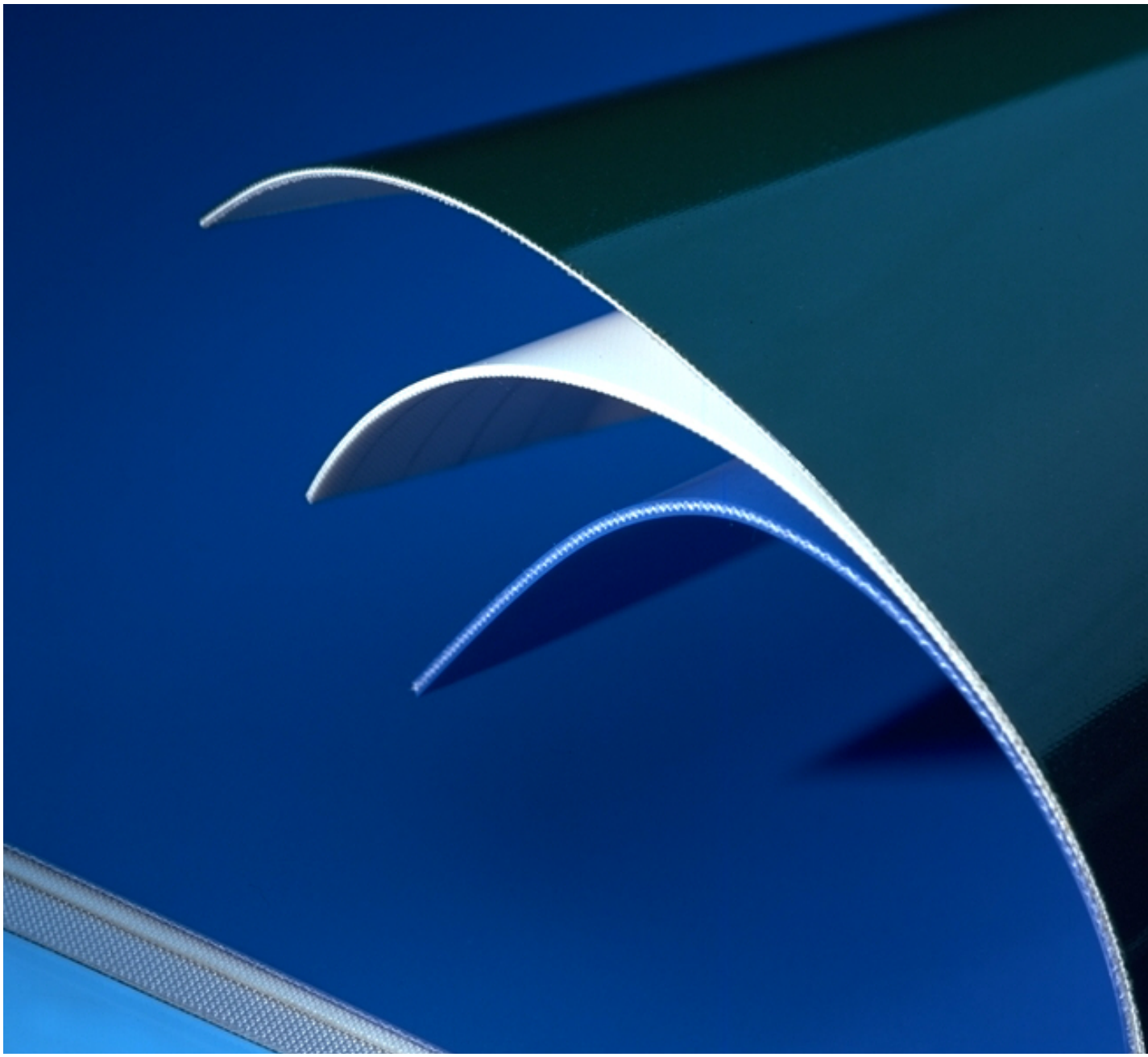
Ammeraal Beltech

BELT POWER®

AM-EN

Synthetic Conveyor Belts General Brochure



Innovation and Service in Belting.


Ammeraal Beltech

1. Ammeraal Beltech

Ammeraal Beltech is a global market leader in the design, manufacturing, fabrication and servicing of high-quality, high-performance process and conveyor belts.

We employ over 3,000 of the best people in the business – people who love belting and are passionate about what they do best – helping our customers with their belting challenges, so they can achieve more production up-time, higher product quality and lower total cost of ownership (TCO).

Our products are available in 150 countries around the world; our network is vast, which means it's also local.

In addition to our Synthetic Belt range, we offer:

- Modular Belts
- Homogeneous Belts
- Plastic and Steel Chains
- Engineered Belts
- High Performance Flat Belts
- Endless Woven Belts
- Round & V-belts

Ammeraal Beltech products are at home in nearly every **industry**, often in critical applications:

- Airports
- Automotive
- Carton, Paper, Packaging materials
- Coating & Lamination
- Food
- Logistics
- Marble and Ceramic
- Metal
- Textile
- Tobacco
- Treadmills
- Tire
- Wood

local stock
quick belt replacement
short delivery time

ONE STOP SHOP belt

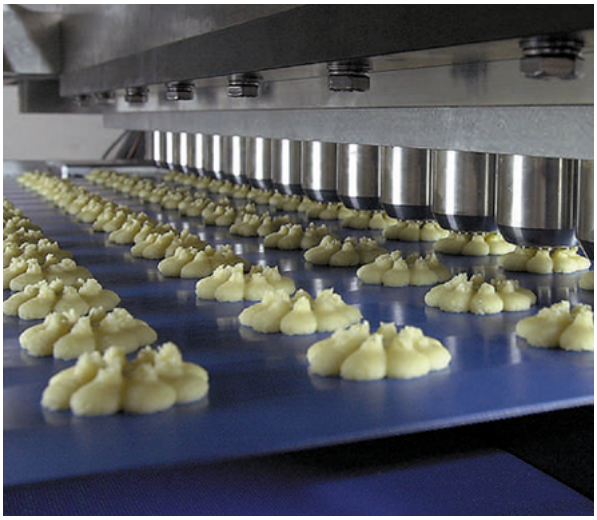
2. Synthetic Belts: Main Product Features & Standards

Ammeraal Beltech Synthetic Belts are designed to meet the specific needs of the industries in which they are used. We offer a broad array of materials, constructions, colors and unique features of design created through collaboration with industry leaders in the segments we service.
Some of our strengths are:

- **Food Grade**

We manufacture belts for use in high or low temperatures, with excellent resistance to oils and fats and superb release characteristics. To ensure food safety and to avoid any food contamination, a complete range of belts is available in compliance with:

- The latest EU regulation EC 1935/2004, EU 10/2011 and amendments
- Food contact surface FDA standards



- **AntiMicrobial**

Ammeraal Beltech developed belts with antimicrobial additives to assist in reducing the number of microbes on food contact surfaces. This also reduces the risk of food contamination - insuring optimum adherence to your food safety standards and supports the implementation of your ISO 22000 (ex HACCP) programs.

- **Non-Fray**

Our non-fray belts run and remain intact longer and deliver even better food hygiene by reducing fabric fray contamination. Our KleenEdge and AmSeal Belts tackle contamination risks that may occur from belt edge wear. The belt construction is designed in such a way that the high strength reinforcement fabric is held securely together with a tough non-cracking thermoplastic polyurethane seal.

- **Knife-Edge Transfer**

Particularly when conveying small goods, the transfer between 2 belts must be as short as possible. In this case it is common to use knife-edges. More tension is needed to flex the belt over a knife-edge which causes more wear. This calls for premium quality belts.

- **Low-Noise, Flame-Retardant, Impact Resistant**

We offer low-noise belts, fire-retardant belts and belts designed to handle impact and abrasion; all of which is required in todays high speed logistics and airport environments.

- **Self Tracking**

Working closely with OEMs we have developed a range of proprietary fabric self-tracking belts that show superior performance on fixed center, bi-directional and wide, short center conveyors. Tracking of a belt in these situations is always very difficult.
Reduced maintenance costs | Compact conveyor design | Less energy consumption | Easy and quick installation

- **High Grip**

Our high grip belts are specifically designed to increase the friction between the belt and the products being carried. This is often needed for inclined transport or in slippery conditions. High grip characteristics can be obtained by using certain cover surface profiles (embossing).

- **Wear-Resistant**

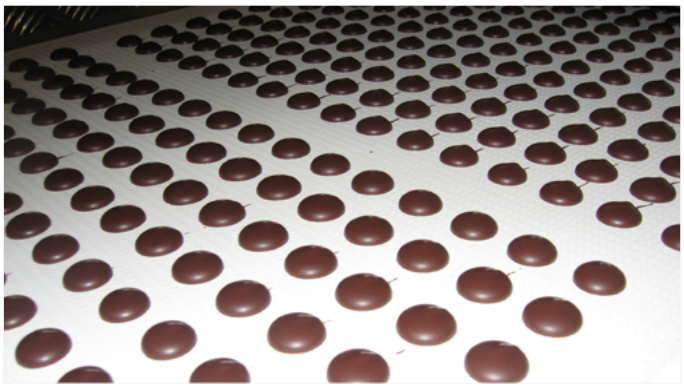
We offer a range of wear-resistant belts that are specifically designed to handle even the toughest conditions you can think of. Wear-resistance is one of the most important properties that determine the life expectancy of a conveyor belt.

- **Energy Saving**

Belt selection is a very important factor in saving energy, but not the only one. Ammeraal Beltech's 'Energy Saving Concept' is based on 3 pillars that influence the power demands of a conveyor:

- Conveyor design, in order to get the basics right
- Belt selection, a fit for purpose belt
- Drum motor sizing, not too big (wastes energy) and not too small (will be overworked)

3. Indication of Use



There are more usages for Synthetic Belts besides the normal A-to-B (horizontal) conveying of goods, where a specific belt is needed to get the job done.

Conveyor types examples:

- *Troughed conveyors*
- *Curved conveying*
- *Inclined or declined conveying*
- *Accumulation*

- **Troughed (roller support)**

Used to convey products such as fruit and vegatables sugar cane and grain. The belts need to have good lateral flexibility.

- **Curved conveying**

Curved belts are used to change the direction of travel of goods (between 30 and 180 degrees), for sorting purposes or when saving floor space is crucial.

- **Inclined/declined conveying**

For inclined conveying measures must be taken to prevent goods from sliding down or falling: cover profile providing high friction between goods and belts or accessories (like cleats) for larger angles of inclination or for bulk products.

- **Accumulation**

When products conveyed accumulate, special low friction cover features allow for the belt to slip under the product without creating damage.

4. Materials

Our comprehensive range of Synthetic Belts are able to fulfill the application needs for light to heavy processing and conveying applications.
Synthetic conveyor belts are made of fabrics with a coating on the top and/or bottom side. A belt consists of one or more fabric plies to give certain features such as strength, stability and impact resistance. The coatings used on Synthetic Belts are called polymers and can be made of various materials which have influence on the suitability of the belt in a certain application.

Mainly used compounds for coatings are:

- **PVC:** Flexam, Nonex
- **Polyurethane:** Ropanyl, Ropanol, Ropan, Ultranyl, Ultraclean
- **Polyolefin:** Peflex, Poliflex, Polikleen
- **Polyester:** Amtel
- **Silicone**: Silam
- **Special Blends**: Pletex, Elastoflex, Elastonyl

By mixing polymers together, Ammeraal Beltech produces variations on PVC or PU called **"Special Blends"**.

The Synthetic Belts range also includes Fabric and Felt belts, used in a wide variety of material transport applications such as car manufacturing, food processing and heavy industry. Felt is a non-woven fabric. The most important raw material for belting fabrics is polyester. Main fabrics used are: Cotton (natural) | Flax (natural) | Polyamide (synthetic) | Polyester (synthetic).

Compound	Main Coating Types
PVC	Flexam, Nonex
POLYURETHANE	Ropanyl (TPU), Ropanol (PUR), Ropan (PUR)
POLYOLEFIN	Peflex, Poliflex, Polikleen
POLYESTER	Amtel

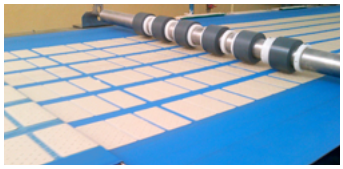
PVC

Flexam belts
- Good chemical resistance (including chlorine)
- Hydrolysis resistance (hot water and steam)
- Flame-retardant types available (ISO 340)

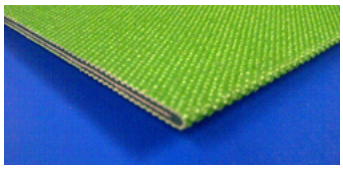
Nonex belts
- Good resistance to oil and fat
- Food compliance for all foodstuff
- Available in white and light blue, and with different profiles

Polyurethane

Ropanyl belts
- Belts with thermoplastic polyurethane coating
- Very flexible even at low temperatures
- Very good resistance to oil and fat



Ropanol belts
- Belts with polyurethane impregnation (zero thickness)
- Low friction top side for accumulation
- Very flexible even at low temperatures



Ropan belts
- Belts with unique heavy duty polyurethane coating
- Extremely good abrasion and cut resistance
- Thermoplastic inner layer, suitable for hot splicing

Polyolefin

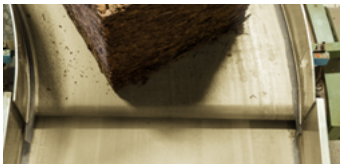
Peflex belts
- Flexible at low temperatures
- Chemically inert material, good chemical resistance
- Pyrolysis resistance (non-toxic when burning, tobacco approved)

Poliflex belts
- Excellent chemical resistance
- Pyrolysis resistance (non-toxic when burning, tobacco approved)
- Food compliance for all foodstuffs

Polikleen belts
- Excellent chemical resistance
- Pyrolysis resistance (non-toxic when burning, tobacco approved)
- Good wear resistance

Polyester

Amtel belts
- Polyester
- Mechanically very strong
- Flexible at low temperatures

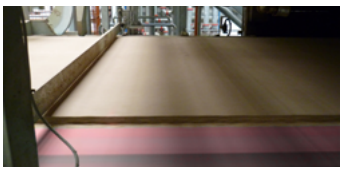


UltraClean belts
- Excellent release properties
- Very good oil and fat resistance
- High chemical resistance

Ultranyl belts
- Very good hydrolysis resistance
- Flexible, suitable for high temperature
- Belts with thermoplastic polyurethane coating

Silicone

Silam belts
- Good release of sticky products
- High temperature resistance
- Chemical resistance

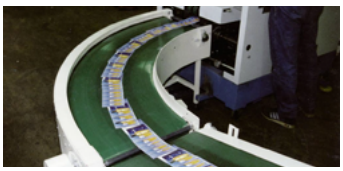


Special Blends

Pletex belts
- High grip
- Good chemical resistance
- Available in red color

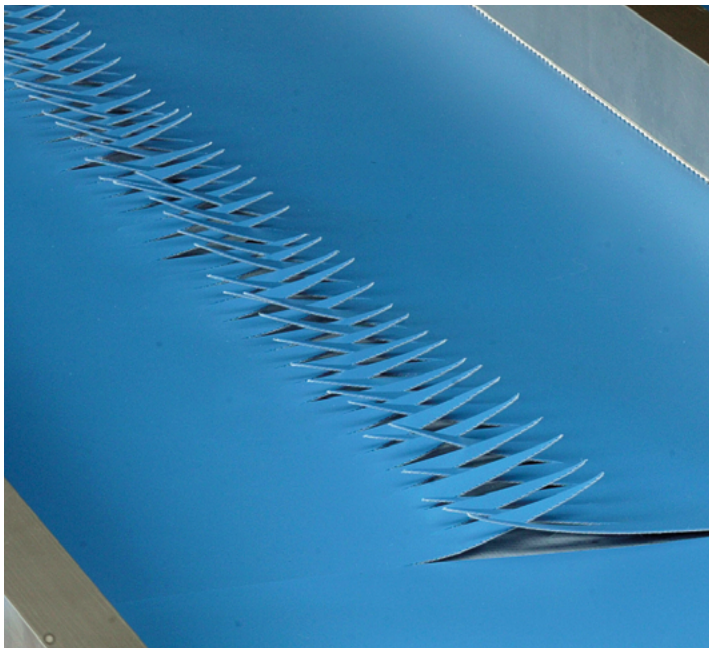
Elastoflex belts
- Very good wear resistance and good grip
- Good oil resistance
- Available in green and beige color

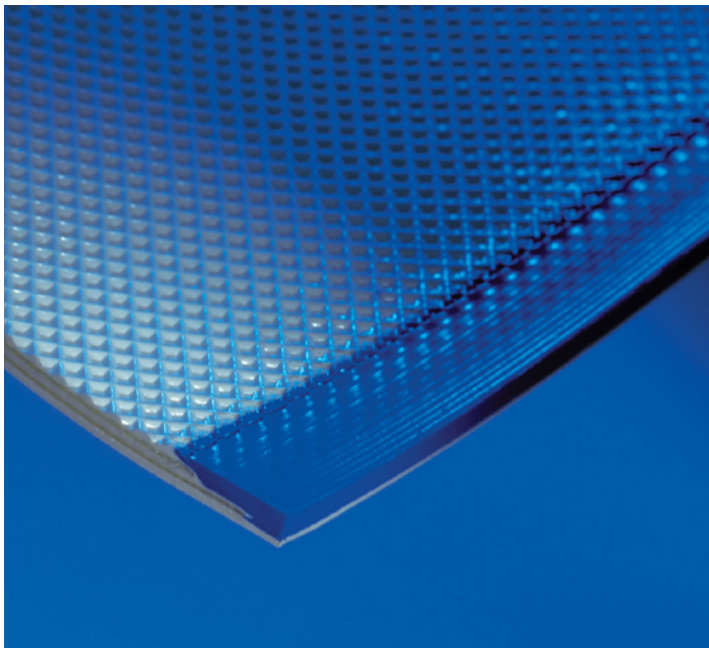
Elastonyl belts
- Excellent wear-resistance and good grip
- Very good oil resistance
- Available in green color

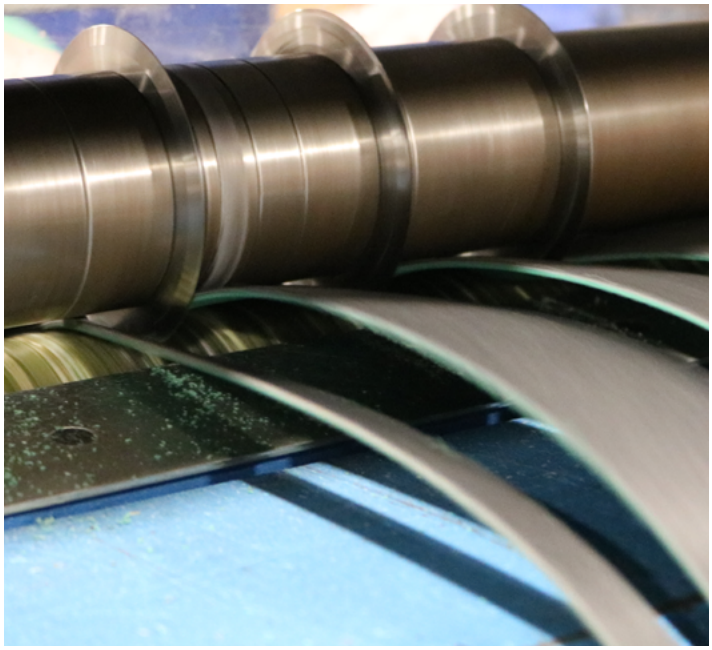


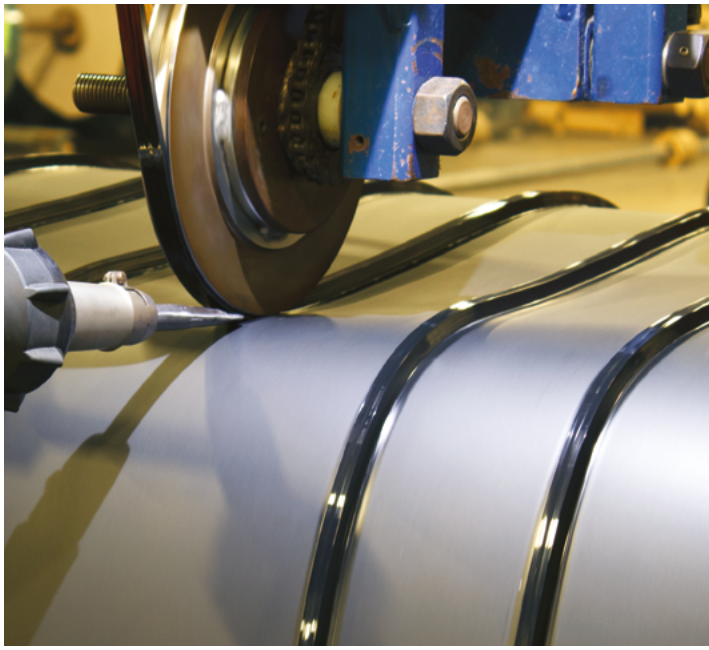

Ammeraal Beltech

Standard Synthetic Fabrications









Standard Splice Configuration by Belt Type Group Overview

Use these charts to select the proper configuration for splicing:

1 Ply Belts								M Type Press			P Type Press		A Type Press	
Top Cover	Inner Layer	Optimum Belt Temperature (°Celcius)	Minimum Dwell Time (seconds)	Standard Splice Geometry (mm)	Angle of Splice	Splice Material	Splice Material Position	Press Plate Temperature (°Celcius)	Thermocouple Temperature (°Celcius)	Dwell Time (Seconds) *2	Press Plate Temperature (°Celcius)	Dwell Time (Seconds) *2	Press Plate Temperature (°Celcius)	Dwell Time (Seconds) *2
Elastonyl	None	180	30	Finger 80 x 10	90°	None	N/A	150	150	45	145	120	150	30
Fabric	None	185	30	Finger 80 x 10	90°	TPU-V	Bottom	180	175	60	180	135	185	30
Felt	Solid (NPF)	185	30	Skived	72°	TPU-V	Center	180	175	60	180	135	185	30
Flexam	None	175	30	Finger 80 x 10	90°	None	N/A	160	170	45	175	120	175	30
Nonex	None	175	30	Finger 80 x 10	90°	None	N/A	160	160	45	175	120	175	30
Peflex	VH	130	30	Finger 80 x 10	90°	None	N/A	120	120	45	125	120	130	30
Ropanol	None	185	30	Finger 80 x 10	90°	TPU-V	Bottom	180	180	60	180	135	185	30
Ropanyl 85/87	None	150	30	Finger 80 x 10	90°	None	N/A	140	140	45	145	120	150	30
Silam	None	185	30	Finger 80 x 10	90°	TPU-V	Bottom	180	180	60	180	135	185	30
Ultraclean	None	140	30	Finger 80 x 10	90°	None	N/A	140	140	45	150	120	140	30

2 Ply Belts								M Type Press			P Type Press		A Type Press	
Top Cover	Inner Layer	Optimum Belt Temperature (°Celcius)	Minimum Dwell Time (seconds)	Standard Splice Geometry (mm)	Angle of Splice	Splice Material	Splice Material Position	Press Plate Temperature (°Celcius)	Thermocouple Temperature (°Celcius)	Dwell Time (Seconds) *2	Press Plate Temperature (°Celcius)	Dwell Time (Seconds) *2	Press Plate Temperature (°Celcius)	Dwell Time (Seconds) *2
Elastoflex	PVC	180	45	Finger 80 x 10	90°	None	N/A	165	160	45	180	100	180	45
Fabric	PVC	175	45	FOF 50 x 20	90°	PVC-S 55 *9	Center	165	160	45	180	100	180	45
Fabric	PU	150	45	FOF 50 x 20	90°	TPU-S85	Center	145	140	45	150	100	150	45
Flexarn	Flexarn	175	45	Finger 80 x 10	90°	None *4 *9	N/A	165	160	45	180	100	180	45
Flexarn	None	175	45	Finger 80 x 10	90°	None	N/A	165	160	45	180	100	180	45
Nonex	Nonex	175	45	Finger 80 x 10	90°	None *4	N/A	165	160	45	180	100	180	45
Nonex	None	175	45	Finger 80 x 10	90°	None	N/A	165	160	45	180	100	180	45
Peflex	Peflex	130	45	FOF 50 x 20	90°	None	N/A	125	120	45	130	100	130	45
Pletex	PVC	175	45	Finger 80 x 10	90°	None	N/A	165	160	45	180	100	180	45
Poliflex	Poliflex	130	45	FOF 50 x 20	90°	None	N/A	120	125	45	130	100	130	45
Poliflex	PU	150	45	FOF 50 x 20	90°	TPU-S	Center	155	150	45	150	100	150	45
Polikleen	Polikleen	130	45	FOF 50 x 20	90°	None	N/A	145	130	45	130	100	130	45
Ropan	PVC	110	45	FOF 50 x 20	90°	TPU-P	Center	140	135	45	130	100	130	45
Ropanol	PU	150	45	FOF 50 x 20	90°	TPU-S	Center	155	150	45	150	100	150	45
Ropanol	PVC	175	45	FOF 50 x 20	90°	PVC-S 55 *9	Center	165	160	45	180	100	180	45
Ropanyl85	PU	150	45	Finger 80 x 10	90°	None *5	N/A	145	140	45	150	100	150	45
Ropanyl85	PVC	175	45	Special *8		Top Cover	Top side	175	170	45	180	100	180	45
Ropanyl85	None	150	45	Finger 80 x 10	90°	None *5	N/A	145	140	45	150	100	150	45
Ropanyl93	PU	155	45	Finger 80 x 10	90°	None *6	N/A	155	150	45	155	100	155	45
Ropanyl93	PVC	175	45	Special *8		Top Cover	Top side	170	165	45	175	100	175	45
Ropanyl93	None	155	45	Finger 80 x 10	90°	None *6	N/A	155	150	45	155	100	155	45
Ropanyl93	PUH	155	45	Finger 80 x 10	90°	None *6	N/A	155	150	45	155	100	155	45
Silam	PU	150	45	FOF 50 x 20	90°	TPU-S85	Center	155	1SO	45	150	100	150	45
Silarn	Silarn	90	300	FOF 50 x 20	90°	Silicone paste	Center	95	90	300	95	480	95	480
Ultraclean	Ropanyl	140	30	Finger 80 x 10	90°	None	N/A	145	140	45	155	100	155	45

3 Ply Belts								M Type Press			P Type Press		A Type Press	
Top Cover	Inner Layer	Optimum Belt Temperature (°Celcius)	Minimum Dwell Time (seconds)	Standard Splice Geometry (mm)	Angle of Splice	Splice Material	Splice Material Position	Press Plate Temperature (°Celcius)	Thermocouple Temperature (°Celcius)	Dwell Time (Seconds) *2	Press Plate Temperature (°Celcius)	Dwell Time (Seconds) *2	Press Plate Temperature (°Celcius)	Dwell Time (Seconds) *2
Elastoflex	PVC	180	45	FOF 50 x 20	90°	None	N/A	170	160	45	180	135	180	75
Fabric	PVC	175	45	Step	72°	None	N/A	165	160	45	180	135	180	75
Fabric	PU	150	45	Step	72°	None	N/A	145	140	45	150	135	150	75
Flexam	Flexam	175	45	Step	72°	None	N/A	170	160	95	180	135	180	75
Flexam	Arntel	175	45	Step	72°	None	N/A	170	160	45	180	135	180	75
Flexam	PU	175	45	Special		Top Cover	Top side	165	160	45	180	135	180	30
Nonex	Nonex	175	45	Step	72°	None	N/A	170	160	95	180	135	180	75
Ropanol	PVC	175	45	Step	72°	None	N/A	165	160	45	180	110	180	75
Ropanyl85	PU	150	45	Step	72°	None *2	N/A	145	140	95	150	110	150	75
Ropanyl93	PU	155	45	Step	72°	None *3	N/A	155	150	95	155	110	155	75
Ropanyl93	PVC	175	45	Special		Top Cover	Top side	175	160	45	180	75	180	45

M type = Maestro Air Cooling, P type = Water Cool, A type = Water cool

*1 All temperatures quoted are approximate and should only be used as a guide. In all instances, the beltmust reach the stated Optimum Belt Temperature

*2 Dwell time is dependent on the thickness of the belt material and the profile cloths in the Splice Pack. The dwell times quoted are for use as a guide only. For more specific information, refer to the Splice Pack Splicing Instructions.

*3 Always make test joints to establish the correct temperatures required according to the current working conditions.

*4 PVC-S 55 foil maybe necessary on the topside on belt types with clear inner layers.

*5 TPU-S 85 foil maybe necessary on the topside on the belt types with clear inner layers.

*6 TPU-H 93 foil maybe necessary on the topside on the belt types with clear inner layers.

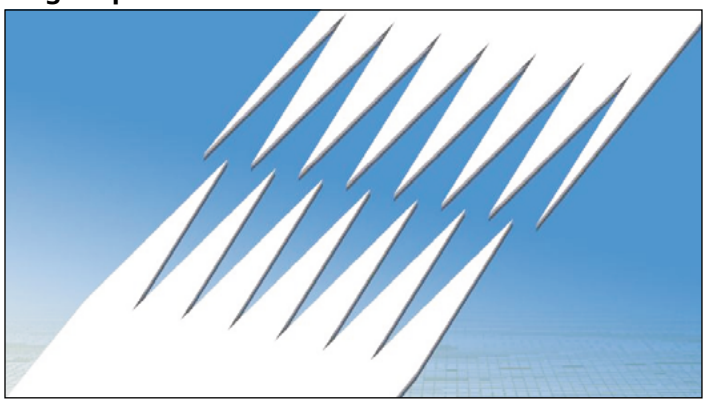
*7 Additional Splicing information can be found within the appropriate Supporting Documentation.

*8 Refer to special Splicing Instructions for these types of belts.

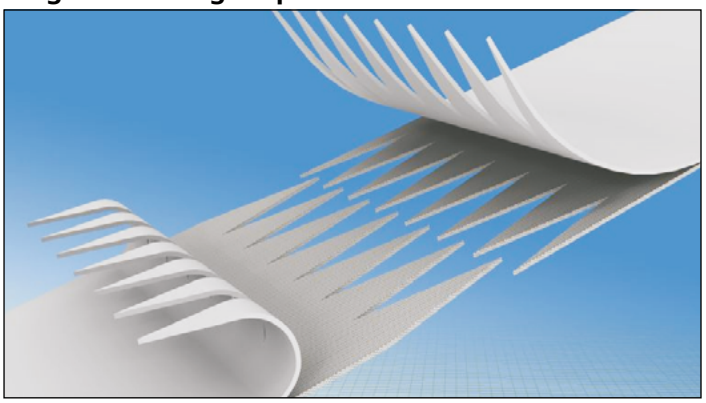
*9 Some belts in this range are subject to Business Service Splice requirements. Check the appropriate documentation to be sure.

Standard Splice Types

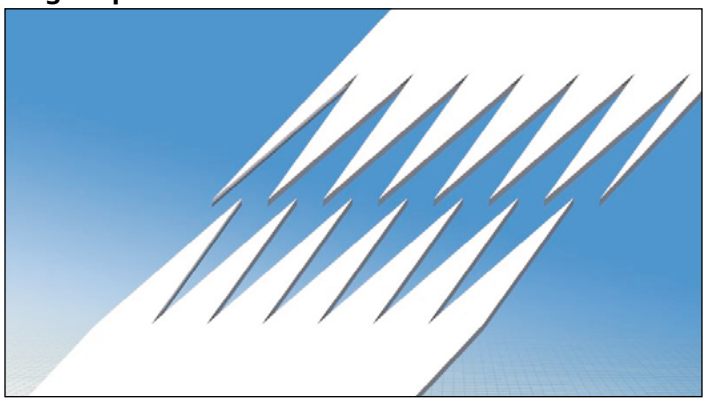
Finger Splice



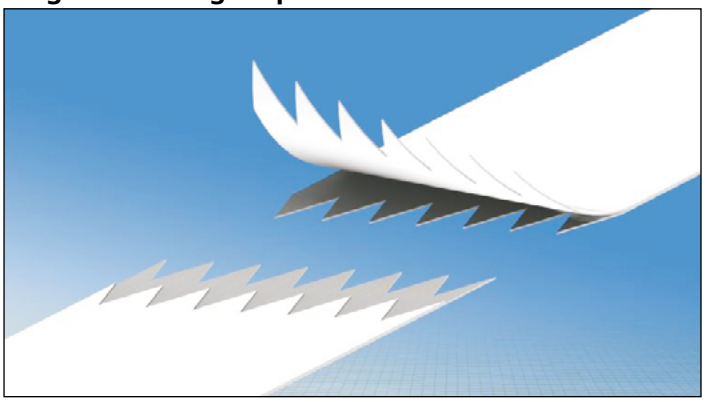
Finger Over Finger Splice



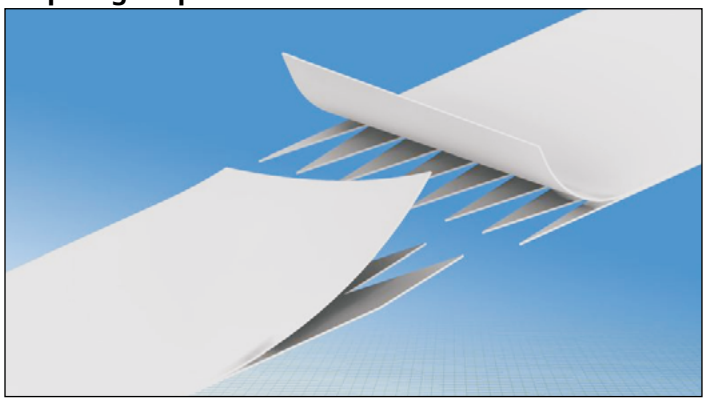
Finger Splice 72°



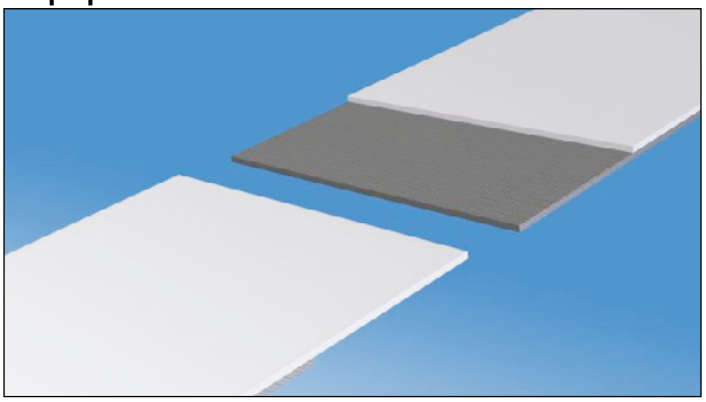
Finger Over Finger Splice 72°



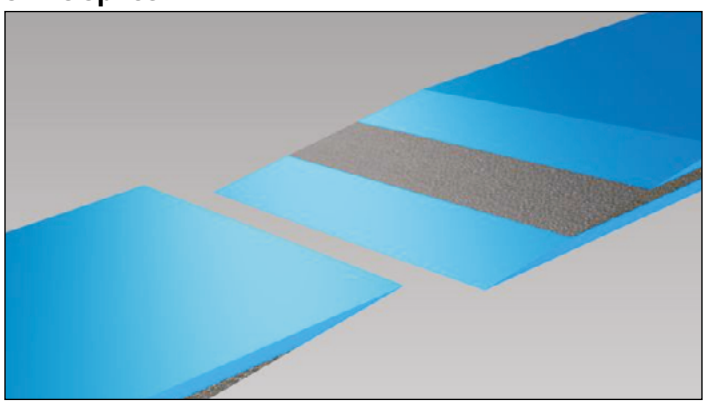
Step Finger Splice



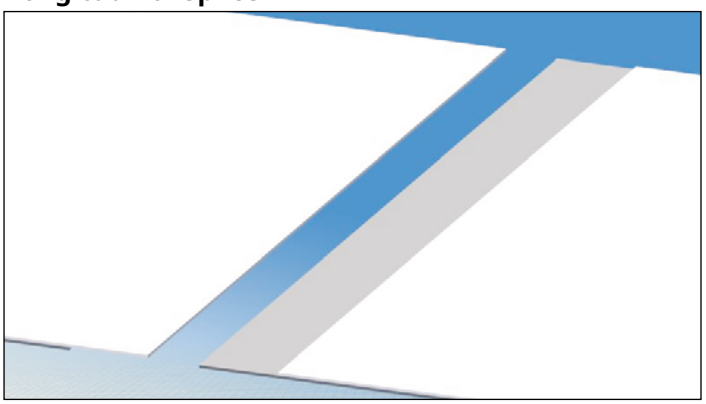
Step Splice Endless



Skive Splice



Longitudinal Splice



Splicing Foils

Use these charts to select the proper configuration for splicing:

Type	Item #	Description & Dimensions
PVC Solid 55A 0.6mm thick (spiral lace)	ETSU000218	Foil PVC Solid 55A x 0.6mm Black (25m x 57mm)
	ETSU000219	Foil PVC Solid 55A x 0.6mm Grey (10m x 57mm)
PVC Solid 55A	ETSU000008	Foil PVC Solid 55A Black (50m x 100mm)
	ETSU000009	Foil PVC Solid 55A Dark Green (50m x 100mm)
	ETSU000010	Foil PVC Solid 55A Green (50m x 100mm)
	ETSU000011	Foil PVC Solid 55A Grey (50m x 100mm)
	ETSU000012	Foil PVC Solid 55A White (50m x 100mm)
	ETSU000047	Foil PVC Solid 55A Light Blue (50m x 100mm)
PVC Solid 80A (Business Service - Top)	ETSU000013	Foil PVC Solid 80A Black (50m x 100mm)
Special TPU-V (Business Service - Bottom + special splices)	ETSU000035	Foil TPU-V Solid Clear (50m x 100mm)
TPU-S Solid 85A	ETSU000048	Foil TPU-S Solid 85A Clear (50m x 100mm)
	ETSU000032	Foil TPU-S Solid 85A White (50m x 100mm)
TPU Solid 87A	ETSU000213	Foil TPU Solid 87A Black (50ft. x 4.5in)
	ETSU000214	Foil TPU Solid 87A Clear (50ft. x 4.5in)
	ETSU000215	Foil TPU Solid 87A BWhite (50ft. x 4.5in)
TPU Reinforced 87A (balloon cloth)	ETSU000217	Foil TPU Reinforced Balloon Cloth 87A White (50ft. x 4.5in)
TPU Solid 92A	ETSU000211	Foil TPU Solid 92A Light Blue (50ft. x 4.5in.)
	ETSU000212	Foil TPU Solid 92A Dark Green (50ft. x 4.5in.)
	ETSU000216	Foil TPU Solid 92A Dark Blue (50ft. x 4.5in.)
TPU-H Solid 93A	ETSU000029	Foil TPU-H Solid 93A Dark Green (50m x 100mm)
	ETSU000030	Foil TPU-H Solid 93A Light Blue (50m x 100mm)
	ETSU000031	Foil TPU-H Solid 93A White (50m x 100mm)
TPU-H Reinforced 93A	ETSU000023	Foil TPU-H Reinforced 93A Black (50m x 90mm)
TPU-P (skived splices)	ETSU000034	Foil TPU-P Solid Clear (50m x 110mm)

Standard Splice Types and Applications

Use the chart below to select the splice for your belt type and your application:

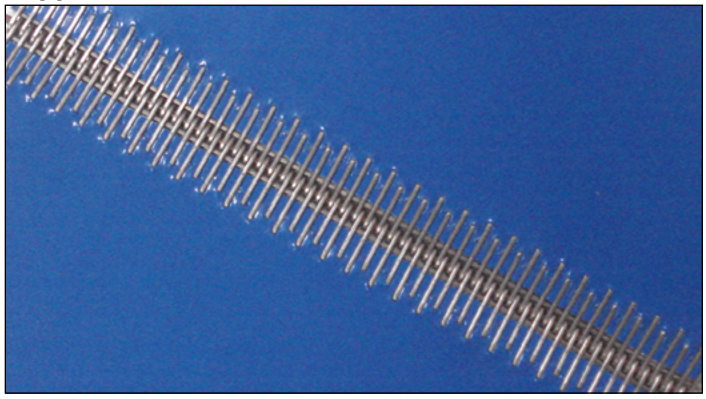
Application Type: ● Recommended ○ Alternative	Finger Splice (80x10)	Finger Splice 72° (80x10)	FOF Splice (50x20)	FOF Splice 72° (50x20)	Step Splice 90°	Step Splice 72°	Step / Finger Splice
Backflexing (small pulley diameters)	●	●	○	○			○
Bagel Belt *1			○	○	●	●	
Bi-directional	●	●	●	●			
High-tensioning & Small Pulley Diameters *2	●	●					
Knife Edge	○	●	○	○			
Pollution			●	●			
Scraper	●	●	●	●	○	○	○

*1 Fabric by fabric should always be a step splice; cover belt can be fabricated with a finger over finger splice.
*2 For small pulley diameter and high tensioning: apply the Business Service Splice.

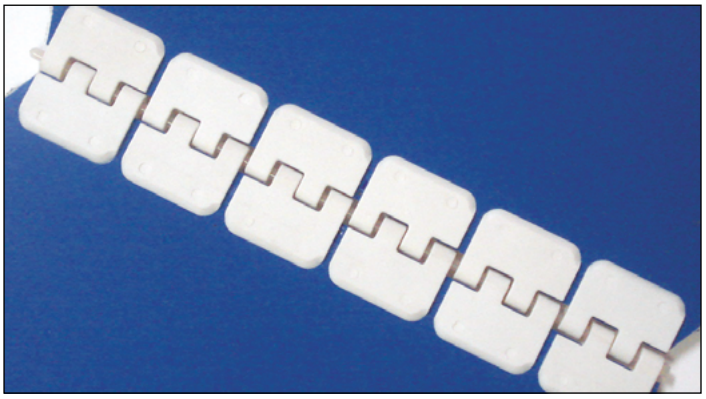
Standard Fasteners

Below are standard fasteners for synthetic belts:

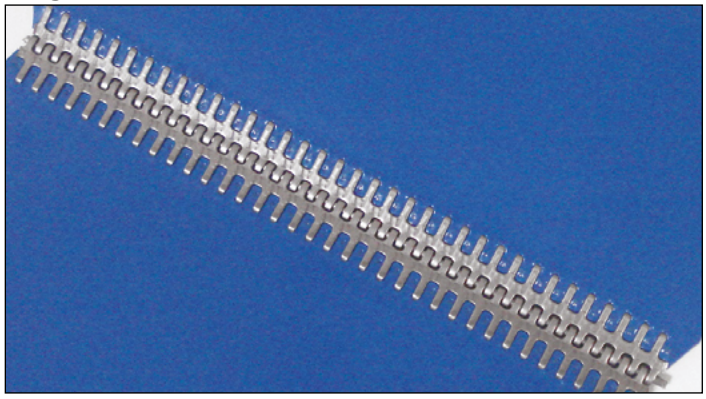
Clipper Fastener



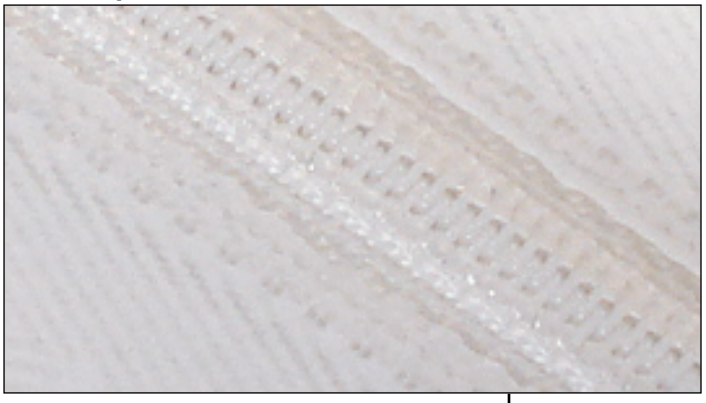
Plastic Rivet Fastener



Alligator Fastener

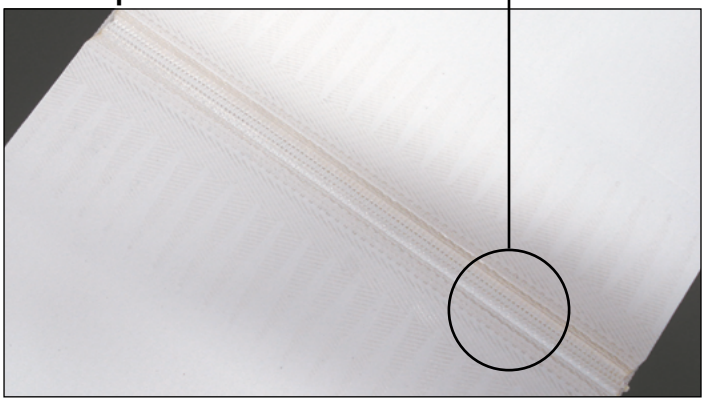


Plastic Spiral Fastener (detail)



RS Staple Fastener

Plastic Spiral Fastener

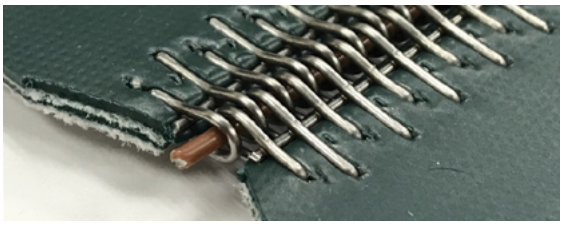


Standard Fastener Fabrications

Get the best performance by selecting the appropriate lace style and retain the strength and durability of metal fasteners without the problems of product marking or damage. Below are fitting methods for Clipper, Alligator and RS Staple Fasteners. Contact a factory representative for assistance in your selection.

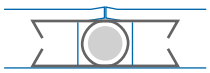
FAFA000006 Fastener Mechanical Fit by Machine (SB)

Standard



FAFA000002 Fastener Mechanical Fit Obscured (SB)

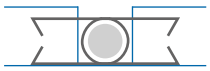
Hidden



Lacing is hidden by the cover of the belt to allow the ease of installation provided by a mechanical splice with the smooth operation of an endless belt.
Style #0

FAFA000115 Fastener Mechanical Fit Partially Obscured (SB)

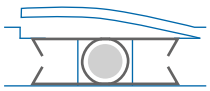
Hidden



Provides smooth transfer with minimal gap at lacing. Belt cover or third upper ply on three-ply types in re-applied back down over legs of the bare top lacing.
Style #1

FAFA000001 Fastener Mechanical Fit Partially Obscured (SB)

Overflap



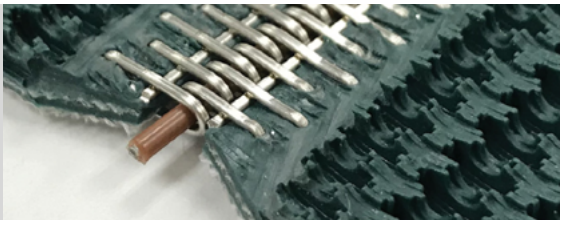
Non-reinforced cover lays over lacing and may be temporarily or permanently adhered to opposite side to hide lacing.
Style #2

Reinforced cover adds additional strength to flap and is best when flap remains loose for repeated removal belt from conveyor for cleaning, etc.
Style #3

FAFA000003 Fastener Mechanical Fit with Topcover Removed (SB)

Recessed

General recessed lacing placing hooks just over fabris ply.
Style #4



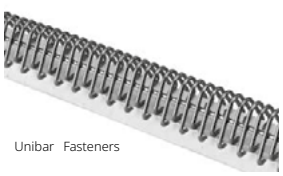
Standard Fastener Type

Select the proper fastener for your belt by reviewing the recommended belt thickness range.

Fastener Type	Material	Material Type	Item Number	Description	Hinge Pin Size	Spiral Size (mm)	MPD (mm)	Required Belt Thickness Minimum (mm)	Required Belt Thickness Maximum (mm)
Clipper Hook	Metal	316L SS	ACFA000204	Fastener Hook 36 Stainless	0.065" (1.7mm)		51	2.4	3.2
		Galvanised	ACFA000267	Fastener Hook 1SP Galvanised	0.065" (1.7mm)		51	2.4	3.2
		430 SS	ACFA000312	Fastener Hook 1SP Stainless	0.065" (1.7mm)		51	2.4	3.2
		Galvanised	ACFA000197	Fastener Hook 2 Galvanised	0.093" (2.4mm)		51	4	4.8
		Galvanised	ACFA000197	Fastener Hook 2 Galvanised	0.093" (2.4mm)		51	4	4.8
Clipper Unibar	Metal	316L SS	ACFA000190	Fastener UniBar UCM36SLXSP Stainless	0.065" (1.7mm)		24	0	1.6
		316L SS	ACFA000189	Fastener UniBar UCM36SP Stainless	0.065" (1.7mm)		51	1.6	2.4
		316L SS	ACFA000186	Fastener UniBar UCM36 Stainless	0.065" (1.7mm)		51	2.4	3.2
		430 SS	ACFA000220	Fastener UniBar U2SP Stainless	0.093" (2.4mm)		51	3.2	4
		430 SS	ACFA000193	Fastener UniBar U3-1 Stainless	0.093" (2.4mm)		76	3.2	4
		430 SS	ACFA000181	Fastener UniBar UX-1 Stainless	0.065" (1.7mm)		51	3.2	4
		430 SS	ACFA000192	Fastener UniBar UX-1LL Stainless	0.065" (1.7mm)		51	3.2	4
		430 SS	ACFA000218	Fastener UniBar U3 Stainless	0.093" (2.4mm)		76	4.8	5.6
Alligator	Metal	316L SS	ACFA000211	Fastener # 00 Lace Stainless	3/64" (1.2mm)		25	0	1.6
		316L SS	ACFA000212	Fastener # 1 Lace Stainless	1/16" (1.6mm)		38	1.6	2.4
		316L SS	ACFA000209	Fastener # 1A Lace Steel	1/16" (1.6mm)		38	1.6	2.4
		316L SS	ACFA000214	Fastener # 15 Lace Stainless	3/32" (2.4mm)		64	3.2	4
		316L SS	ACFA000213	Fastener # 7 Lace Stainless	1/16" (1.6mm)		51	2.4	3.6
RS Staple	Metal	316L SS	ACFA000112	Fastener RS062 Stainless	nylon (2mm), steel (2mm)		50	1.5	3.2
		Steel	ACFA000111	Fastener RS062 Steel	nylon (2mm), steel (2mm)		50	1.5	3.2
		316L SS	ACFA000114	Fastener RS125 Stainless	nylon (3.6mm), steel (3.6mm)		75	3.2	4.8
		316L SS	ACFA000116	Fastener RS187 Stainless	nylon (5.2mm), steel (4.7mm)		102	4.8	6.4
Plastic Rivet	Non-Metallic	Nylon	ACFA000159	Fastener Plastic (Spin type) APF150W White	3.5mm		75	1.6	3.2
Plastic Spiral Lace [1,2]	Non-Metallic	Polyester Multifil	ACFA000487	Fastener Fabric Spiral PM45-55 Black	(0.81mm)	0.55	12.7	0.8	3.2
		Polyester Multifil	ACFA000488	Fastener Fabric Spiral PM45-55 White	(0.81mm)	0.55	12.7	0.8	3.2
		Polyester Multifil	ACFA000489	Fastener Fabric Spiral PM60-70 Black	(0.89mm)	0.70	12.7	2.4	3.6
		Polyester Multifil	ACFA000490	Fastener Fabric Spiral PM60-70 White	(0.89mm)	0.70	12.7	2.4	3.6
		Polyester Multifil	ACFA000291	Fastener Fabric Spiral PM60-90 Black	(1.19mm)	0.90	15.3	2.8	3.2
		Polyester Multifil	ACFA000292	Fastener Fabric Spiral PM60-90 White	(1.19mm)	0.90	15.3	2.8	3.2
		Polyester Multifil	ACFA000491	Fastener Fabric Spiral VE-50-MO Black	(0.80mm)	2.2	10-15	1.6	3.2
		Polyester Multifil	ACFA000492	Fastener Fabric Spiral VE-50-MO White	(0.80mm)	2.2	10-15	1.6	3.2
		Polyester Multifil	ACFA000392	Fastener Fabric Spiral VE-65-MO Black	(1.0mm)	3.0	30	2.4	2.6
		Polyester Multifil	ACFA000244	Fastener Fabric Spiral VE-65-MO White	(1.0mm)	3.0	30	2.4	2.6
		Polyester Multifil	ACFA000493	Fastener Fabric Spiral VE-90-MO Black	(3.6mm)	3.6	50	3.5	4.6
		Polyester Multifil	ACFA000494	Fastener Fabric Spiral VE-90-MO White	(3.6mm)	3.6	50	3.2	4.6

Fitting methods for Plastic Spiral Lace only:

1 FAFA000090: Fastener Spiral Lace Fit Fingers in Top Ply (2Ply) is the standard method.
2 FAFA000044: Fastener Spiral Lace Fit Fingers in Bottom Ply (2Ply) is the method for silicone belts, different inner layer material belts, and high profiled belts.

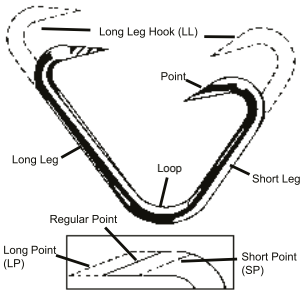


Unibar Fasteners

Carded Hooks

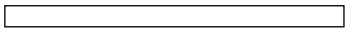
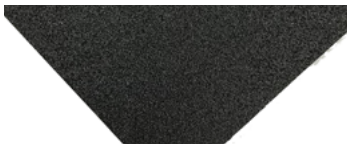
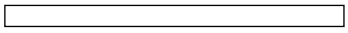
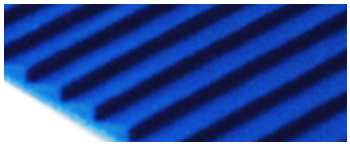
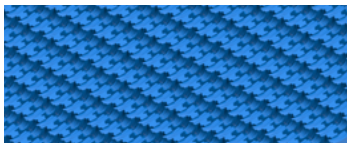
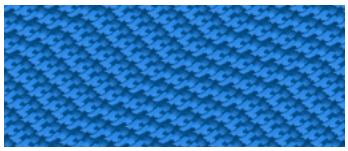
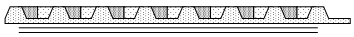
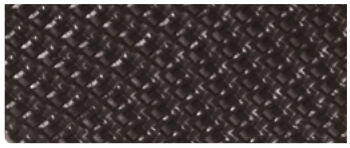
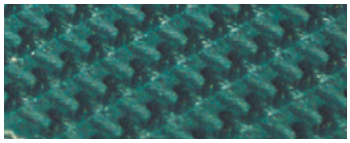
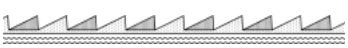
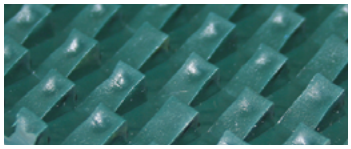
Hook Abbreviations	
XSP	Extra Short Point
SP	Short Point
LP	Long Point
SL	Short Leg
LL	Long Leg

Images courtesy of: Flexco (©2017 Flexible Steel Lacing Company)



Standard Profiles with Fasteners

Below are common types of top profiled belts that need to be recessed before inserting fasteners.
Once the belt has been recessed, use the new belt thickness to select the proper fastener options.

Description	Profile	Typical Application	Dimensions
25 Smooth Profile 		die cutting metal/bricks	profile depth 2.5mm
30 Smooth Profile 		corrugated box Flexo Folder Gluer	profile depth 3.0mm
A13 - P28 Profile Sawtooth 		meat fish poultry industry	profile depth 2.0mm pitch 7mm
A34 Profile Supergrip 		inclined applications	profile depth 2.4mm
A42 Profile Supergrip (wave) 		inclined applications	profile depth 2.4mm waving, low noise execution
A79 Profile Diamond 19mm 		wood sanding metal grinding	profile depth 3.5mm pitch 19x19mm diagonal
P6 Grip Face 		inclined applications	profile depth 3.5mm
P7 Mini-Grip		packaging bakery industry tobacco industry	profile depth 1.0mm straight
P25 Ramps 		marble polishing ceramic grinding mail sorting	profile depth 5.0mm also available with lateral intermediate space

Standard V-Guides

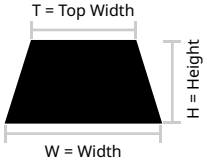
Material	Shore Hardness	smooth	notched	profile	5 x 3 x 2	6 x 4 x 4 [1]	8 x 5 x 4	10 x 6 x 6 [2]	13 x 8 x 7 [3]	15 x 8.5 x 10.5	17 x 11 x 10 [4]	22 x 14 x 12.5 [5]	30 x 16 x 20 [6]	36 x 3	Thickness mm	transparent	ivory	white	light blue	petrol	dark blue	green	dark green
V-Guides																							
Flexam PVC	60A	●					●	●	●														●
	60A	●									●											●	
	60A		●				●	●	●		●												●
	60A		●				●															●	
Nonex PVC	60A	●						●	●										●				
	60A	●				●	●	●	●		●	●						●					
	60A		●			●	●	●											●				
	60A		●			●	●	●	●	●	●	●	●					●					
Ropanyl TPU	60A	●					●	●			●					●							
	70A	●							●		●					●							
	70A	●			●					●								●					
	85A	●				●										●							
	85A	●							●										●				
	85A	●				●	●	●	●		●							●					
	90A	●							●												●		
	60A		●				●	●			●					●							
	70A		●						●		●					●							
	85A		●			●														●			
	85A		●			●	●	●	●		●							●					
	85A		●					●												●			
	93A		●			●														●			
Amtel TPE-E	40D	●						●	●										●				
Peflex PE	90A		●						●							●							
Strips, square - rectangular																							
Flexam PVC	78A	●													3 [7]			●					
Ropanyl TPU	83A	●													4.8 & 6.4 [8]	●							
	65A			Ribbed										●	3			●					
	85A			A11											5 [9]			●					
Amtel TPE-E	40D			A11											5 [9]		●						

[1] K6 = Z-sect | [2] K10 = O-Sect/3L (3L = 9.5 x 5.5) | [3] K13 = A-sect | [4] K17 = B-sect | [5] K22 = C-sect | [6] K30 = D-sect | [7] Width avail: 5mm - 304.8mm | [8] Width avail: 5mm - 38.1mm | [9] Width avail: 5mm - 950mm

Use height of guide for "H" to determine the minimum pulley diameter.
Increase by 50% for backflexing from minimum pulley diameter.

Pulley Diameter	PVC	TPU	PE	TPE-E
V-Rope	6 X H	6 X H	7 X H	8 X H
V-Rope notched	5 X H	5 X H		6 X H
Guide Strip	10 X H			10 X H
w/ A11 Profile	10 X H	10 X H		10 X H
w/ Ribbed Profile		4 X H		

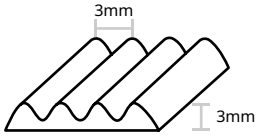
Profile for Guides



Guide Strips

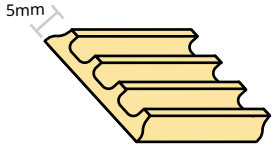
Profiled Guide Strips

Multi-Rib Edge Guide



(rib runs longitudinally)

Amtel/PU/A11 Guide



(rib runs laterally)

Standard Cleats

Material	Shore Hardness	footless	scoop	foot	Angle 90°	75°	60°	Height mm 12.7	19	20	25	30	35	38.1	40	50	60	75	100	Color white	light blue	black	dark blue	dark green	Min. Cover Thickness (mm) 0.2	0.4	0.5	0.7
Cleats																												
Flexam PVC	60A	•			•					•		•				•				•		•				•		
	60A	•			•											•					•			•			•		
	60A			•	•			•	•		•			•		•				•		•				•		
	60A			•	•													•		•		•						•
	70A		•	•			•											•				•					•	
	70A		•	•			•									•		•		•							•	
	70A			•	•													•		•		•					•	
Nonex PVC	60A	•			•					•		•			•	•				•						•		
	60A	•			•												•	•	•	•								•
	60A	•					•								•	•		•		•								
Ropanyl TPU	83A			•	•			•	•		•			•		•		•		•						•		
	83A			•	•									•		•							•			•		
	83A			•	•													•			•					•		
	85A	•			•	•				•			•			•				•	•			•		•		
	85A	•			•	•												•		•	•					•		
	85A		•	•	•											•				•								•

Minimum Pulley Diameter	
Solid footless cleat	min. 1.1 x height of cleat
Solid cleat with foot	min. 2.5 x height of cleat

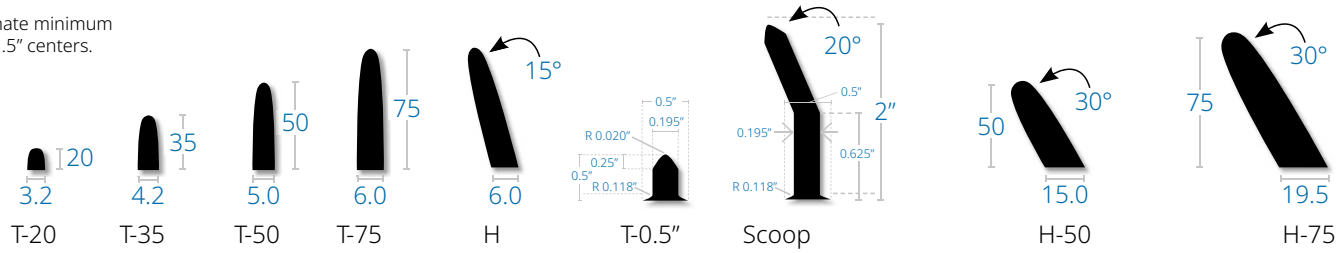
To reduce scrap, you can cut down on cleats by choosing the next cleat size up at a minimum of 10mm. I.e. 25mm cleat height required; use 40mm cleat high to cut down rather than 50mm high cleats.

PU - Footless T and H, T and Scoop Cleats

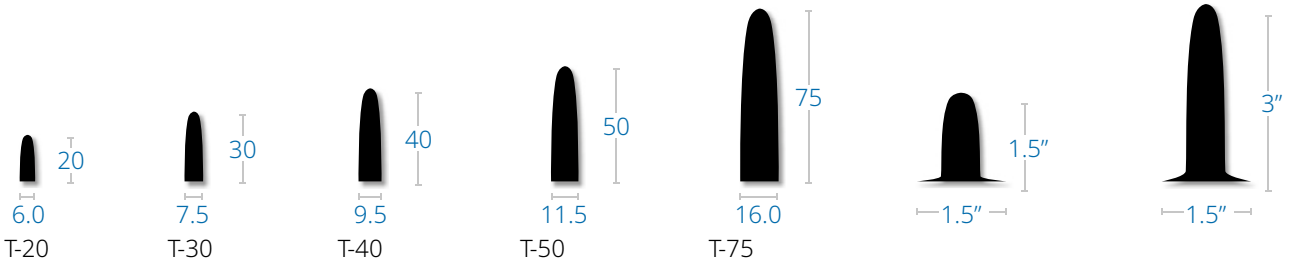
PVC - Angle Footless Cleats

Dimensions are in millimeters unless otherwise indicated.

Approximate minimum spacing 1.5" centers.



PVC - Footless and Heavy-duty Footed Cleats



Note: Minimum pulley diameters include a safety factor. Contact AB Product Management if smaller diameters are required. Illustrations are not to scale.

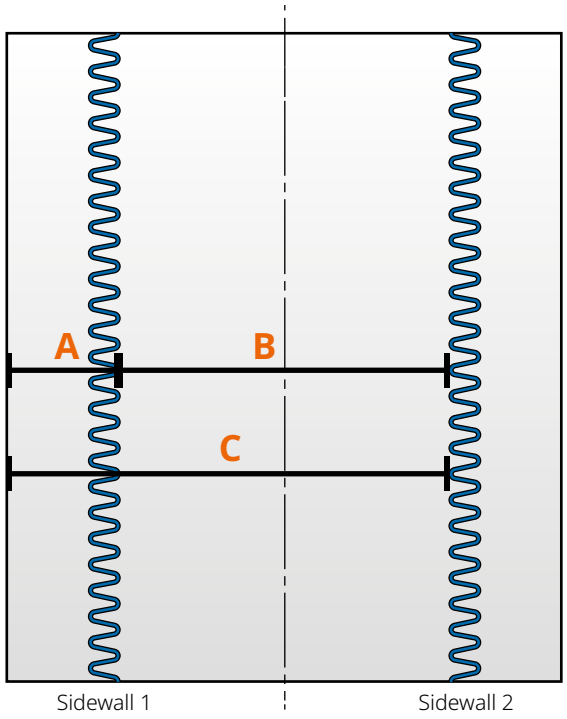
Standard Corrugated Sidewalls

Corrugated sidewalls are designed to allow small pulley diameters while maximizing product capacity.

Material	Shore Hardness	Thickness mm				Wave (mm)				Height (mm)	Color		Min. Cover Thickness (mm)		Welding Method	
		1.7	2.1	3.4	5.3	Short (25X25) [1]	Normal (45X50) [2]	Large (50X50) [3]	Mini (30X22) [4]	Available heights mm (increments of 5)	white	light blue	0.3 or greater	0.5 or greater	High Frequency	Hot Air
Sidewall																
Flexam PVC	65A				•			•		25 - 75	•			•		•
Ropanyl TPU	83A			•			•			25 - 75	•	•		•		•
	83A		•						•	25 - 50	•			•		•
	85A	•				•				25 - 55	•	•	•		•	

[1] Short Wave Sidewall Pattern (25mm footprint x 25mm loop/pitch)
[2] Normal Wave Sidewall Pattern (45mm footprint x 50mm loop/pitch)
[3] Large Wave Sidewall Pattern (50mm footprint x 50mm loop/pitch)
[4] Mini Wave Sidewall Pattern (30mm footprint x 22mm loop/pitch)

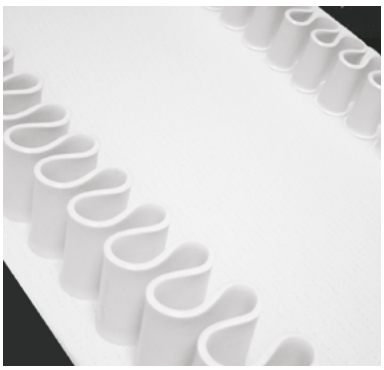
Minimum Pulley Diameter Standard Sidewall	Minimum Pulley Diameter Mini Sidewall
3 x height of sidewall	1 x height of sidewall
Back Flex Standard Sidewall	**Back Flex Mini Sidewall**
10 x standard flex	8 x standard flex



Corrugated Sidewall Dimensions

A = Distance from edge of belt to inside edge of sidewall [1]
B = Inside edges distance
C = Distance from edge of belt to inside edge of sidewall [2]

Normal Sidewall

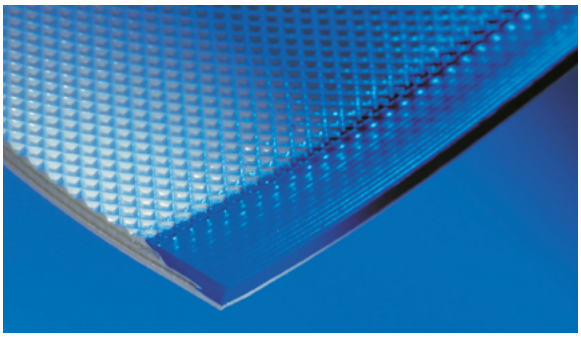


Mini Sidewall

Amseal™ Sealed Edges

Belt edges of conveyor belts are normally finished with cut edges and are not protected against external influence. The Amseal edge protection completely seals the belt edge on all sides with a thermoplastic strip. Belts with Amseal belt edges are protected against all kind of external influences and circumstances. When Amseal is applied to belts, do not use on knife edge applications.

Material	Hardness	Amseal		Dimensions		Requirement		Standard Fabrication	
		Item Number	Description	Width (mm)	Thickness (mm)	Top Cover Thickness Minimum (mm)	Number of Plies	Item Number	Description
Amseal									
Peflex EVA	92A	ACAM000024	Amseal Peflex 92A Transparent	13.75	5.75	0.2			
Nonex PVC	55A	ACAM000015	Amseal PVC 55A L.Blue FG	13.75	5.75	0.2			
Amtel TPE-E	40D	ACAM000020	Amseal TPE-E 40D Ivory	13.75	5.75	0.2			
Ropanyl TPU	85A	ACAM000028	Amseal TPU 85A White	13.75	5.75	0.15	2-ply Belt Only	FAAM000001	Amseal Fit < 2000 (SB)
	93A	ACAM000029	Amseal TPU 93A L.Blue						
		ACAM000007	Amseal TPU 93A Petrol	13.75	5.75	0.15			
		ACAM000030	Amseal TPU 93A White						

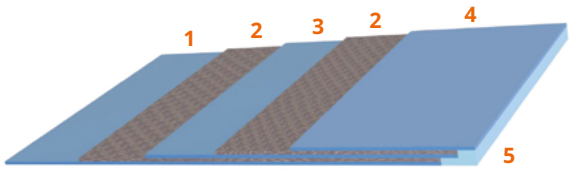


To produce Amseal™, we thermally fuse a homogeneous material to a specially prepared, stepped belt edge. This unique method leaves the entire belt cover intact and provides a robust edge much less susceptible to damage. A wide range of standard belts can be fitted with Amseal™ edges and are available in FDA white or blue.

Product Benefits:

- Improved hygiene
  - Easy to clean
  - Less cross contamination
  - Eliminates fabric contamination
- Totally encapsulated belt
  - Avoid fibre contamination
  - Long belt life
  - Low cleaning costs
- Highly durable design/high strength
  - Highly wear resistant
  - Long belt life
  - Low running costs
- Wide range of belting
  - One, two or three ply belts
  - Suitable for many cover types
  - Possible with many profiles
- Improved visual aspects
  - Clean belt and conveyor
  - Improved image
  - Modern design
  - Available in many different colors

Layer Composition:



Two ply belt with double-sided cover and Amseal edge protection:
1 Bottom Cover, **2** Fabric, **3** Inner Layer, **4** Top Cover, **5** Amseal™ Strip

Applications:

Amseal is used in different industries, such as:

- Bakery
- Confectionery
- Meat, poultry & fish processing
- Dairy
- Fruit & vegetable
- Tobacco processing
- Airport & general handling
- Rubber & tyre
- Wood lacquering
- Agriculture
- Pharmaceuticals

FDA

Food Grade belts comply with EC 1935/2004 EU 10/2011 and FDA standards

EHEDG

Ammeraal Beltech member European Hygenic Engineering & Design Group

Notes


Ammeraal Beltech


BELT POWER®