10, ATL10		16	20	30	40	45	50	55	65	80	100
T20, AT20, ATL20		18	18	20	30	40	45	50	54	58	60
HTD® 5 & STD 5		14	30	45	50	60	100	-	-	-	-
HTD® 8 & STD 8		14	20	40	45	55	60	70	80	100	-



Profile Strength

Urethane Welded Profile

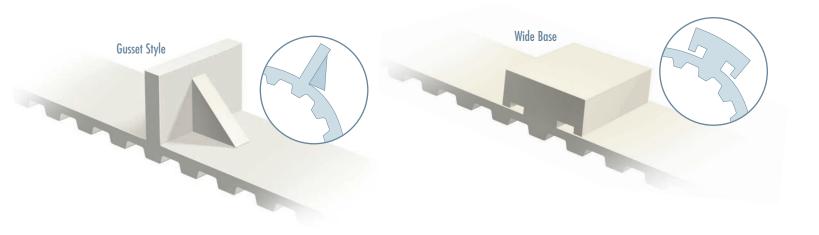
The strength of the profile is affected by the type and direction of the force applied to it. Under high loads, the failure mode will normally be either bending and distortion of the profile and belt, or in some cases, the urethane may actually tear. With a load introduced against the profile at a point 1/4" above the belt surface, the strength of the profile is 2,500 lbs. per square inch of welded foot area, or 1724 N/cm2. Our Technical Department would like to assist you with determination of profile strength.

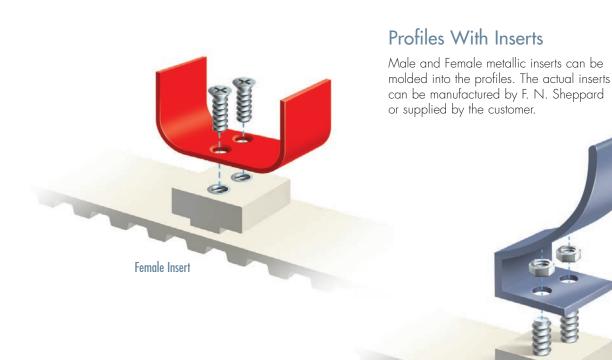
There are many variables to consider when figuring the strength of the profile. Variables include; method of attachment, compound of profile, belt construction, type of force, and direction of force. F. N. Sheppard has the largest selection of belts and profiles available and many methods of attaching profiles. Your application and other variables are the major factor for considering what method of attachment to use.

Wide Base Profiles

Some applications require profiles that are tall with a wide base, or need to maintain rigidity. An unwelded gusset, foot or feet would allow for flexing around a pulley, yet remain rigid when loaded or in the linear position.

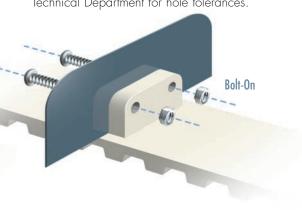
Male Insert







Holes or slots can be molded, perforated or drilled into the profile. Holes are typically used as a means for securing other attachments. Metal or plastic style bushings may be incorporated into the hole to provide strong support. Contact our Technical Department for hole tolerances.



Detachable

Bushing Insert

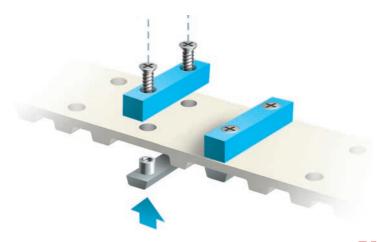
Detachable Profiles

Quick interchangeability is the key here. Use one master belt with male profiles, and slide-on the custom molded profile. This provides quick change-over for various product shapes or sizes. We can also engineer the detachable profile to temporarily shear off when a machine jam occurs, rather than damaging or destroying belts or profiles.









False Tooth

Available in various tooth pitches and made to customers specifications. Typically they are constructed of Stainless Steel. The false tooth with extended boss is threaded to you specifications Belt tooth is removed and holes are perrforated at predetermined center distances. Profiles of different construction can be bolted onto the false tooth (steel, urethane, UHMW, plastic, wood). Other unique false tooth features are available. Contact our Technical Department for details.

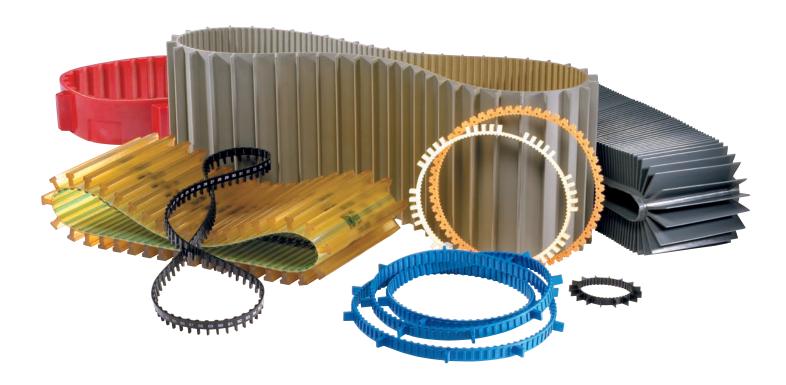
ONE-PIECE MOLDED PROFILE BELTS

Thermoset Urethane

One piece molded profiles and belts are integrally molded using high performance thermoset urethane. The profile and belt are molded as one, using a centrifugal, heat cast processing method. This type of construction removes the necessity for any additional fabrication. This process provides a wide range of material characteristics specifically formulated to suit your application, and the flexibility to test and evaluate various compounds. Even with an initial one time engineering service charge, this is the most economical method of producing high quantity, high quality requirements for profiled belts.

Advantages

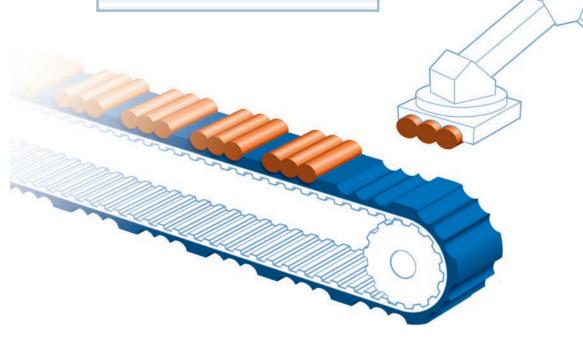
- Strongest Profile shear strength
- Profile design is very flexible
- Wide range of profile hardness
- Dual durometer belt and profile available
- Exact profile pitch and spacing tolerance
- Available in FDA, USDA approved materials
- Profiles can be positioned extremely close
- Uniformity & reliability, every belt is the same
- Custom urethane lubricity agents to alter the coefficient of friction
- Anti-static or static conductive properties available.
- Endless selection of colors for the belt and/or profile.



Contact our Technical Department for further assistance.

Pocket belts are the most accurate method of positioning. But there is a vast array of types and sizes of pocket belts, and there are any number of methods of incorporating pockets, depending on the compounds

A pocket belt is a positive, precision, sequencing feed belt. It is the most sensitive way to handle delicate or odd shaped products. Special contoured shapes or pockets are made on the conveying surface of a belt. When positioning and timing is critical, you should consider using a timing belt structure as the base belt. This allows for the most exacting pocket sequencing. For applications not requiring as tight of tolerances, other base belt structures can be considered such as Flat, Poly-V, V-belts. It is the most sensitive way to handle delicate or odd shaped products.



Pocket Size and Shape

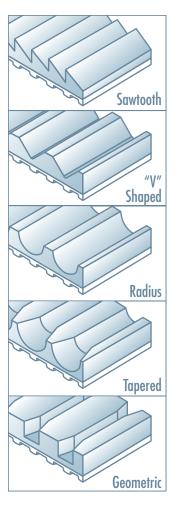
used as backings.

Variations in pocket sizes and shapes provide the flexibility and versatility other conventional means may not offer. Speeds are much faster than timing screws. Other than belt changing, few adjustments are necessary to go from medicine vials to plastic jugs, glass containers to multi-shaped bottles, etc.

Special contoured shapes or pockets of resilient elastomer or polymer compounds are available. Compounds include: Urethane, Rubber, Sponge, Silicone, etc. These pockets fit the desired container and position it with absolute precision through stages of feeding, capping, washing, labeling or many other operations requiring high quality control.

Pocket belts are made to your specifications and requirements. With F. N. Sheppard's expertise and knowledge of belt types and existing applications we would like to assist you in selecting the belt which is best suited for your application.

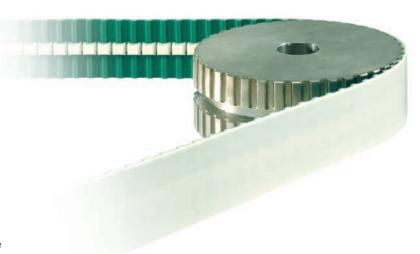
Some general information required in assisting you with the design is pocket shape, spacing, etc. Please refer to the examples. Any shape available, standard and custom.



SELF-TRACKING BELTS

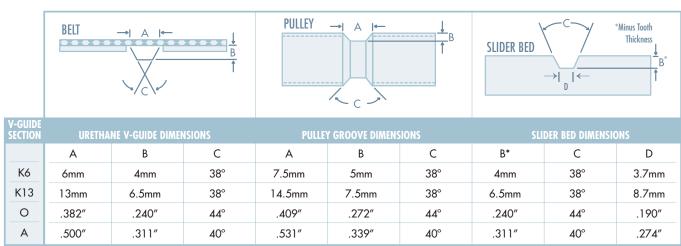
Reasons and Applications for Using V-Guide Tracking

- For the most positive form of synchronous motion with dynamic true tracking
- Where pulley flanges can not be used or may interfere with products being conveyed
- Conveyors with long center distance where true tracking is critical
- Side loading or unloading applications
- Where the belt runs on its edge in a vertical position instead of lying flat on a conveyor surface



V-guide Charts

Listed are the most common v-guide sizes for urethane timing belts. Dimensions are for integral molded and welded v-guides on urethane timing belts. For other v-guide sizes, material and belt types please contact our technical department.



	Urethane V-Guide: Integral Molded & Notched													
Belt Tooth Pitch	V-Section Size	Belt Width - Available $\sqrt{}$												
		16mm	16mm 25mm 32mm 50mm 75mm 100mm 150mm											
T5	K6	√	V	√	√	√	√	V						
AT5	K6	√	$\sqrt{}$	V	√	√	√							
T10	K6	√	$\sqrt{}$	$\sqrt{}$		√	√	V						
T10	K13			$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	√	$\sqrt{}$						
AT10	K13			√	$\sqrt{}$	√	$\sqrt{}$	√						
		1.5" 2.0" 3.0" 4.0" 6.0"												
Н	Α			√	√	√	√	√						

V-guide

Sizes (Inches & Metric): O - A - B - C - K6 - K8 - K10 - K13

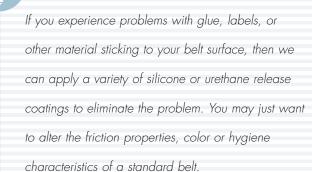
Material: Urethane - PVC - Neoprene - FDA Construction: Solid - Notched - Serrated

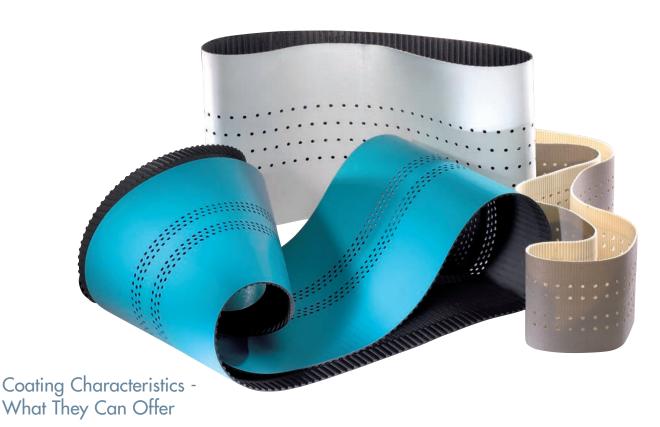
V-guides are generally located on tooth side, in the center of the belt. However, fabricated v-guides can be positioned anywhere on the belt, to meet your specifications. Multiple v-guides can be fabricated in different locations, to meet your needs.

NON-STICK COATINGS - Silicone & Urethane

Non-Stick Coating

Many synchronized conveying processes may include some form of product folding, glueing, laminating, or labeling. We produce several variations of silicone and urethane release coatings that are applied to the belt surface to help eliminate the possibility of belt contamination. Typically vacuum conveyors are used with perforated timing belts. The vacuum, combined with our coating, can create the desired positive control of the product. The coating process allows us the flexibility of coating many different substrates, including urethane and neoprene timing belts, regardless of the belt width or length.





- Non-Stick
- Glue Release
- Low Coefficient of Friction
- High Coefficient of Friction
- Anti-Static
- Various colors available for optic or hygienic reasons
- Some Coatings are FDA Approved

Belt Surfaces: All Types

- Belt top side or conveying surface
- Belt bottom side of belt which comes in contact with slider bed
- Belt fabrics (top or bottom)
- Timing Belt teeth

Other Materials

- Belt (profiles, pockets, cleats, lugs)
- Elastomer compounds/backings
- Rollers
- Pressure Pads

TIMING BELTS - Urethane & Neoprene

Timing belts are one of the most efficient ways for synchronized conveying, indexing, product positioning and motion control. Timing belts are available with a variety of material compounds, reinforcement cords, and physical properties and features. They can also be produced in various trapezoidal or curvilinear tooth shape, inch or metric pitches, and in several forms – open-ended, truly endless, and welded or spliced endless. Our wide product range and selection offers the most diverse and comprehensive range of options in the global market, and made to virtually any width or length that you may need.



Urethane Timing Beltspage 25



Neoprene Timing Beltspage 34



Urethane Timing Belts Molded Endlesspage 29



Silicone Rubber Timing Belts.....page 29



Wound Endless (flex belts)page 33





The need for wide timing belts continues to increase. F. N. Sheppard can provide both urethane and neoprene belts as wide or wider than anybody else in the industry.

Advantages of Timing Belts Over:

Flat Belts

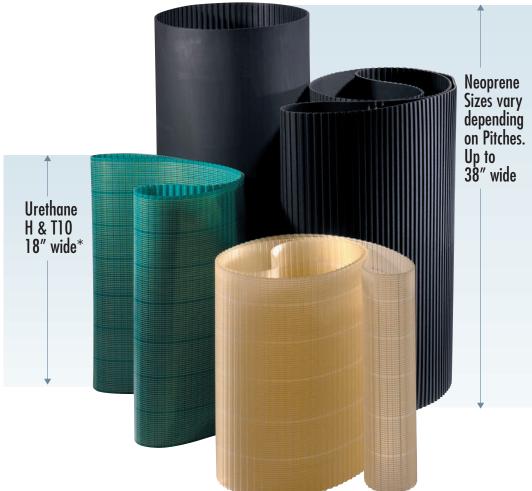
- Positive drive
- Perfect synchronization, exact timing
- No slippage
- Little or no re-tensioning
- Less maintenance

Chains

- No lubrication needed
- Higher speeds
- Less noise
- Holds product more gently
- Less maintenance

Plastic Modular Belts

- Less maintenance
- Easier to clean
- More hygienic
- Less noise



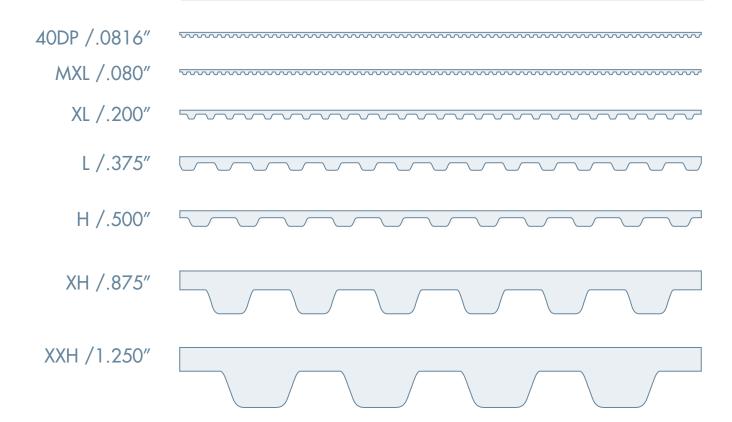
Tracking

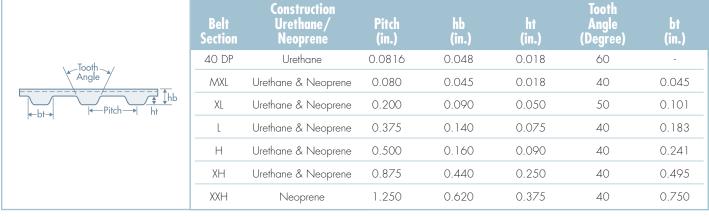
Generally, pulleys with flanges are suitable for tracking. However, on conveyors with center distances more than 10 times the width of the belt, a self-tracking V-guide may be required. Also, belts with a center distance equal to or less than the width of the belt will also require a self-tracking V-guide. Various V-guide sizes may be used (see page 18) for specifications on urethane belts (see pages 26-27). These belts are designated H-XVV and T10-XVV.

^{*} Can be longitudinally welded to 38" wide.

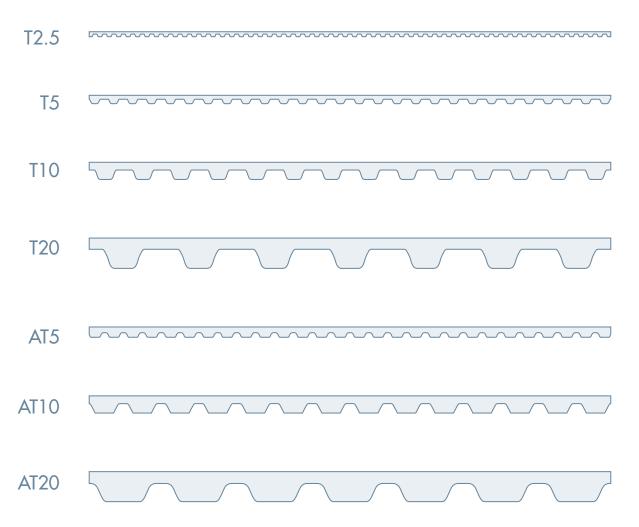
TIMING BELTS - Inch

Drawings of Timing Belts are drawn to scale. This may help you visualize the differences in tooth size, shape and pitch. Belt specifications and sizes are listed on the following pages.





There are many sizes to select from in urethane and neoprene constructions. Please contact Customer Service for availability.



Tooth Angle	Belt Section	Construction Urethane	Pitch (mm)	hb (mm)	ht (mm)	Tooth Angle (Degree)	bt (mm)
	T2.5	Urethane	2.5	1.3	.7	40	-
depitch→ ht	T5	Urethane	5	2.2	1.2	40	2.7
	T10	Urethane	10	4.5	2.5	40	5.3
	T20	Urethane	20	8	5	40	10.1
Tooth Angle	AT5	Urethane	5	2.7	1.2	50	3.6
Arigie	AT10	Urethane	10	4.5	2.5	50	7.3
←bt→ I←Pitch→ ht	AT20	Urethane	20	8	5	50	15.1

Note: For specifications and sizes see the following pages:

Some belt sections are available in neoprene construction. Double sided belts available. Please contact our Customer Service.

Urethane: Open-Ended

Molded Endless p.29-32 Flex Wound Endless p.33

p.26-27

Neoprene: Open-Ended

Open-Ended p. 34 Molded Endless p. 35-39

TIMING BELTS - Metric

	Belt Section	Construction Neoprene/ Urethane	Pitch (mm)	hb (mm)	ht (mm)
	HTD® - 3M	Neoprene	3	2.41	1.22
hb hb	HTD® - 5M	Neoprene	5	3.81	2.08
←Pitch→ ht	HTD® - 5M	Urethane	5	3.6	2.1
HTD® GT®/HTD®	HTD® - 8M	Urethane	8	5.6	3.4
■ GIP/ HID	HTD® - 14M	Urethane	14	10.0	6.1
	GT®/HTD® - 20M	Neoprene	3	13.2	8.4

	Belt Section	Construction Neoprene/ Urethane	Pitch (mm)	hb (mm)	ht (mm)
	Super Torque - S2M	Neoprene	2	1.40	.76
	Super Torque - S2M	Urethane	2	1.19	.76
	Super Torque - S3M	Neoprene	3	2.00	1.14
	Super Torque - S3M	Urethane	3	1.78	1.14
	Super Torque - S4.5M	Neoprene	4.5	2.70	1.71
	Super Torque - S5M	Neoprene	5	3.61	1.91
hb	Super Torque - S8M	Neoprene	8	5.30	3.05
←Pitch→ ht	Super Torque - S14M	Neoprene	14	10.20	5.30
SuperTorque					
• GT®2	GT®2 - 2MR	Neoprene	2	1.52	.76
Poly Chain® GT®2STD	GT®2 - 3MR	Neoprene	3	2.41	1.14
	GT®2 - 5MR	Neoprene	5	3.81	1.93
	GT®2 - 8MGT	Neoprene	8	5.59	3.28
	GT®2 - 14MGT	Neoprene	14	9.91	5.84
	Poly Chain® GT®2 - 8MGT	Urethane	8	5.9	3.4
	Poly Chain® GT®2 - 14MG	T Urethane	14	10.2	6.0
	STD5	Urethane	5	3.3	1.9
	STD8	Urethane	8	5.1	2.95

Double sided belts available. Please contact Customer Service for availability.

TIMING BELTS – Urethane Open-Ended

- Available Pitch Sizes:
 XL, L, H, XH
 T5, T10, T20, AT5, AT10, AT20
 HTD®: 5M, 8M, 14M
- The widest selection available
- Steel and Kevlar® cord construction provides excellent strength
- Cost effective
- Readily available
- Long lengths slit to various widths



Urethane Belts

Open-ended roll lengths can be thermally welded to almost any required length (see specifications on pages 26 & 27), or fixed end to end with our clamping plates (see page 42). Truly endless is the strongest construction, recommended for drive and high torque applications.

Urethane Construction and Teeth

Molded integrally the urethane protects the cords and provides a strong, flexible and excellent wear-resistant belt. Various urethane compounds are available depending on construction. To ensure correct engagement with the pulley grooves, the teeth are precisely formed and accurately spaced. They are precisely located so that the tooth root line lies substantially on the pitch line; thus the tooth spacing of the belt is not altered by flexing. Low friction nylon fabric on the tooth and/or back side, is available on thermal weldable urethane.

Tensile Member

The parallel cord tensile member is the secret of the belt's enormous strength, its excellent flex life, and high resistance to elongation. Various tensile members are available depending on construction and belt pitch; such as Steel, Kevlar® and Polyester.



Urethane has become a workhorse in countless production situations around the world. Why? It's tough, can be made to any length, and stands up to the harshest industrial and environmental conditions.

That makes it an outstanding value. Ask us about it.

Endless

Urethane Characteristics

- Working Temperature -22° +176° F
- Chemically Resistant to Ozone and Sunlight
- Extremely Resistant to Oil, Grease and Gasoline
- Hydrolysis Resistant
- Fairly Acid-proof and Alkali-proof

TIMING BELTS - Urethane Open-Ended & Welded Endless

Belt Specifications

BELT SECT	TION		XL	L	Н	H-HF	H-XW	XH	T5	AT5
PITCH (inch &	& metric)		.200"	.375"	.500"	.500"	.500"	.875"	5 mm	5 mm
	Steel	lb/in	730	1330	1570	2380	-	3160	730	1440
Ultimate Tensile Strength	Sieei	N/25mm	3250	5920	6980	10590	-	14060	3250	6410
per inch of 25 mm belt width	Kevlar®	lb/in	1360	1710	1820	-	760	3450	1360	1710
	Kevidi	N/25mm	6050	7610	8100	-	3380	15350	6050	7610
	Open-Ended	lb/in	180	330	390	590	-	790	180	360
Max. allowable belt tension (T ₁ all) per inch of 25 mm belt	Open Linded	N/25mm	800	1470	1730	2620	-	3510	800	1600
width (Safety factor > 4)	Welded	lb/in	140	190	240	240	100	380	140	210
Widin (balely facior > 4)	v veided	N/25mm	620	850	1070	1070	440	1690	620	930
All II (f	Steel & Kevlar®	lb/in	180	360	440	440	-	880	200	290
Allowable effective tension for the belt teeth T _{eall}	Open-Ended	N/25mm	800	1600	1960	1960	-	3910	890	1290
(15 and more teeth in mesh)	Steel & Kevlar®	lb/in	130	270	330	330	330	660	150	210
(Welded	N/25mm	580	1200	1470	1470	1470	2940	670	930
	Cı l	lb/ft/in	0.036	0.059	0.066	0.072	-	0.180	0.037	0.055
Specific belt weight w _b	Steel	Kgf/m/cm	0.021	0.035	0.039	0.042	-	0.105	0.022	0.032
Specific bell weight wb	IZ I ®	lb/ft/in	0.033	0.052	0.055	-	0.056	0.155	0.033	0.046
	Kevlar®	Kgf/m/cm	0.019	0.030	0.032	-	0.033	0.091	0.020	0.027
	Cı. I	lb/in	47950	92800	109000	133600	-	213600	47950	100500
Specific belt stiffness C _{sp}	Steel	N/mm	8400	16255	19085	23400	-	37410	8400	17605
opecine ben sinness esp	IZ I ®	lb/in	52250	69100	60700	-	30350	100000	52250	-
	Kevlar®	N/mm	9155	12100	10635	-	5300	17500	9155	-
Minimum No. of pulley teeth (z	min)		10	10	14	12	14	18	10	15
Minimum diameter of tensioning		inch	1.125	2.375	3.125	2.375	3.125	5.875	1.125	2.375
idler running on back of belt		mm	30	60	80	60	80	150	30	60
Available in FDA/USDA construction	(FDA/USDA 85 SI	nore A Urethane)	Υ	Υ	Υ		Υ		Υ	
Min. Welded Belt Length	Min. Welded Belt Length			17"	18″	18″	33"	42"	450mm	450mm
Max. Standard Belt Width. Wic	der belts maybe	e available	6"	6"	8″	6"	20"	6"	150mm	150mm
upon request.	,									

Temperature Range: 23° F to +158° F Standard Durometer: 92 Duro. Shore A

85 Duro. Shore A-FDA

Coefficient of Friction

0.5 to 0.7 Urethane vs. Steel (dry) Urethane vs. UHMV (dry) 0.2 to 0.4 0.2 to 0.4 Nylon vs. Steel (dry) Nylon vs. UHMV (dry) 0.1 to 0.3 All belts are available with Nylon Fabric on either or both sides.

For Nylon on the tooth side, specify "NT" For Nylon on the back side, specify "NB" For Nylon on both sides, specify "NTB"

ATL designates stronger cord construction H-HF & T10-HF designates high flex reinforcement cords H-XW & T10-XW designates belt width wider than 6", and up to 18"

Additional Constructions

Hytrel HiTemp Heavy Backing

ATL5	T10	T10-HF	T10-XW	AT10	ATL10	T20	AT20	HTD® 5	HTD® 8	HTD® 14	STD 5	STD 8
5 mm	10 mm	10 mm	10 mm	10 mm	10 mm	20 mm	20 mm	5 mm	8 mm	14 mm	5 mm	8 mm
2380	1570	2380	-	3160	5030	3160	5030	2380	3160	4670	2380	3160
10590	6980	10590	-	14060	22380	14060	22380	10590	14060	20770	10590	14060
-	1820	-	760	3450	-	3450	4410	2050	3450	4090	2050	3450
-	8100	-	3380	15350	-	15350	19620	9120	15350	18190	9120	15350
590	390	590	-	790	1250	790	1100	510	790	1020	510	790
2620	1730	2620	-	3510	5560	3510	4890	2270	3510	4540	2270	3510
220	240	240	100	380	380	380	450	240	380	450	240	380
980	1070	1070	440	1690	1690	1690	2000	1070	1690	2000	1070	1690
290	380	380	-	580	580	710	1220	230	420	770	220	410
1290	1690	1690	-	2580	2580	3160	5430	1020	1870	3430	980	1820
210	280	280	280	430	430	530	910	160	270	440	150	260
930	1250	1250	1250	1910	1910	2360	4050	710	1200	1960	670	1160
0.062	0.074	0.079	-	0.096	0.114	0.125	0.169	0.070	0.101	0.182	0.067	0.087
0.036	0.043	0.046	-	0.056	0.067	0.073	0.099	0.041	0.059	0.107	0.039	0.051
-	0.062	-	0.066	0.071	-	0.101	0.124	0.050	0.080	0.143	0.050	0.074
-	0.036	-	0.039	0.042	-	0.059	0.073	0.029	0.047	0.084	0.029	0.043
133600	109000	133600	-	213600	334600	213600	334600	133600	213600	29440	133600	213600
23400	19085	23400	-	37410	58600	37410	58600	23400	37410	51560	23400	37410
-	60700	-	30350	-	-	-	100000	60700	100000	86500	60700	100000
-	10635	-	5300	-	-	-	17500	10635	17500	15150	10635	17500
15	14	12	16	15	25	15	18	14	20	28	14	20
2.375	3.125	2.375	3.125	4.750	5.875	4.750	7.125	2.375	4.750	7.875	2.375	4.750
60	80	60	80	120	150	120	180	60	120	180	60	120
_	Υ		Υ									
450mm	450mm	450mm	840mm	600mm	600mm	1000mm	1000mm	450mm	456mm	456mm	450mm	456m
50mm	150mm	150mm	520mm	150mm	150mm	150mm	200mm	1 <i>5</i> 0mm	1 <i>5</i> 0mm	1 <i>7</i> 0mm	50mm	200mm

For other special constructions and colors contact our Technical Department

TIMING BELTS – Urethane Specifications & Tolerances

Star	ndard Wi	idth			Belt S	ection			Length 1	Width Tolerances Length 17" to 60" (432mm to 1524mm) Length over 60" (1524mm)						lmm)
code	inch	mm	XL	L	Н	H-HF	H-XVV	XH	XL, L H	, H-XVV	Х	Н	XL,	L, H	Х	Ή
025	1/4	6.35	Χ						+.020"	+0.5mm			1 U3U"	+0.8mm		
031	5/16	7.94	Χ													
037	3/8	9.53	Χ	Х	Х	Х			030"	-0.8mm			030	+0.8mm		
050	1/2	12.7	Χ	Χ	Х	Χ		Χ	+.030"	+0.8mm			. 020"	+0.8mm		
075	3/4	19.05	Χ	Χ	Χ	Χ		Χ			000#	0			100#	4.0
100	1	25.4	Χ	Χ	Χ	Χ		Χ	030"	-0.8mm	+.080"	+2mm	050"	-1.3mm	+.190"	+4.8mm
150	1 1/2	38.1	Χ	Χ	Х	Х		Х	+.030"	+0.8mm			+.050"	+1.3mm		
200	2	50.8	Χ	Χ	Х	Х		Х	050"	-1.3mm	080"	-2mm	060"	-1.5mm	190″	-4.8mm
300	3	76.2		Χ	Х	Х		Χ	+.060"	+1.5mm			+.060"	+1.5mm		
400	4	101.6		Χ	Х	Х		Χ	060"	-1.5mm			080"	-2mm		
600	6	152.4			Х	Х	Х	Χ	+.060"	+1.5mm			+.060"	+1.5mm		
900	9	228.6					Χ		100"	-2.5mm			120"	-3.1mm		
1200	12	304.8					Х		+.060"	+1.5mm			+.060"	+1.5mm		
1500	15	381					Χ									
1800	18	457.2					Х		125″	-3.2mm			125″	-3.2mm		

Standard Width		Re	It Section			Length 450mm to 15		Tolerances Length over 1525	199199	
Jidiiddid Tridiii		1		1		-				
mm	T5	T10	T10-HF	T10-XVV	T20	T5, T10, T10-HF, T10-XVV	T20	T5, T10, T10-HF, T10-XVV	T20	
4	Χ									
6	Χ					+0.5mm		+0.75mm		
8	X					-0.75mm		-0.75mm		
10	Х	Χ	Х							
12	Х	Х	Χ							
16	Х	Х	Х			+0.75mm		+0.75mm		
20	Х	Х	Χ			-0.75mm		-1.27mm		
25	Х	Х	Χ		Χ					
32	Х	Х	Χ		Χ	+0.75mm		+1.27mm		
50	Х	Х	Χ		Χ	-1.27mm	+2.0mm	-1.52mm	+4.8mm	
75	Х	Х	Χ		Χ	+1.52mm	-2.0mm	+1.52mm	-4.8mm	
100	Х	Х	Χ		Χ	-1.52mm		-2.0mm		
150		Х	Χ	Χ	Χ	+1.52mm		+1.52mm		
225				Χ		-2.5mm		-3.18mm		
300				Χ						
380				Χ		+1.52mm		+1.52mm		
450				Χ		-3.18mm		-3.18mm		

					Width T	olerances		
Standard Width	Belt Section Length 450			Length 450mm to 1	525mm	Length over 1	Length over 1525mm	
mm	AT5, ATL5	AT10, ATL10	AT20	AT5, AT10, ATL10	AT20	AT5, AT10, ATL10	AT20	
4	Х							
6	Х			+0.5mm		+0.75mm		
8	Х			-0.75mm		-0.75mm		
10	Х	Х						
12	Х	Х						
16	Х	Х		+0.75mm		+0.75mm		
20	Х	Х		-0.75mm		-1.27mm		
25	Х	Х	Χ					
32	Χ	Χ	Χ	+0.75mm		+1.27mm		
50	Χ	Χ	Χ	-1.27mm	+2.0mm	-1.52mm	+4.8mm	
75		Χ	Χ		-2.0mm		-4.8mm	
100		Х	Χ	+1.52mm		+1.52mm		
150		Х	Х	-1.52mm		-2.0mm		

						Width	Tolerances
Standard Width		Ве	elt Section			Length 450mm to 1525mm	Length over 1525mm
mm	HTD® 5	HTD® 8	HTD®14	STD 5	STD 8	HTD® 5, HTD® 8, HTD® 14, STD 5, STD 8	HTD® 5, HTD® 8, HTD®14, STD 5, STD 8
5	Х			Χ		+0.5mm	+0.75mm
10	Х	Χ		Χ	Χ	-0.75mm	-0.75mm
15	Χ	χ		Χ	Χ	+0.75mm	+0.75mm
20		Χ			Χ	-0.75mm	+0.75mm
25	Х	Χ	Χ	Χ	Χ	-0.7 SIIIII	-1.2/ !!!!!
30		Χ			Χ		
40			Χ			+1.75mm	+1.27mm
50	Х	Χ		Х	Χ	-1.27mm	-1.52mm
55			Χ				
85		Χ	Χ		Χ	+1.52mm	+1.52mm
100		Х	Х		Х	-1.52mm	-2.0mm



Urethane Construction

Urethane offers extremely good abrasion resistance. Low wear means that the belts will be very clean running, with no accumulation of debris. Urethane teeth are much harder than traditional neoprene teeth, which contributes to the belts overall stiffness. This makes Truly Endless Belts ideal for high precision, positioning applications.

Reinforcing Cords

Our standard reinforcing material is steel cord. For some pitches, we can also supply Kevlar® cord or polyester cord. The cord with the optimum physical properties can be selected to maximize performance. Some considerations may include tensile strength, stretch, and flex-fatigue properties.

TIMING BELTS - Silicone Rubber



- Molded endless, no seam or splice
- Temperature range up to 500° Fahrenheit
- Chemical resistance
- Glue release
- Low thermal conductivity
- Additional backings available, molded integral with the base belt
- FDA compound available

XL	(.200") P	itch
Belt No.	No. Teeth	Pitch Length (in.)
60-XL	30	6.00
70-XL	35	7.00
80-XL	40	8.00
90-XL	45	9.00
96-XL	48	9.60
100-XL	50	10.00
106-XL	53	10.60
110-XL	55	11.00
120-XL	60	12.00
130-XL	65	13.00
134-XL	67	13.40
140-XL	70	14.00
150-XL	75	15.00
158-XL	79	15.80
160-XL	80	16.00
170-XL	85	17.00
180-XL	90	18.00
190-XL	95	19.00
194-XL	97	19.40
200-XL	100	20.00
210-XL	105	21.00
220-XL	110	22.00
230-XL	115	23.00
240-XL	120	24.00
250-XL	125	25.00
260-XL	130	26.00
270-XL	135	27.00
288-XL	144	28.80
290-XL	145	29.00
300-XL	150	30.00
330-XL	165	33.00
340-XL	170	34.00
356-XL	178	35.60
360-XL	180	36.00
376-XL	188	37.60
414-XL	207	41.40
450-XL	225	45.00
460-XL	230	46.00
480-XL	240	48.00
566-XL	283	56.60

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L	(.375") Pi	tch
Belt No.	No. Teeth	Pitch Length (in.)
86-L	23	8.62
124-L	33	12.38
150-L	40	15.00
165-L	44	16.50
187-L	50	18.75
202-L	54	20.25
210-L	56	21.00
225-L	60	22.50
240-L	64	24.00
255-L	68	25.50
270-L	72	27.00
285-L	76	28.50
300-L	80	30.00
322-L	86	32.25
345-L	92	34.50
360-L	96	36.00
367-L	98	36.75
390-L	104	39.00
420-L	112	42.00
450-L	120	45.00
480-L	128	48.00
510-L	136	51.00
540-L	144	54.00
570-L	152	57.00
600-L	160	60.00

H (.500") Pitch						
Belt No.	No. Teeth	Pitch Length (in.)				
240-H	48	24.00				
270-H	54	27.00				
300-H	60	30.00				
330-H	66	33.00				
360-H	72	36.00				
390-H	78	39.00				
420-H	84	42.00				
450-H	90	45.00				
480-H	96	48.00				
510-H	102	51.00				

T2.5 (2	2.5 mm)	Pitch
Belt No.	No. Teeth	Pitch Length (mm)
T2.5-55	22	55
T2.5-120	48	120
T2.5-122.5	49	122.5
T2.5-145	58	145
T2.5-160	64	160
T2.5-177.5	71	177.5
T2.5-180	72	180
T2.5-182	73	182
T2.5-185	74	185
T2.5-200	80	200
T2.5-230	92	230
T2.5-245	98	245
T2.5-265	106	265
T2.5-285	114	285
T2.5-290	116	290
T2.5-305	122	305
T2.5-317.5*	127	317.5
T2.5-330	132	330
T2.5-380	152	380
T2.5-395	158	395
T2.5-420	168	420
T2.5-480	192	480
T2.5-500	200	500
T2.5-540	216	540
T2.5-600	240	600
T2.5-620	248	620
T2.5-650	260	650
T2.5-680	272	680
T2.5-780	312	780
T2.5-880	352	880
T2.5-915	366	915
T2.5-950	380	950
T2.5-1185	474	1185
T2.5-1300	520	1300
Widths (ı	nm): up to	50 mm

T5 (5 mm) Pitch

No.

Teeth

24

30

33

36

37

40

42

43

44

45

49

50

51

52

55

56 59

60

61

63

65

66

68

70

71

73

78

80

82

84

85

86

88

89

90

91

92

93

95

96

100

102

103

105

109

110

112

115

Belt

No.

T5-100

T5-120

T5-150*

T5-165

T5-180

T5-185

T5-200

T5-210

T5-215

T5-220

T5-225

T5-245

T5-250

T5-255

T5-260*

T5-270

T5-275

T5-280

T5-295 T5-300*

T5-305

T5-315

T5-325

T5-330

T5-340

T5-350

T5-355

T5-365

T5-390

T5-400

T5-410*

T5-420

T5-425

T5-430

T5-440

T5-445

T5-450

T5-455

T5-460*

T5-465

T5-475

T5-480*

T5-500*

T5-510

T5-515*

T5-525*

T5-545

T5-550*

T5-560

T5-575

Pitch

Length

(mm)

100

120

150

165

180

185 200

210

215

220 225

245

250

255

260

270

275

280

295

300

305

315 325

330

340

350

355

365

390

400

410

420

425

430

440

445

450

455

460

465

475

480

500

510

515

525

545

550

560 575

MXL (.080") Pitch 40DP (.0816") Pitch

*Also available in double sided belt

Many sizes available. Contact our Customer Service Department for assistance.

AL .	(.200) 1	IICII
Belt No.	No. Teeth	Pitch Length (in.)
110.	leem	(111.)
60-XL	30	6.00
70-XL	35	7.00
80-XL	40	8.00
90-XL	45	9.00
96-XL	48	9.60
100-XL	50	10.00
106-XL	53	10.60
110-XL	55	11.00
120-XL	60	12.00
130-XL	65	13.00
134-XL	67	13.40
140-XL	70	14.00
150-XL	75	15.00
158-XL	79	15.80
160-XL	80	16.00
170-XL	85	17.00
180-XL	90	18.00
190-XL	95	19.00
194-XL	97	19.40
200-XL	100	20.00
210-XL	105	21.00
220-XL	110	22.00
230-XL	115	23.00
240-XL	120	24.00
250-XL	125	25.00
260-XL	130	26.00
270-XL	135	27.00
288-XL	144	28.80
290-XL	145	29.00
300-XL	150	30.00
330-XL	165	33.00
340-XL	170	34.00
356-XL	178	35.60
360-XL	180	36.00
376-XL	188	37.60
414-XL	207	41.40
450-XL	225	45.00
460-XL	230	46.00
480-XL	240	48.00
566-XL	283	56.60
Ordering E.	vampla	
INCH- URETH	<u>'</u>	
, UREII		

41 4 VI	007	41.40
414-XL	207	41.40
450-XL	225	45.00
460-XL	230	46.00
480-XL	240	48.00
566-XL	283	56.60
Ordering Ex	kample	
INCH- URETH	ANE XL, L, I	Н
U 480 - L - 1	00	
		— 1" wide
		— .375" pitch
		— 48" long
		— Urethane
30 F N	Shor	nard S

Belt No.	No. Teeth	Pitch Length (mm)
T5-590*	118	590
T5-600	120	600
T5-610	122	610
T5-620*	124	620
T5-625*	125	625
T5-630	126	630
T5-640	128	640
T5-650*	130	650
T5-660	132	660
T5-675	135	675
T5-690	138	690
T5-695	139	695
T5-700*	140	700
T5-720	144	720
T5-725	145	725
T5-750*	150	750
T5-765	153	765
T5-780	156	780
T5-800*	160	800
T5-815*	163	815
T5-830	166	830
T5-840	168	840
T5-850	170	850
T5-860*	172	860
T5-885	177	885
T5-900*	180	900
T5-920	184	920
T5-925	185	925
T5-940*	188	940
T5-975	195	975
T5-990	198	990
T5-1000	200	1000
T5-1075*	215	1075
T5-1090	218	1090
T5-1100*	220	1100
T5-1115	223	1115
T5-1140	228	1140
T5-1160	232 240	1160
T5-1200 T5-1215	243	1200 1215
T5-1215	243 255	1275
T5-1275	256	1273
T5-1315	263	1315
T5-1355	203 271	1355
T5-1333	276	1333
T5-1440	288	1440
T5-1500	300	1500
T5-1955	391	1955
	٠,١	

Wie	dths	(mm):	up to	1	00 mi	m
*Also	ava	ilable	in	doub	le	sided	belt

AT5	(5 mm) l	Pitch
Belt No.	No. Teeth	Pitch Length (mm)
AT5-225	45	225
AT5-255	51	255
AT5-260	52	260
AT5-275	55	275
AT5-280	56	280
AT5-300	60	300
AT5-330	66	330
AT5-340	68	340
AT5-375	75	375
AT5-390	78	390
AT5-420	84	420
AT5-450	90	450
AT5-455	91	455
AT5-480	96	480
AT5-500	100	500
AT5-525	105	525
AT5-545	109	545
AT5-600	120	600
AT5-610	122	610
AT5-620	124	620
AT5-630	126	630
AT5-660	132	660
AT5-710	142	710
AT5-720	144	720
AT5-750	150	750
AT5-780	156	780
AT5-825	165	825
AT5-860	172	860
AT5-975	195	975
AT5-1050	210	1050
AT5-1125	225	1125
AT5-1500	300	1500
AT5-1750	350	1750
AT5-2000	400	2000
Widths	(mm): up to	100 mm

T10 (10 mm) Pitch							
Belt No.	No. Teeth	Pitch Length (mm)	Belt No.	No. Teeth	Pitch Length (mm)		
T10-260*	26	260	T10-980*	98	980		
T10-340	34	340	T10-1000	100	1000		
T10-370	37	370	T10-1010	101	1010		
T10-390	37	390	T10-1050	105	1050		
T10-400	40	400	T10-1080	108	1080		
T10-410	41	410	T10-1100*	110	1100		
T10-440	44	440	T10-1110	111	1110		
T10-450	45	450	T10-1140	114	1140		
T10-480	48	480	T10-1150	115	1150		
T10-500	50	500	T10-1200	120	1200		
T10-520	52	520	T10-1210*	121	1210		
T10-530*	53	530	T10-1240*	124	1240		
T10-550	55	550	T10-1250*	125	1250		
T10-560	56	560	T10-1300	130	1300		
T10-600*	60	600	T10-1320*	132	1320		
T10-610	61	610	T10-1350*	135	1350		
T10-630*	63	630	T10-1390	139	1390		
T10-660*	66	660	T10-1400	140	1400		
T10-680	68	680	T10-1420*	142	1420		
T10-690	69	690	T10-1440	144	1440		
T10-700*	70	700	T10-1450	145	1450		
T10-720*	72	720	T10-1460	146	1460		
T10-730	73	730	T10-1500*	150	1500		
T10-750	75	750	T10-1560	156	1560		
T10-780	78	780	T10-1600	160	1600		
T10-800*	80	800	T10-1610*	161	1610		
T10-810	81	810	T10-1700*	170	1700		
T10-840*	84	840	T10-1750	175	1750		
T10-850	85	850	T10-1780	178	1780		
T10-880	88	880	T10-1880*	188	1880		
T10-890	89	890	T10-1960	196	1960		
T10-900*	90	900	T10-2250	225	2250		
T10-910	91	910	T10-3100	310	3100		
T10-920*	92	920	T10-4780*	478	4780		
T10-950	95	950	1M:d+L - /-	nm]n +-	100 mm		
T10-960*	96	960	Widths (mm): up to 100 mm *Also available in double sided belt				
T10-970	97	970	AISO UVUIIO	DIE III UUUDI	t siutu deli		

Ordering Example



NOTE: Additional sizes may be available. Check with Customer Service for availability.

AT10	(10 mm)	Pitch
Belt No.	No. Teeth	Pitch Length
NO.	leetn	(mm)
AT10-500	50	500
AT10-560	56	560
AT10-600	60	600
AT10-610	61	610
AT10-660	66	660
AT10-700	70	700
AT10-730 AT10-780	73 70	730
AT10-760 AT10-800	78 80	780 800
AT10-810	81	810
AT10-840	84	840
AT10-880	88	880
AT10-890	89	890
AT10-920	92	920
AT10-960	96	960
AT10-980	98	980
AT10-1000	100	1000
AT10-1010	101	1010
AT10-1050	105	1050
AT10-1080	108	1080
AT10-1100	110	1100
AT10-1150	115	1150
AT10-1200	120	1200
AT10-1210	121	1210
AT10-1250	125	1250
AT10-1280 AT10-1300	128 130	1280 1300
AT10-1300 AT10-1320	130	1320
AT10-1320	135	1350
AT10-1350	136	1360
AT10-1400	140	1400
AT10-1420	142	1420
AT10-1480	148	1480
AT10-1500	150	1500
AT10-1600	160	1600
AT10-1700	170	1700
AT10-1720	172	1720
AT10-1800	180	1800
AT10-1860	186	1860
AT10-1940	194	1940
Widths	(mm): up to 1	00 mm

T20 (20 mm)	Pitch
Belt No.	No. Teeth	Pitch Length (mm)
T20-1260	63	1260
T20-1460	73	1460
T20-1780	89	1780
T20-1880	94	1880
T20-2360	118	2360
T20-2600*	130	2600
T20-3100	155	3100
T20-3620*	181	3620
	nm): up to ble in doubl	

AT20 ((20 mm)	Pitch
Belt No.	No. Teeth	Pitch Length (mm)
AT20-1000	50	1000
AT20-1100	55	1100
AT20-1200	60	1200
AT20-1260	63	1260
AT20-1500	75	1500
AT20-1600	80	1600
AT20-1700	85	1700
AT20-1760	88	1760
AT20-1800	90	1800
AT20-1900	95	1900
AT20-1960	98	1960
Widths (r	nm): up to	100 mm

	CHAIN® (5mm) P	
Belt No.	No. Teeth	Pitch Length (mm)
5M GT-375	75	375
5M GT-425	85	425
5M GT-600	120	600
5M GT-815	163	815
Std. Widt	hs (mm): 9,	, 15, 25

POLY CHAIN® GT®

8M	(8mm) P	itch
Belt No.	No. Teeth	Pitch Length (mm)
8M-248	31	248
8M-288	36	288
8M-352	44	352
8M-416	52	416
8M-456	57	456
8M-480	60	480
8M-544	68	544
8M-608	76	608
8M-640	80	640
8M-720	90	720
8M-800	100	800
8M-896	112	896
8M-1000	125	1000
8M-1120	140	1120
8M-1200	150	1200
8M-1280	160	1280
8M-1440	180	1440
8M-1600	200	1600
8M-1792	224	1792
8M-2000	250	2000
8M-2240	280	2240
8M-2400	300	2400
8M-2520	315	2520
8M-2840	355	2840
8M-3200	400	3200
8M-3600	450	3600
8M-4000	500	4000
8M-4480	560	4480
Std. Wid	ths (mm): 12	, 21, 36

POLY 14M	CHAIN® (14mm)	GT® Pitch
Belt No.	No. Teeth	Pitch Length (mm)
14M-994	71	994
14M-1120	80	1120
14M-1190	85	1190
14M-1260	90	1260
14M-1400	100	1400
14M-1568	112	1568
14M-1750	125	1750
14M-1890	135	1890
14M-1960	140	1960
14M-2100	150	2100
14M-2240	160	2240
14M-2380	170	2380
14M-2520	180	2520
14M-2660	190	2660
14M-2800	200	2800
14M-3136	224	3136
14M-3304	236	3304
14M-3500	250	3500
14M-3920	280	3920
14M-4410	315	4410
	ths (mm): 2 8, 90, 125	

Ordering Example POLY CHAIN® GT® 5M, 8M, 14M 8M - 456 - 21 21 mm wide - 456 mm long 8 mm pitch

TIMING BELTS - Urethane Flex Wound Endless



In the past, there has been two basic methods for producing timing belts, Molded Endless and Open-Ended. Now we can offer a third method called Flex-Wound Endless. This method allows us to provide belts with molded endless strength, and with flexibility in making belts any length within the given range listed below.

Consider this belt when you need a wound endless construction and a standard molded endless belt is not available.

F. N. Sheppard Flex - Timing Belts are made to custom lengths ranging from 1.5 to 13.5 meters. Our unique manufacturing process provides you with the benefit of custom length belts with the additional power, strength and reliability of truly endless construction.

Truly Endless Design for greater loads and long life.

These belts are manufactured in an endless form for greater strength and longer life compared to spliced (welded belts). Truly endless construction is ideal for power transmission and high tension applications.

Steel reinforced urethane construction for improved durability.

Our steel reinforced urethane construction provides greater durability than neoprene belts. These belts exhibit excellent abrasion and chemical resistance. Steel cords provide exceptional strength, low stretch, and excellent flex-fatigue properties.



	AVAILABLE	PITCHES A	ND SIZES	
Timing Tooth Pitch	Nylon Teeth Optional	Maximum Width	Minimum Length	Maximum Length
T5, AT5	Yes	150 mm	1.5 meters	13.5 meters
T10, AT10	Yes	150 mm	1.5 meters	13.5 meters
T20, AT20	Yes	150 mm	1.5 meters	13.5 meters
8M HTD®	Yes	6 inches	1.5 meters	13.5 meters
XL	Yes	6 inches	60 inches	531 inches
L, H, XH	Yes	6 inches	60 inches	531 inches

TIMING BELTS - Neoprene Open-Ended



Special Length Belting

Open-ended timing belts with various tooth designs have been an excellent alternative for the conversion of synchronous rotational movement to linear motion. This provides an economical, noise and maintenance-free solution for oscillating or linear drives, by joining the ends with our clamping plates (see page 42). The result is the maximizing of positioning accuracy, repeatability, and power capacity.

By using the same long-length belting, we offer made-to-order belts, spliced to any length. Whether it be one tooth longer, or shorter than an available mold size, or a belt several hundred feet long, we can provide it. This is an excellent option for synchronous conveying, indexing, automation, and packaging applications. The process allows the flexibility of manufacturing one piece for prototyping without the need for expensive tooling, or in large production quantities. And keep in mind, we can also apply any of the available backings to the belt.

TIMING BELTS - Neoprene Molded Endless



OPTIONAL COME	POUNDS
Compound	Durometer
Tan Natural Rubber	35
Gray Synthetic Natural Rubber	37
Red Natural Rubber	40
White Natural Rubber	40
Yellow Natural Rubber	40
Gray Non-Marking	50
Tan FDA Compound	56
Non-Conductive Compound	69
Gray Non-Marking	70
High Temperature Compound	70

Other compounds available upon request

Neoprene Backing

Strong neoprene bonded to the tensile member for protection against grime, oil and moisture. It also protects against frictional wear if power is transmitted from the back of the belt.

Teeth with Nylon Facing

The molding process allows for the teeth to be accurately spaced and precisely molded with a nylon fabric tooth facing. This enables the teeth to smoothly mesh with the pulley groove. The nylon fabric also protects the tooth surface and provides for a low friction wear surface.

Reinforcement Cords

Fiberglass Tension Members provide timing belts with exceptional strength, low stretch, and excellent flex-fatigue properties.

TIMING BELTS - Neoprene Molded Endless

MXL	(.080")	Pitch
Belt No.	No. Teeth	Pitch Length (in.)
36-MXL	45	3.60
40-MXL	50	4.00
44-MXL	55	4.40
48-MXL	60	4.80
56-MXL	70	5.60
64-MXL	80	6.40
68-MXL	85	6.80
72-MXL	90	7.20
76-MXL	95	7.60
80-MXL	100	8.00
88-MXL	110	8.80
96-MXL	120	9.60
104-MXL	130	10.40
112-MXL	140	11.20
120-MXL	150	12.00
132-MXL	165	13.20
140-MXL	175	14.00
152-MXL	190	15.20
160-MXL	200	16.00
168-MXL	210	16.80
180-MXL	225	18.00
200-MXL	250	20.00
208-MXL	260	20.80
236-MXL	295	23.60
240-MXL	300	24.00
320-MXL	400	32.00

		XL (.20	0") Pitch		
Belt No.	No. Teeth	Pitch Length (in.)	Belt No.	No. Teeth	Pitch Length (in.)
50-XL	25	5.00	274-XL*	137	27.40
60-XL	30	6.00	280-XL*	140	28.00
68-XL	34	6.80	290-XL*	145	29.00
70-XL	35	7.00	300-XL*	150	30.00
76-XL	38	7.60	310-XL*	155	31.00
80-XL	40	8.00	314-XL*	157	31.40
90-XL	45	9.00	320-XL*	160	32.00
100-XL	50	10.00	330-XL*	165	33.00
110-XL	55	11.00	340-XL*	170	34.00
112-XL	56	11.20	344-XL*	172	34.40
120-XL	60	12.00	348-XL*	174	34.80
130-XL*	65	13.00	350-XL*	175	35.00
140-XL*	70	14.00	352-XL*	176	35.20
144-XL*	72	14.40	356-XL*	178	35.60
146-XL*	73	14.60	360-XL*	180	36.00
150-XL*	75	15.00	364-XL*	182	36.40
152-XL*	76	15.20	370-XL*	185	37.00
160-XL*	80	16.00	372-XL	186	37.20
162-XL*	81	16.20	376-XL*	188	37.60
164-XL*	82	16.40	380-XL*	190	38.00
166-XL*	83	16.60	384-XL*	192	38.40
168-XL*	84	16.80	390-XL*	195	39.00
170-XL*	85	17.00	400-XL*	200	40.00
172-XL*	86	17.20	408-XL*	204	40.80
174-XL*	87	17.40	420-XL*	210	42.00
176-XL*	88	17.60	424-XL*	212	42.40
180-XL*	90	18.00	430-XL*	215	43.00
182-XL*	91	18.20	450-XL*	225	45.00
184-XL*	92	18.40	456-XL*	228	45.60
188-XL*	94	18.80	460-XL*	230	46.00
190-XL*	95	19.00	480-XL*	240	48.00
192-XL*	96	19.20	490-XL*	245	49.00
196-XL*	98	19.60	500-XL*	250	50.00
198-XL*	99	19.80	570-XL*	285	57.00
200-XL* 202-XL*	100 101	20.00 20.20	592-XL*	296 304	59.20 60.80
202-XL 206-XL*	101	20.20	608-XL*		
206-XL 208-XL*	103	20.80	630-XL* 662-XL	315 331	63.00 66.20
210-XL*	104	21.00	672-XL*	336	67.20
210-XL 212-XL*	105	21.00	770-XL*	385	77.00
212-XL 220-XL*	110	22.00	828-XL	414	82.80
228-XL*	114	22.80	850-XL	425	85.00
230-XL*	115	23.00	860-XL	430	86.00
234-XL*	117	23.40	888-XL	444	88.80
240-XL*	120	24.00	900-XL	450	90.00
250-XL*	125	25.00	1020-XL	510	102.00
260-XL*	130	26.00	1180-XL	590	118.00
262-XL*	131	26.20			
270-XL*	135	27.00	*Also avail	lable in doubl	e sided belt

L ((.375") Pi	tch	
n. I.		Pitch	
Belt No.	No. Teeth	Length	
NO.	leetn	(in.)	
124-L	33	12.375	
135-L	36	13.500	
150-L*	40	15.000	
165-L*	44	16.500	
169-L*	45	16.875	
173-L*	46	17.250	
187-L*	50	18.750	
195-L*	52	19.500	
203-L*	54	20.250	
210-L*	56	21.000	
217-L*	58	21.750	
225-L*	60	22.500	
240-L*	64	24.000	
244-L	65	24.375	
255-L*	68	25.500	
263-L*	70	26.250	
270-L*	72	27.000	
277-L*	74	27.750	
285-L*	76	28.500	
300-L*	80	30.000	
304-L*	81	30.375	
315-L*	84	31.500	
318-L*	85	31.875	
322-L*	86	32.250	
334-L*	89	33.375	
337-L*	90	33.750	
345-L*	92	34.500	
352-L	94	35.250	
360-L*	96	36.000	
367-L*	98	36.750	
375-L*	100	37.500	
382-L*	102	38.250	
390-L*	104	39.000	
420-L*	112	42.000	
427-L*	114	42.750	

TIMING BELTS - Neoprene Molded Endless

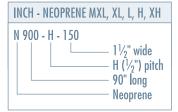
Belt	No.	Pitch Length
No.	Teeth	(in.)
436-L*	116	43.500
438-L*	117	43.875
446-L*	119	44.625
450-L*	120	45.000
465-1*	124	46.500
480-L*	128	48.000
510-L*	136	51.000
514-L*	137	51.375
525-L*	140	52.500
540-L*	144	54.000
548-L*	146	54.750
566-L*	151	56.625
581-L*	155	58.125
600-L*	160	60.000
605-L*	161	60.375
619-L*	165	61.875
640-L*	170	64.000
653-L*	174	65.250
660-L*	176	66.000
697-L*	186	69.750
728-L*	194	72.750
731-L*	195	73.125
767-L*	205	76.875
780-L*	208	78.000
788-L*	210	78.750
806-L*	215	80.625
817-L*	218	81.750
855-L*	228	85.500
863-L*	230	86.250
881-L	235	88.125
900-L*	240	90.000
915-L*	244	91.500
919-L*	245	91.875
938-L*	250	93.750
945-L*	252	94.500

*Also available in double sided belt

		H (.500")	Pitch		
	No. Le	itch ngth in.)	Belt No.	No. Teeth	Pitch Length (in.)
185-H*	37 1	8.50	680-H*	136	68.00
210-H*		1.00	700-H*	140	70.00
220-H*		2.00	725-H	145	72.50
230-H*		3.00	730-H*	146	73.00
240-H*		4.00	750-H*	150	75.00
255-H		5.50	760-H*	152	76.00
270-H*		7.00	770-H*	154	77.00
280-H*		8.00	780-H*	156	78.00
300-H*		0.00	800-H*	160	80.00
310-H*		1.00	810-H*	162	81.00
315-H*		1.50	820-H*	164	82.00
320-H*		2.00	840-H*	168	84.00
325-H		2.50	850-H*	170	85.00
330-H*		3.00	860-H*	172	86.00
340-H*		4.00	880-H*	176	88.00
350-H*		5.00	900-H*	180	90.00
360-H*		6.00	950-H*	190	95.00
370-H*		7.00	960-H*	192	96.00
375-H*		7.50	985-H*	197	98.50
390-H*		9.00	1000-H*	200	100.00
400-H*		0.00	1020-H*	204	102.00
410-H*		1.00	1040-H*	208	104.00
420-H*	84 4	2.00	1050-H*	210	105.00
430-H*		3.00	1100-H*	220	110.00
450-H*		5.00	1140-H*	228	114.00
465-H*	93 4	6.50	1150-H	230	115.00
480-H*	96 4	8.00	1170-H*	234	117.00
490-H*	98 4	9.00	1180-H*	236	118.00
500-H*	100 5	0.00	1250-H*	250	125.00
510-H*	102 5	1.00	1320-H*	264	132.00
530-H*	106 5	3.00	1350-H*	270	135.00
540-H*	108 5	4.00	1365-H*	273	136.50
560-H*	112 5	6.00	1400-H*	280	140.00
570-H*	114 5	7.00	1510-H*	302	151.00
580-H*	116 5	8.00	1550-H*	310	155.00
585-H	117 5	8.50	1645-H*	329	164.50
600-H*	120 6	0.00	1680-H*	336	168.00
		0.50	1700-H*	340	170.00
		3.00	2010-H*	402	201.00
640-H	128 6	4.00	2100-H*	420	210.00
		4.50	2330-H*	466	233.00
		5.00	2360-Н	472	236.00
		6.00	*Also available	in double of	idad halt
670-H	134 6	7.00	AISU UVUIIUDIO	t iii uuudie Si	ueu bell

XH (.875") Pitch				
Belt No.	No. Teeth	Pitch Length (in.)		
507-XH	58	50.75		
560-XH	64	56.00		
630-XH	72	63.00		
700-XH	80	70.00		
770-XH	88	77.00		
840-XH	96	84.00		
980-XH	112	98.00		
1120-XH	128	112.00		
1260-XH	144	126.00		
1400-XH	160	140.00		
1540-XH	176	154.00		
1750-XH	200	175.00		

Ordering Example



NOTE: Additional sizes may be available. Check with Customer Service for availability.

TIMING BELTS - Neoprene Molded Endless

HTD®	3M (3 mm)	Pitch
		Pitch
Belt	No. Teeth	Length
No.	ieein	(in.)
150-3M	50	5.91
159-3M	53	6.26
168-3M	56	6.61
177-3M	59	6.97
189-3M	63	7.44
201-3M	67	7.91
213-3M	71	8.39
225-3M	75	8.86
240-3M	80	9.45
252-3M	84	9.92
255-3M	85	10.04
267-3M	89 95	10.51
285-3M 300-3M		11.22
312-3M	100 104	11.81 12.28
312-3M 318-3M	104	12.20
339-3M	113	13.35
357-3M	113	14.06
363-3M	121	14.29
384-3M	128	15.12
390-3M	130	15.35
399-3M	133	15.71
420-3M	140	16.54
447-3M	149	17.60
474-3M	158	18.66
486-3M	162	19.13
501-3M	167	19.72
513-3M	171	20.20
531-3M	177	20.91
564-3M	188	22.20
597-3M	199	23.50
633-3M	211	24.92
669-3M	223	26.34
711-3M	237	27.99
753-3M	251	29.65
795-3M	265	31.30
843-3M	281	33.19
882-3M	294	34.72
945-3M	315	37.20
1002-3M	334	39.45
1062-3M	354	41.81
1125-3M 1191-3M	375 397	44.29 46.89
1191-3M 1263-3M	397 421	46.89 49.72
1709-91//	471	47./ L

HTD® 5	M (5 mm) Pitch
Belt	No.	Pitch Length
No.	Teeth	(in.)
350-5M	70	13.78
375-5M	75	14.76
400-5M	80	15.75
425-5M	85	16.73
450-5M	90	17.72
475-5M	95	18.70
500-5M	100	19.69
535-5M	107	21.06
565-5M	113	22.24
600-5M	120	23.62
635-5M	127	25.00
670-5M	134	26.38
710-5M	142	27.95
740-5M	148	29.13
800-5M	160	31.50
850-5M	170	33.46
890-5M	178	35.04
950-5M	190	37.40
1000-5M	200	39.37
1050-5M	210	41.34
1125-5M	225	44.29
1195-5M	239	47.05
1270-5M	254	50.00
1420-5M	284	55.91
1595-5M	319	62.80
1690-5M	338	66.54
1790-5M	358	70.47
1895-5M	379	74.61
2000-5M	400	78.74
2250-5M	450	88.58
2525-5M	505	99.40

HTD® 20	M (20 m	m) Pitch
Belt No.	No. Teeth	Pitch Length (in.)
2000-20M	100	78.74
2500-20M	125	98.43
3400-20M	170	133.86
3800-20M	190	149.61
4200-20M	210	165.35
4600-20M	230	181.10
5000-20M	250	196.85
5200-20M	260	204.72
5400-20M	270	212.60
5600-20M	280	220.47
5800-20M	290	228.35
6000-20M	300	236.22
6200-20M	310	244.09
6400-20M	320	251.97
6600-20M	330	259.84

Ordering Example

HTD® 3M, 5M, 20M
1420 - 5M - 25

GT®2 2M	R (2 mm)	Pitch
Belt No.	No. Teeth	Pitch Length (in.)
2MR-100	50	3.94
2MR-112	56	4.41
2MR-126	63	4.96
2MR-134 2MR-136	67 68	5.28 5.35
2MR-140	70	5.51
2MR-152	76	5.98
2MR-158	79	6.22
2MR-160	80	6.30
2MR-164	82	6.46
2MR-166 2MR-168	83 84	6.54 6.61
2MR-100 2MR-172	86	6.77
2MR-180	90	7.09
2MR-192	96	7.56
2MR-200	100	7.87
2MR-202	101	7.95
2MR-210 2MR-212	105 106	8.27 8.35
2MR-212 2MR-216	108	8.50
2MR-220	110	8.66
2MR-232	116	9.13
2MR-236	118	9.29
2MR-240	120	9.45
2MR-250	125	9.84
2MR-252 2MR-258	126 129	9.92 10.16
2MR-238	139	10.16
2MR-280	140	11.02
2MR-300	150	11.81
2MR-320	160	12.60
2MR-322	161	12.68
2MR-346 2MR-350	173	13.62
2MR-350 2MR-364	175 182	13.78 14.33
2MR-370	185	14.57
2MR-380	190	14.96
2MR-386	193	15.20
2MR-400	200	15.75
2MR-406	203	15.98
2MR-420 2MR-456	210 228	16.54 17.95
2MR-470	235	18.50
2MR-474	237	18.66
2MR-488	244	19.21
2MR-504	252	19.84
2MR-528	264	20.79
2MR-552	276	21.73 22.68
2MR-576 2MR-600	288 300	23.62
2MR-640	320	25.20
2MR-696	348	27.40
2MR-744	372	29.29
2MR-1164	582	45.83
Widths	(mm): 4, 6,	9

NOTE: Additional sizes may be available. Check with Customer Service for availability.

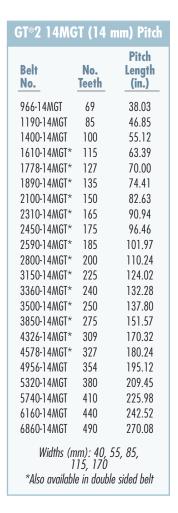
TIMING BELTS - Neoprene Molded Endless

CTO OMCT (O \ D'I |

GT®2	3MR (3 mm) Pitch
D.L	M-	Pitch
Belt No.	No. Teeth	Length (in.)
110.		
3MR-165		6.50
3MR-189		7.44
3MR-201		7.91
3MR-219		8.62
3MR-225		8.86
3MR-240		9.45
3MR-243		9.57
3MR-267		10.51
3MR-282	94	11.10
3MR-291		11.46
3MR-300	100	11.81
3MR-339	113	13.35
3MR-348	116	13.70
3MR-357		14.06
3MR-360		14.17
3MR-375	125	14.76
3MR-420	140	16.54
3MR-447	149	17.60
3MR-450	150	17.72
3MR-474	158	18.66
3MR-480	160	18.90
3MR-483	161	19.02
3MR-489	163	19.23
3MR-537	179	21.14
3MR-600	200	23.62
3MR-630	210	24.80
3MR-684	228	26.93
3MR-750	250	29.53
3MR-840		33.07
3MR-945	315	37.20
3MR-105	0 350	41.34
3MR-108		42.52
3MR-153		60.47
3MR-206	1 687	81.14

GT®2 51	MR (5 mi	m) Pitch
Belt No.	No. Teeth	Pitch Length (in.)
	10	
5MR-300	60	11.81
5MR-355	71	13.98
5MR-375	75	14.76
5MR-400	80	15.75
5MR-405	81	15.95
5MR-425	85	16.73
5MR-450	90	17.72
5MR-500	100	19.69
5MR-535	107	21.06
5MR-565	113	22.24
5MR-580	116	22.83
5MR-600	120	23.62
5MR-625	125	24.61
5MR-650	130	25.59
5MR-700	140	27.56
5MR-750	150	29.53
5MR-800	160	31.50
5MR-850	170	33.46
5MR-900	180	35.43
5MR-1000	200	39.37
5MR-1150	230	45.28
5MR-1300	260	51.18
5MR-1450	290	57.09
5MR-1600	320	62.99
5MR-1720	344	67.72
5MR-2100	420	82.67
Widths	s (mm): 9, 1	15, 25

Belt No.	No. Teeth	Pitch Length (in.)
384-8MGT	60	18.89
480-8MGT	60	18.89
560-8MGT	70	22.05
600-8MGT	75	23.62
640-8MGT	80	25.20
720-8MGT	90	28.35
800-8MGT	100	31.50
880-8MGT	110	34.65
960-8MGT	120	37.80
1040-8MGT	130	40.94
1120-8MGT	140	44.09
1200-8MGT*	150	47.24
1280-8MGT*	160	50.39
1440-8MGT*	180	56.69
1600-8MGT*	200	62.99
1760-8MGT*	220	69.29
1800-8MGT*	225	70.89
2000-8MGT*	250	78.74
2400-8MGT*	300	94.49
2600-8MGT*	325	102.36
2800-8MGT*	350	110.24
3048-8MGT*	381	120.00
3280-8MGT*	410	129.13
3600-8MGT*	450	141.73
4400-8MGT*	550	173.23



SUPER 1	TORQUE	
Belt	Pitch	
No.	<u>Length</u>	
S2M	2 mm	
S3M	3 mm	
S4.5M	4.5 mm	
S5M	5 mm	
S8M	8 mm	
S14M	14 mm	
Many sizes are available, please check with Customer Service for availability.		
Also available in	double sided belt.	

Ordering Example

GT®2 2MR, 3MR, 5MR

5MR - 1000 - 15

15 mm wide
1000 mm long
5MR (5 mm pitch)

Widths (mm): 6, 9, 15

TIMING PULLEYS & HARDWARE



Pulleys

- Pulley Bar Stock
- Bored Sizes
- Custom Sizes, Machining and Treating -FDA/USDA
- Aluminum, Steel, Cast Iron, Stainless Steel, Delrin - Depending on pitch and size

Additional Processes

- Heat Treating
- Black Oxide
- Anodizing
- Teflon® Coating

Additional Hardware

- QD Bushings
- Taper-Lock Bushings
- Taper-Lock Sheaves
- V-Belt Sheaves
- Flanges

Inch Sizes: MXL /.080", XL /.200", L /.375", H /.500", XH /.875"

Metric Sizes: T2.5, T5, T10, T20, AT5, AT10, AT20

HTD® Sizes: 3M, 5M, 8M, 14M



Here's another way F. N. Sheppard can help solve your production problems

- with a wide array of pulleys and hardware, including standard and custom
sizes. Just as having the right belts are important, it's just as essential to have
the right pulleys and hardware.

TIMING PULLEY





Type 6



Type 6W



Many other styles and types are also available

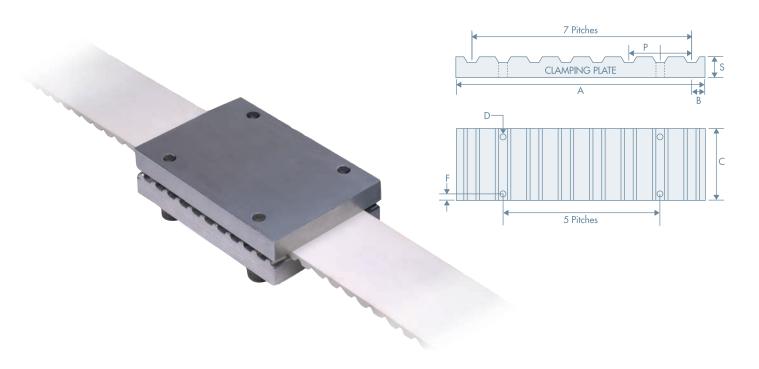
							Man	•	•		es are a		ilable							
								DF	RIVEC	ESIG	N CHA	RT								
	INCH PITCH (in.)									METRIC PITCH (mm)										
No. of	XL (0.200")		L (0.375")		H (0.500")		XH (0.875")		T5		T10		T20		AT5		AT10		AT	20
Teeth	PD	OD	PD	OD	PD	OD	PD	OD	PD	OD	PD	OD	PD	OD	PD	OD	PD	OD	PD	OD
10	0.64	0.62	1.19	1.16	-	-	-	-	15.9	15.1	31.8	30.0	-	-	15.9	15.1	31.8	30.0	-	-
11	0.70	0.68	1.31	1.28	-	-	-	-	17.5	16.7	35.0	33.2	-	-	17.5	16.7	35.0	33.2	-	-
12	0.76	0.74	1.43	1.40	-	-	-	-	19.1	18.3	38.2	36.3		-	19.1	18.3	38.2	36.3	-	-
13	0.83	0.81 0.87	1.55	1.52	2.23	2.17	-	-	20.7	19.9 21.5	41.4 44.6	39.5 42.7	-	-	20.7 22.3	19.9 21.5	41.4 44.6	39.5 42.7	-	-
15	0.09	0.07	1.07	1.76	2.23	2.17	-	-	23.9	23.1	44.0	45.9	95.5	92.6	23.9	23.1	44.0	45.9	-	-
16	1.02	1.00	1.77	1.88	2.55	2.49	-	-	25.5	24.6	50.9	49.1	101.9	99.0	25.5	24.6	50.9	49.1	-	
17	1.08	1.06	2.03	2.00	2.71	2.65	-	_	27.1	26.2	54.1	52.3	108.2	105.4	27.1	26.2	54.1	52.3	-	_
18	1.15	1.13	2.15	2.12	2.86	2.81		-	28.6	27.8	57.3	55.4	114.6	111.7	28.6	27.8	57.3	55.4	114.6	111.7
19	1.21	1.19	2.27	2.24	3.02	2.97	5.29	5.18	30.2	29.4	60.5	58.6	121.0	118.1	30.2	29.4	60.5	58.6	121.0	118.1
20	1.27	1.25	2.39	2.36	3.18	3.13	5.57	5.46	31.8	31.0	63.7	61.8	127.3	124.5	31.8	31.0	63.7	61.8	127.3	124.5
21	1.34	1.32	2.51	2.48	3.34	3.29	5.85	5.74	33.4	32.6	66.8	65.0	133.7	130.8	33.4	32.6	66.8	65.0	133.7	130.8
22	1.40	1.38	2.63	2.60	3.50	3.45	6.13	6.02	35.0	34.2	70.0	68.2	140.1	137.2	35.0	34.2	70.0	68.2	140.1	137.2
23	1.46	1.44	2.75	2.72	3.66	3.61	6.41	6.30	36.6	35.8	73.2	71.4	146.4	143.6	36.6	35.8	73.2	71.4	146.4	143.6
24	1.53	1.51	2.86	2.83	3.82	3.77	6.68	6.57	38.2	37.4	76.4	74.5	152.8	149.9	38.2	37.4	76.4	74.5	152.8	149.9
25	1.59	1.57	2.98	2.95	3.98	3.92	6.96	6.85	39.8	39.0	79.6	77.7	159.2	156.3	39.8	39.0	79.6	77.7	159.2	156.3
26	1.66	1.64	3.10	3.07	4.14	4.08	7.24	7.13	41.4	40.6	82.8	80.9	165.5	162.7	41.4	40.6	82.8	80.9	165.5	162.7
27	1.72	1.70	3.22	3.19	4.30	4.24	7.52	7.41	43.0	42.2	85.9	84.1	171.9	169.0	43.0	42.2	85.9	84.1	171.9	169.0
28	1.78	1.76	3.34	3.31	4.46	4.40	7.80	7.69	44.6	43.7	89.1	87.3	178.3	175.4	44.6	43.7	89.1	87.3	178.3	175.4
29	1.85	1.83	3.46	3.43	4.62	4.56	8.08	7.97	46.2	45.3	92.3	90.5	184.6	181.8	46.2	45.3	92.3	90.5	184.6	181.8
30	1.91	1.89	3.58	3.55	4.77	4.72	8.36	8.25	47.7	46.9	95.5	93.6	191.0	188.1	47.7	46.9	95.5	93.6	191.0	188.1
32	2.04	2.02	3.82	3.79	5.09	5.04	8.91	8.80	50.9	50.1	101.9	100.0	203.7	200.9	50.9	50.1	101.9	100.0	203.7	200.9
33	2.10	2.08	3.94	3.91	5.25	5.20	9.19	9.08	52.5	51.7	105.0	103.2	210.1	207.2	52.5	51.7	105.0	103.2	210.1	207.2
34	2.16	2.14	4.06	4.03	5.41	5.36	9.47	9.36	54.1	53.3	108.2	106.4	216.5	213.6	54.1	53.3	108.2	106.4	216.5	213.6
35	2.23	2.21	4.18	4.15	5.57	5.52	9.75	9.64	55.7	54.9	111.4	109.6	222.8	220.0	55.7	54.9	111.4	109.6	222.8	220.0
36	2.29	2.27	4.30	4.27	5.73	5.68	10.03	9.92	57.3	56.5	114.6	112.7	229.2	226.3	57.3	56.5	114.6	112.7	229.2	226.3
37	2.36	2.34	4.42	4.39	5.89	5.83	10.31	10.20	58.9	58.1	117.8	115.9	235.5	232.7	58.9	58.1	117.8	115.9	235.5	232.7
38	2.42	2.40	4.54	4.51	6.05	5.99	10.58	10.47	60.5	59.7	121.0	119.1	241.9	239.1	60.5	59.7	121.0	119.1	241.9	239.1
39 40	2.48	2.46	4.66	4.63	6.21	6.15	10.86	10.75	62.1	61.3	124.1	122.3	248.3	245.4	62.1	61.3	124.1	112.3	248.3	245.4
40	2.55	2.53	4.77	4.74	6.37	6.31	11.14	11.03	63.7	62.8	127.3	125.5	254.6	251.8	63.7	62.8	127.3	125.5	254.6	251.8
41	2.61	2.59	4.89	4.86	6.53	6.47	11.42	11.31	65.3	64.4	130.5	128.7	261.0	258.2	65.3	64.4	130.5	128.7	261.0	258.2
42	2.67	2.65	5.01	4.98	6.68	6.63	11.70	11.59	66.8	66.0	133.7	131.8	267.4	264.5	66.8	66.0	133.7	131.8	267.4	264.5
43	2.74	2.72	5.13	5.10	6.84	6.79	11.98	11.87	68.4	67.6	136.9		273.7	270.9	68.4	67.6	136.9	135.0	273.7	270.9
44	2.80	2.78	5.25	5.22	7.00	6.95	12.25	12.14	70.0	69.2	140.1	138.2	280.1	277.3	70.0	69.2	140.1	138.2	280.1	277.3
45	2.86	2.84	5.37	5.34	7.16	7.11	12.53	12.42	71.6	70.8	143.2	141.4	286.5	283.6	71.6	70.8	143.2	141.4	286.5	283.6
46	2.93 3.06	2.91 3.04	5.49 5.73	5.46 5.70	7.32 7.64	7.27 7.59	12.81 13.37	12.70 13.26	73.2 76.4	72.4 75.6	146.4 152.8	144.6 150.9	292.8 305.6	290.0 302.7	73.2 76.4	72.4 75.6	146.4 152.8	144.6 150.9	292.8 305.6	290.0 302.7
50	3.18	3.16	5.73	5.94	7.04	7.59	13.37	13.82	79.6	78.8	159.2	150.9	318.3	315.4	79.6	78.8	152.8	150.9	318.3	315.4
56	3.57	3.55	6.68	6.65	8.91	8.86	15.60	15.49	89.1	88.3	178.3	176.4	356.5	353.6	89.1	88.3	178.3	176.4	356.5	353.6
60	3.82	3.80	7.16	7.13	9.55	9.50	16.71	16.60	95.5	94.7	191.0	189.1	382.0	379.1	95.5	94.7	191.0	189.1	382.0	379.1
64	4.07	4.05	7.64	7.61	10.19	10.13	17.83	17.72	101.9	101.0	203.7	201.9	407.4	404.6	101.9	101.0	203.7	201.9	407.4	404.6
72	4.58	4.56	8.59	8.56	11.46	11.41	20.05	19.94	114.6	113.8	229.2	227.3	458.4	455.5	114.6	113.8	229.2	227.3	458.4	455.5

This chart is a reference for pulley diameters (outside and pitch) for a given number of teeth and a given tooth profile.

Note: Pitch Diameter = Pitch x #Teeth / 3.1416

TIMING BELT CLAMPS

F. N. Sheppard tooth profile clamping plates allow maximum clamping strength for open-ended timing belts used in oscillating or linear drives. Our precision machined tooth prevents slippage or backlash.



Aluminum Plate Dimensions

	F	D	В	Δ	ς	Belt Width C (inches)									
PITCH	inches	inches	inches	inches	inches	025	037	050	075	100	150	200	300	400	
XL	0.24	0.22	0.14	1.67	0.31	1.00	1.12	1.26	1.50	1.77	-	-	-	-	
L	0.31	0.35	0.20	3.02	0.59	-	1.41	1.54	1.77	2.03	2.52	3.03	-	-	
Н	0.39	0.43	0.35	4.21	0.87	-	-	1.77	2.00	2.26	2.75	3.26	4.25	5.27	

	F	D	В	٨	S mm	Belt Width C (mm)									
PITCH	mm	mm	mm	mm		10	16	25	32	50	55	75	85	100	
T5, AT5	6.00	5.50	3.20	41.80	8.00	29	35	44	51	71	-	-	-	-	
T10, AT10	8.00	9.00	5.00	80.00	15.00	-	41	50	57	75	-	100	-	125	
T20, AT20	10.00	11.00	10.00	160.00	20.00	-	-	56	65	81	106	132	-	-	

PITCH	F	n	R	٨	Ç	Belt Width C (mm)											
HTD®	mm	mm	mm	mm	mm	10	15	20	25	30	40	50	55	85	100		
5M	6	5.5	3.2	41.8	8	28	34	-	44	-	-	61	-	-	-		
8M	8	9	5	66	15	35	40	45	-	55	-	75	-	110	125		
14M	10	11	9	116	22	-	-	-	56	-	71	-	86	116	132		

FLAT CONVEYOR BELTS



"No problem. We can do that." That's what our customers have become accustomed to hearing. And that goes for flat conveyor belts too. In fact, that's how we got started. We are one of the largest distributors in the U.S. and we're certainly one of the best. Call our Customer Service Department and put us to the test.

F. N. Sheppard is a distributor and fabricator of flat conveyor belts. We have a large inventory of wide rolls which can be slit and fabricated to your specifications. With state-of-the-art equipment, several manufacturing and service locations, and a commitment to providing the best belt, you will get what you want.

Compounds

- FDA/USDA Approved
- Urethane
- PVC
- Thermoplastic
- Rubber
- Ruff-Tops
- Synthetic
- Oriented Nylon
- Natural Rubber
- Hi-Temperature
- Woven Endless
- Teflon®
- Silicone
- Plastic Modular





Cleats/Profiles



Mechanical Lacing



V-Guide



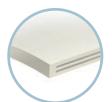
Perforating



Splicing



Corrugated Side-Walls



Capped or Sealed Edges



Turn Belt

SERVICE ON LOCATION



F. N. Sheppard can thermally weld open-ended timing belts on location instantly. We realize how difficult installation of endless timing belts can be. With weldable urethane timing belts, F. N. Sheppard can vulcanize belts endless in a short period of time.

Splicing, repair and installation services can be performed on location by trained technicians, without disassembling your equipment. We can even train your personnel in splicing and repair procedures, so you can streamline maintenance times down to the bare minimum.

F. N. Sheppard can provide on site splicing with our portable weld press. This unit compares with that of factory splicing systems, providing factory results under field conditions. The presses are also available to be purchased. We can customize to suit your pitch and width for any synchronous thermoplastic belts.

TRANSMISSION BELTS

We maintain one of the largest inventories of timing belt sleeves readily available to slit and ship, and have access to one of the country's biggest warehouses of power transmission products, at our immediate disposal.



Timing - Inch: MXL, XL, L, H, XH, XXH

Metric: T2.5, T5, AT5, T10, AT10, T20, AT20

Double Sided: Check availability

HTD® Belts: 3M, 5M, 8M, 14M

Poly Chain® GT®: 5M, 8M

Poly Chain® GT®2: 2MR, 3MR, 5MR, 8MGT, 14MGT

Double Sided: Check availability

Poly-V: J, L, M

V-Belts & Banded & Notched: V-Belts Double-V:

Link V-belt:

Metric V-Belts:

Fractional Horsepower V-belts: Deep Wedge & Banded & Notched:

Variable Speed: Woven Endless Flat: A, AX, B, BX, C, CX, D, E

AA, BB, CC, DD

A, B

SPZ, SPA, SPB, SPC, 10X, 13X, 17X

2L, 3L, 4L, 5L 3V, 3VX, 5V, 5VX, 8V Standard & Metric

Panther® #400, H, L, VL

MOLDED URETHANE PARTS



Molded parts and accessory items in various durometers and colors can be manufactured to the precise physical properties required for your applications.

- Urethane sheet material can be cut to your requirements
- O-ring Belts
- Vacuum Cups
- Pad/Bumpers
- Capper Disc
- Wheels
- Any shape. Minimal tooling charge for new parts
- Various Urethane or Silicone compounds

ROLLER/PULLEYS & LAGGING

We have been able to solve a lot of belt grip problems by covering rollers and pulleys with various compounds. There are many types and methods for covering rollers from the smallest to the largest sizes. We have a complete line of conveyor pulleys and industrial rollers. Virtually any diameter, wall thickness, length, end type, shaft size, and lagging type is available. Manufactured with crowned face or flat face in mild steel, stainless steel, aluminum or PVC. Contact our Technical Department for complete details.

Methods

• Molded Covers

Sheet Wrapped LaggingSpiral Wrapped

• Slide on Tubing

Compounds

- Urethane
- Neoprene
- Synthetic Rubbers
- Natural Gum
- Linatex
- Silicone
- Ruff-Top

Types

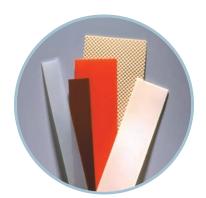
- Standard Duty
- Medium Duty
- Hubs/Shafts
- Stainless
- Wing Type
- Machined
- Idlers

TEFLON® & SILICONE BELTS



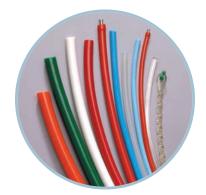
THERMOPLASTIC FLAT, ROUND & V-BELTS

Thermoplastic urethane is very user friendly. It allows for quick splicing with the means of heat welding the belt ends. Belting is available in open-ended rolls (standard rolls 100-500 ft.) or cut and welded to your exact length required.



Flat Belts

Various colors, hardness, and thicknesses



Round Belts

Various colors, hardness, textures and diameters. Standard diameters range from 1/8" - 3/4". Some are available with hollow cores, allowing for quick metal insert connections. Others are twisted for mechanical loop fastening.

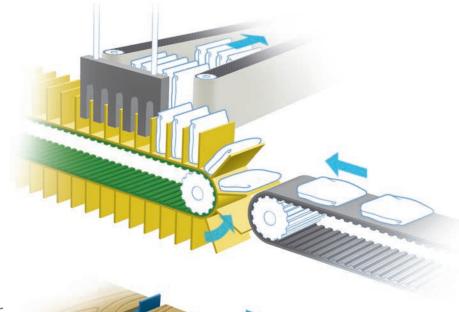


V-Belts

Various colors, hardness, additional backings and sizes. Standard section sizes 3L, A, B, C, D, E. Backings available include: Flat, Twin, Crown-Top, Ridge-Top, Hi-Ridge-Top, Wing-Top, Ruff-Top.

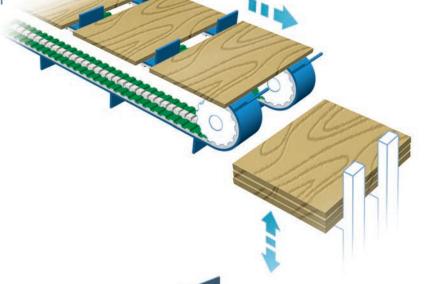
Indexing Packaging Machine

High friction infeed belt, flighted accumulation belt, and soft compression belt.



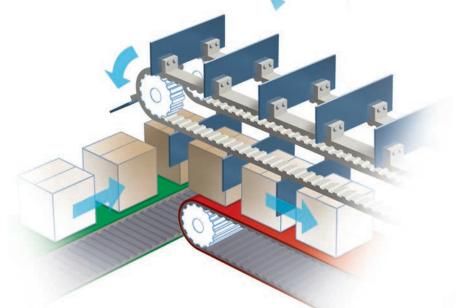
Synchronous Stacking Conveyor

Urethane timing belt with profiles and self-tracking guide



90° Overhead Sweep

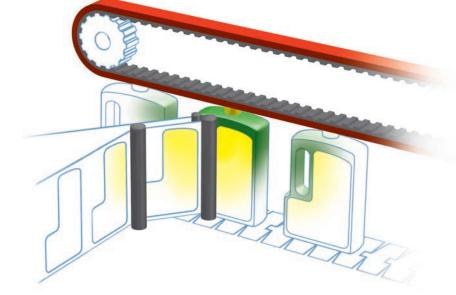
Low friction infeed belt, high friction discharge belt, and profile timing belt with attachments



APPLICATIONS

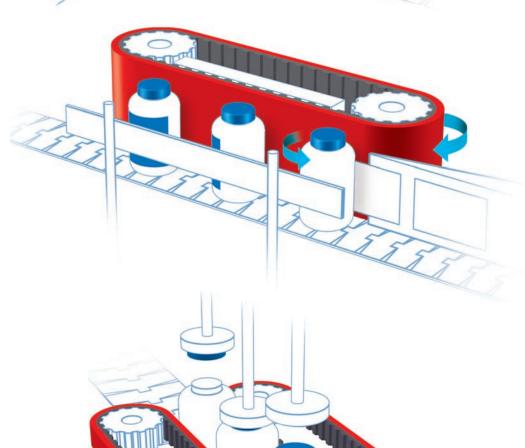
Top Support Belt

Overhead belt with compressible additional backing



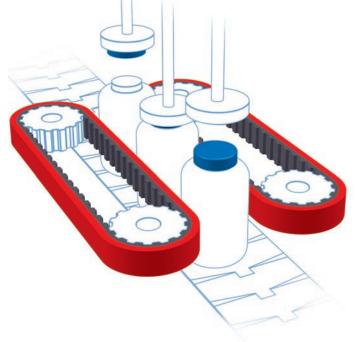
Side Wrap Belt

Soft, high friction wrap belt



Side Grip Belts

Soft, side grip belts for container control



Form-Fill-Seal Pull Belts

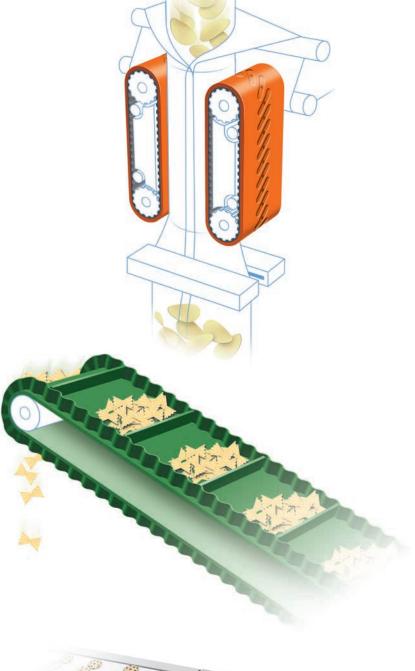
High friction backing with perforations for vacuum



Conveyor belt with corrugated side walls and cleats



Flat belt for power turn conveyor





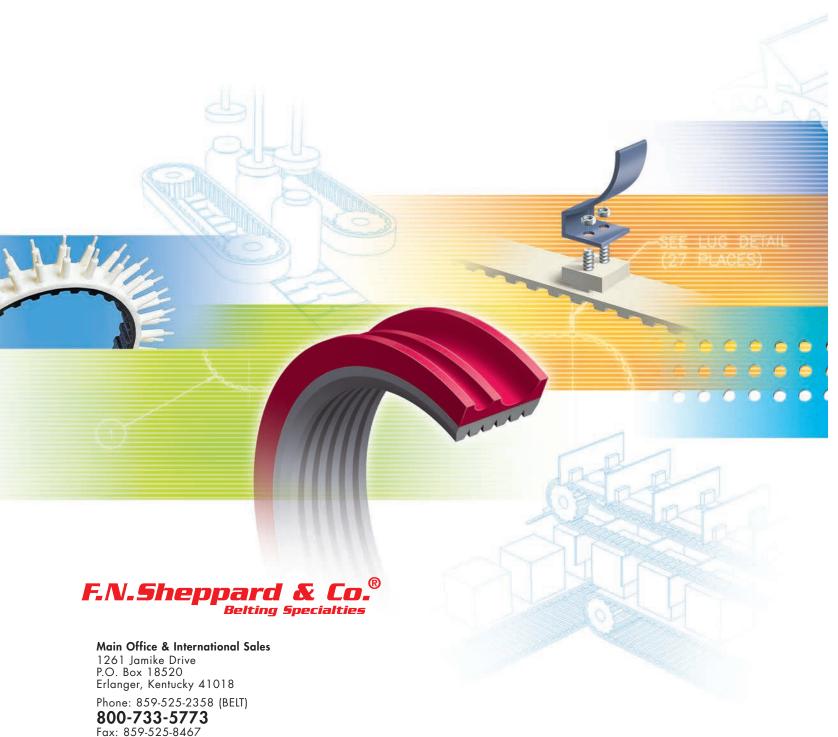
UNIQUE CUSTOM BELT EXAMPLES



UNIQUE CUSTOM BELT EXAMPLES



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Louisville, Kentucky 800-499-8966 Charlotte, North Carolina 704-295-0140

Maple Grove, Minnesota

763-420-8133

Woodbury, New Jersey 859-653-3857

