

EAGLE[®]
POLYURETHANE BELTING & O-RINGS



YOUR #1 SOURCE FOR POLYURETHANE BELTING!

The possibilities are endless with Eagle Polyurethane and Polyester Belting and O-Rings from Fenner Drives. As a world leader in belting, we have a comprehensive range of high quality non-reinforced and reinforced products.

From light, medium or heavy duty conveying to custom profiles, Fenner Drives has the right product for your application.

Eagle® Polyurethane Belting and O-Rings

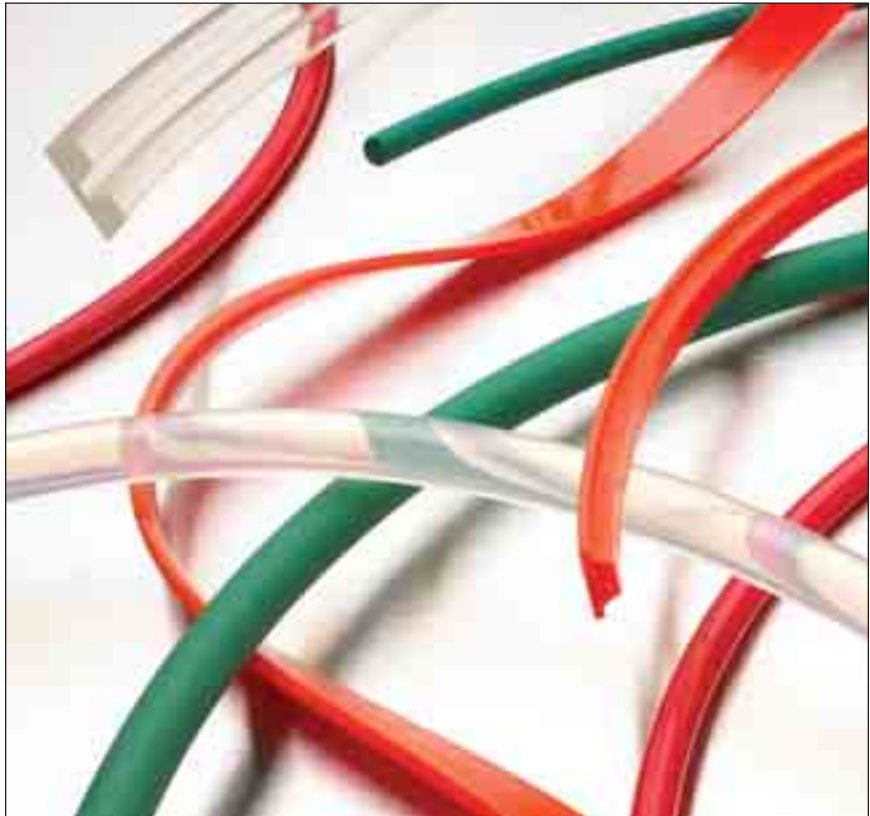


Contents

Non-Reinforced Polyurethane Belting	4
Quick Connect and Endless Belting	5
Factory Welded Endless Belting	6
Reinforced Polyurethane Belting	7
Polyester Belting	8
Co-Extruded Polyurethane Belting	10
SuperGrip Top Polyurethane and Polyester Belting	11
Special Profiles & Durometres	12
Welding Kits	13
Welding Instructions	
Reinforced Belting	14
Non-Reinforced Belting	16
Product Application Guidelines	17
Product Applications	18
Product Range	20
Part Number Listing	22
Technical Data	24
Engineering Data	35
Chemical Resistance Chart	38
Frequently Asked Questions	39

NON-REINFORCED POLYURETHANE BELTING

Eagle Opaque 80
Eagle Orange 85
Eagle Clear 85
Eagle Ivory 85
Eagle Green 89
Eagle Green 89 T
Eagle Red 90
Eagle Beige 95
Eagle Clear 95



Eagle® Non-Reinforced Polyurethane Belting — the proven workhorse for material transfer and light-duty power transmission applications.

- Solid polyurethane construction
- Round, V- and flat profiles
- Excellent abrasion resistance
- Self tensioning — no take-up required
- Easily welded on site with a Fenner Drives Butt Welding Kit

Eagle Clear 85 QC
Eagle Red 85 QC
Eagle Yellow 85 QC
Eagle Clear 85 TOR



Eagle® Non-Reinforced Quick-Connect Polyurethane Belting — the quick and easy way to avoid conveyor and system downtime; no welding required.

- Ideal quick fixes — zero downtime products
- Twisted O-Rings (TOR) — ideal fast fit solution for live roller conveyors
- Twisted loop construction available with plastic or metal hooks
- Round hollow construction available with metal connectors
- No need to dismantle drive components
- Custom colours and durometers available to order

Eagle Endless O-Rings and Fabricated Belts



Eagle® Endless O-Rings and Fabricated Belts — let us do the work for you and take the hassle out of fabricating your own endless belts.

- Available in all Eagle belting colours and durometers
- For line shaft, live roller, transfer conveyors and light duty power transmission drives
- High coefficient of friction
- Elastic with excellent memory
- Popular 5mm and 6mm sizes in stock
- Custom sizes, colours and durometers are made to order
- Rapid order turnaround for all specials
- For fast fit Twisted O-Rings, see page 5

REINFORCED POLYURETHANE BELTING

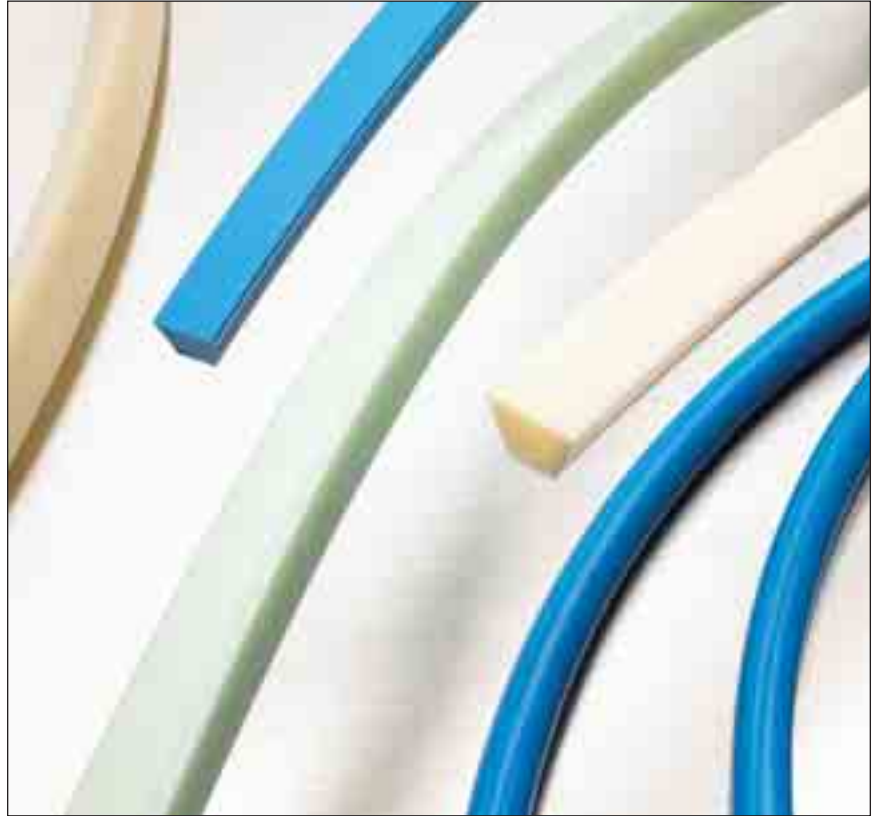
Eagle Opaque 80 R
Eagle Hyfen® 85 R
Eagle Ivory 85 R
Eagle Orange 85 R
Eagle Green 89 R
Eagle Green 89 RT
Eagle Beige 95 R
Eagle Hyfen 95 R



Eagle® Reinforced Polyurethane Belting — the ideal high-strength, low-stretch choice for longer conveyor lengths, heavier conveyed loads, or medium-duty power transmission applications.

- For more highly loaded applications
- Either polyester cord or tape reinforcement
- High strength — low stretch
- Round, V- and Twin V- profiles
- Can be cogged for increased flexibility
- Reinforced belting is not self-tensioning — take up the slack with a Fenner Drives T-Max™ Tensioner

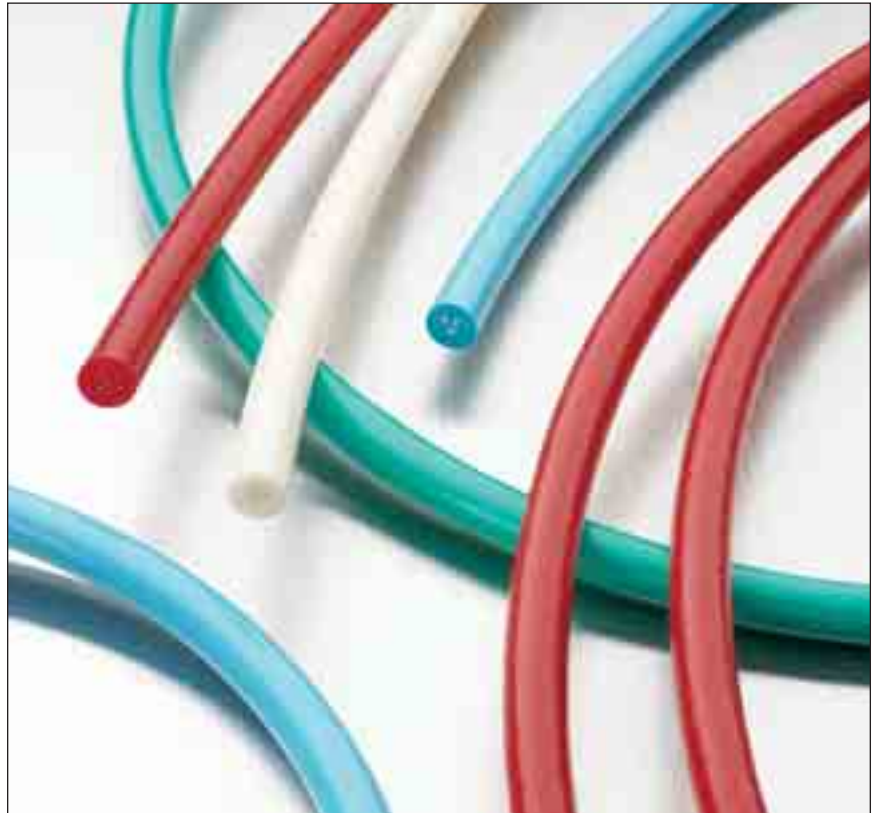
Eagle White 40D
Eagle Blue 55D



Eagle® Polyester Belting — a low-stretch, hard-wearing option. Ideal for conveying heavy or abrasive materials; also for longer conveyor lengths.

- Made from solid polyester
- Low stretch characteristics
- Ideal for longer spans
- Ideal for conveying heavy materials
- Lower coefficient of friction than polyurethane
- Allows for accumulation while conveying

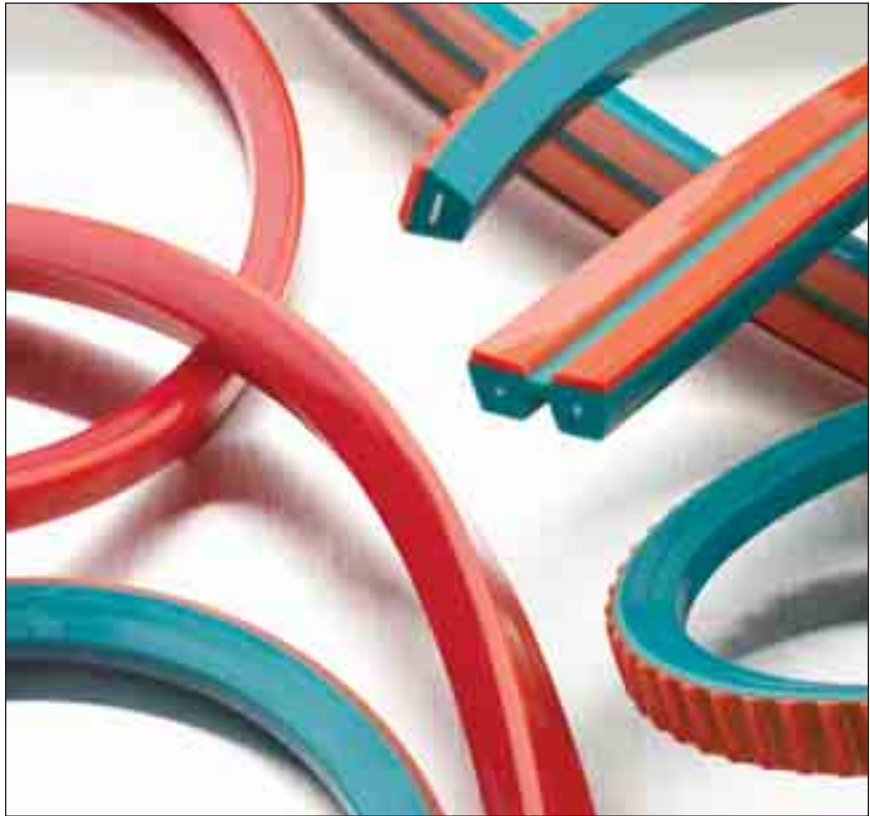
Eagle Red 50D CC LCF
Eagle Blue 55D CC
Eagle Natural 55D CC
Eagle Green 63D CC
Eagle Natural 63D CC



Eagle® Reinforced Can Cable — when canning lines go down, don't call in the wire splicing team and wait; weld our Can Cables endless in minutes yourself!

- Blue, Green and Natural are 100% polyester reinforced with high tensile cord; Red is a Fenner Drives engineered proprietary polymer blend.
- High performance, low cost alternative to steel cables
- Fast installation — a zero downtime product
- Easily welded endless on site with overlap weld kit
- Eagle Red 50D has a lower coefficient of friction (LCF)
- Popular $\frac{3}{8}$ " (9.5mm) diameter cable available
- Other sizes and colours made to order

Eagle Red 85 CXF
Eagle Hyfen 85 CXF®
Eagle Hyfen 85 CXR®



Eagle® Red 85 & Reinforced Hyfen 85 Co-Extruded Polyurethane Belting — for flat or inclined conveyors, provides extra grip and cushioning.

- Non-reinforced and reinforced versions
- Ultra-grip co-extruded 60A top surface
- Tough 85A base
- Smooth (CXF) and rough (CXR) top surfaces available
- V- and Twin V- profiles
- Integrally bonded top cannot delaminate
- Outperforms all adhesively bonded special surface belts
- Reinforced belting is not self-tensioning — use a T-Max™ Tensioner from Fenner Drives

Eagle Opaque 80 SGT
Eagle Ivory 85 SGT
Eagle Ivory 85 SGT PU
Eagle Ivory 85 RSGT
Eagle Ivory 85 RSGT PU
Eagle Green 89 SGT
Eagle Green 89 RSGT
Eagle Red 90 SGT
Eagle White 40D SGT



Eagle® SGT Polyurethane and Polyester Belting — incorporating high grip, low wear top surfaces. Ideally suited for ceramic, woodworking and corrugated conveying applications.

- Polyurethane 80A, 85A, 89A, and 90A base durometers
- Polyester 40D base durometer
- Non-reinforced (SGT) and reinforced (RSGT) versions
- PVC or polyurethane top surfaces available
- PVC SuperGrip Top for high grip — non-abrasive materials
- PU SuperGrip Top for heavier duty — highly abrasive materials
- Integrally bonded top cannot delaminate
- V-profiles
- Custom top surfaces available on request

**Work one on one
with our design
engineers to develop
an optimum solution**



Eagle® Custom Belting — our product design and engineering teams work with you to develop the correct belt profile and optimum material selection for your specific application.

- Dual durometers — a variety of options are available to utilize the best properties of two different polyurethane materials
- Static dissipative and UV stabilized material options
- Tracking features to fit unique pulleys and drive configurations
- Ridged profiles for reduced product contact surface
- Larger surface areas to lower unit pressure on heavy or sensitive product surfaces

OVERLAP WELDING

Kit Includes:

Bench Clamp, Hot Knife, Set of Dies, Flash Cutters, Cutting Shears, Carrying Case



If you've chosen our reinforced Eagle® polyurethane or Can Cable belting for your application, then you'll want to make your belts endless with our overlap welder. This is the strongest weld you can make in the field and is far superior to conventional butt welding techniques. This flexible weld delivers 100% of rated tensile belt strength by overlapping the reinforcing tensile member inside the finished belt. It provides a smooth surface that won't damage transferred product. Overlap welds can be completed on site in minutes.

BUTT WELDING

Kit Includes:

Large Clamp or Mini Clamp, Hot Knife, Flash Cutters, Cutting Shears, Carrying Case



Butt Welding Kit

Take the hassle out of fabricating endless non-reinforced polyurethane belts with the Fenner Drives Butt Welding System. The kit provides a fast, economical way to join all non-reinforced Eagle belting and even hollow Quick-Connect. Our unique clamping tool is the easiest and most reliable to use and ensures proper alignment of belt ends. For belting larger than 14mm and C, D, E and Twin V-profiles, Fenner Drives offers a 3" hot knife for a more effective weld.



Mini Butt Welding Kit

OVERLAP WELDING INSTRUCTIONS

Fenner Drives' Overlap Welder is designed exclusively to produce an overlap joint in Eagle® Reinforced Belting and Eagle Non-Reinforced Belting. A proper overlap weld will yield around 100% of the belt's ultimate tensile strength. With the tools provided and these instructions, proper overlap welding technique can be achieved. Note: A clean environment can contribute to ensuring a proper weld. Make sure the area is well ventilated and free of dust, dirt, and draft. Practice makes perfect. We strongly encourage getting familiar with the welder and practicing on a short piece of belt before making a final weld on the belt.

1. Securely fasten the welding fixture to mounting surface.

2. Examine the coated hot knife blade for scratches. A scratched or damaged surface can affect weld results; heating element may need to be replaced.

3. Plug the hot knife into a 240v (or 110/120v, as appropriate) socket and preheat for ten minutes. Once hot, use a clean, dry cloth to gently remove any urethane residue from previous welding from the coated surface.

Warning: Do not use any object to scrape urethane from surface.

4. Select the belt profile jigs to suit the belt section being joined. Belt profiles are marked clearly on the top of each jig. Remove black fixing nuts on the top of the welding fixture. Fit the selected belt profile jig into place by locating on the pins (see Figure 1). Jigs for round profiles are in two pieces; jigs for V-section profiles are in three pieces. For V-section jigs, fit two pieces at the rear and one at the front. Ensure that the required profile faces inwards and that identical profiles face each other.

5. Secure the fixing nuts to hold jigs in place.



Figure 1

6. Using the belt cutters provided, cut the belt to the required length as outlined in the Technical Data section in this catalogue. Note: 38mm should be added to the nominal length to allow for the overlap joint. Cut each end of belt at a 15° angle and trim off any debris from cut ends.

7. For reinforced belts, use the fixed depth drill bits provided to drill out the reinforced cord section at both ends (see Figure 2). See Table 1 to determine the appropriate drill bit.



Figure 2

8. Slide one belt end into the rear profile jig from the left until it extends from the profile jig by 2 - 3mm on the right side. Tighten screw X (Figure 3) to hold belt end in place.



Figure 3

Cross Section	Use Drill Bit
6mm – 8mm Round; Z – A	2mm
10mm – 12mm 3/8", 1/2" Round; B	3.5mm
15mm – 18mm Round; C	5mm

Table 1

Cross Section	Estimated Heating Time
2mm – 6mm, 3/32"–1/4"	<10 sec
7mm – 9mm, 5/16", all 3L and Z,	10 – 20 sec
10mm, 3/8", all A (except Hi-Ridge Top)	21 – 30 sec
12mm – 15mm, 1/2" – 9/16", all Twin, A Hi-Ridge Top, B	31 – 50 sec
16mm +, 5/8" – 3/4", C, D	>50 sec

Table 2

9. Repeat step 8 for the other end of the belt, sliding into the front (sliding) profile jig from the right and extending 2 – 3mm on the left side. Tighten screw Y (see Fig. 4) to hold belt end in place.



Figure 4

10. Lift blue clamp handle, moving the belt ends toward each other in the clamp. Leave enough space between belt ends to insert the hot knife blade (Fig.5).



Figure 5

11. Insert hot knife blade between the two exposed lengths of the belt. Ease the belt ends into contact with the hot knife blade by moving the blue clamp handle upwards. Continue to raise the blue clamp handle, melting the belt, until firm resistance is met. Leave the hot knife in place for the required heating time (Table 2).

12. **Important:** The following sequence must be done very quickly. Ease blue clamp handle down enough to remove hot knife blade. Once the hot knife blade is removed, quickly push up the blue clamp handle until it locks in position to bring the two belt ends together. Leave belt ends clamped in this position for approximately 3 – 4 minutes (Fig. 6).



Figure 6

13. While weld is cooling, unplug the hot knife and use a clean, dry cloth to clean excess urethane material from the coated heating surface. It is important that the heating element be cleaned between every weld.

14. Loosen screws X and Y to release the belt from the jigs and lower the blue clamp handle. The belt can now be removed from the welder.

Warning: Do not bend/flex the belt at the joint at less than the recommended pulley diameter for the given belt profile.

15. Using the flash cutters provided, trim off any excess flash from the belt to ensure a correct profile around the joint (Figure 7).



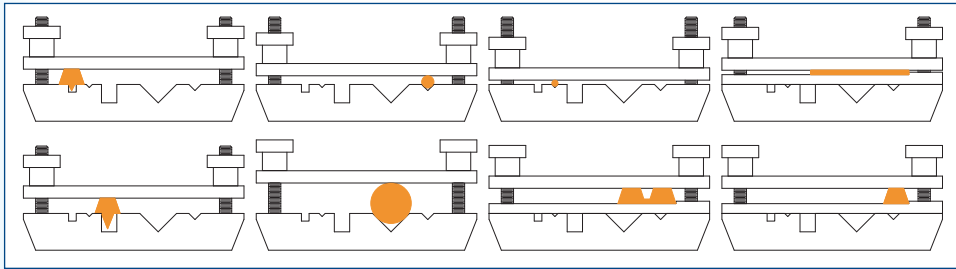
Figure 7

16. Important: Allow the belt to cure for a minimum of 30 minutes prior to installing, tensioning or putting strain on the belt weld.

For any questions about your welding kit, just call +44 (0)870 7577007 and we'll be happy to help you.

BUTT WELDING INSTRUCTIONS

A proper butt weld will yield 100% of the non-reinforced belt's ultimate tensile strength. Note: A clean environment is necessary for a good weld. Make sure the area is well ventilated and free of dirt, dust and draft.



Cross Section		Use V-Groove
2mm – 3mm	3/32" – 1/8"	Small
4mm – 8mm	3/16" – 5/16"	Medium
10mm – 15mm	3/8" – 3/4"	Large

Figure 2

1. For round belts 14mm and larger and C, D, E and Twin V-profiles, our 3" Hot Knife is required. Examine the coated hot knife blade for scratches. A damaged hot knife can negatively affect weld results.
2. Plug the hot knife into 240v (or 110/120v as appropriate) outlet and preheat for approximately ten minutes. Once hot, use a clean, dry cloth and gently remove any residue on the blade from previous welding. **Warning: Do not use a hard object to scrape polyurethane from hot knife blade.**
3. Using the cutting shears provided, cut each end of the belt perfectly square. Under certain circumstances it may be necessary to butt weld a reinforced belt. In these situations the reinforcement at each cut end must be drilled back 5mm – 7mm prior to welding. See Table 1 to determine the appropriate drill bit. If unclear about the circumstances that would require butt welding a reinforced belt, please contact Fenner Drives Applications Engineering. Note: Contact Fenner Drives for instructions on determining correct belt length.
4. Refer to Figure 1. Using the Hand Clamp, slide the spacer toward the mounting clamps, squeeze the handles closed, and finger tighten the thumb nut located to the right of the right side mounting clamp.

Cross Section	Use Drill Bit
6mm–8mm, 1/4"–5/16", Z/10–A/13	2mm, 5/64"
10mm–12mm, 3/8"–1/2", B/17	3.5mm, 9/64"
15mm–18mm, 9/16"–3/4", C/22	5mm, 13/64"

Table 1

Cross Section	Estimated Heating Time
2mm – 6mm, 3/32"–1/4", .055" Thick Flats	<10 sec
7mm – 9mm, 5/16", all 3L and Z, .06" x .75", .06" x 1.5", .08" x .75", .09" x 1.00", .13" x .63"	10 – 20 sec
10mm, 3/8", all A (except Hi-Ridge Top), .06" x 1.75", .06" x 2.00", .09" x 1.25", .09" x 1.50", .13" x 1.00", .25" x .63"	21 – 30 sec
12mm – 15mm, 1/2" – 9/16", all Twin, A Hi-Ridge Top, all B, .06" x 3.00", .09" x 2.00"	31 – 50 sec
16mm – 20mm, 5/8" – 3/4", C, D	>50 sec

Table 2

5. Figure 2 illustrates possible belt clamp mounting positions. Starting on one side, loosen the clamp nuts and place belt in desired clamping position. Slide belt in clamp so that the end is halfway between the two mounting clamps. Tighten clamp nuts. Note: For round and ridge-top profiles, remove bottom plate.
6. On the opposite clamp, loosen nuts and place belt in the same clamping position. **Warning: Make sure there are no twists in the belt.** Slide belt in clamp until the two belt ends butt together. Make sure that ends are properly aligned on all sides; see Fig. 3. Tighten clamp nuts. Note: Try to keep both clamping plates parallel to the grooved base blocks.
7. Loosen thumb nut on right approx. 1½ turns and allow the handles to open. With your left thumb, hold the spacer forward and with your right hand, insert the hot knife blade between belt ends and squeeze handles together. Refer to Figure 4.
8. As the belt ends begin to melt, the handles will contact the spacer. Hold handles tight against the spacer. After the appropriate time (refer to Table 1), quickly release the handles, slide the spacer toward yourself, withdraw the hot knife blade, and squeeze the handles together.
9. Tighten the thumb nut on the right and allow the welded joint to cure. Small cross section belts should be left in the clamp for a minimum of one minute to allow for initial cooling. Belt cross sections over 6mm (¼") wide should be left in the clamp a minimum of three minutes. **Warning: Allow the belt to cure for a minimum of ½ hour prior to installing, tensioning, or straining the belt weld.** Note: While the belt is cooling, use a clean, dry cloth to remove any residue from the hot knife blade.

10. Loosen clamp nuts and remove belt from clamp. Using the flash cutters, remove the bead from the splice; see Fig. 5.



Figure 1



Figure 3



Figure 4



Figure 5

Fenner Drives accept no responsibility for damage or injury caused by the misuse of this equipment.

PRODUCT APPLICATION GUIDELINES

With such a range of products, how do you choose what's right for your application? While the possibilities seem endless, there are some general guidelines we can make based on our extensive experience with polyurethane and polyester belting products. The uses are not limited to those listed here; if you have a question about a product or application that isn't addressed below, please contact our Applications Engineering department. We'll be happy to help.

		Working Load less than 9 kg/belt	Working Load 9.5 – 18 kg/belt	Working Load greater than 18 kg/belt	Accumulating Applications	Washdown Applications	Can Conveyors	Highly Abrasive Applications	Over 15 M c.d.	Inclines or Declines	High Coefficient of Friction	FDA Compliant	Static Dissipating
Non-Reinforced Belting	Eagle Opaque 80	● ▽	▽						No			No	No
	Eagle Orange 85	● ▽ —	● ▽						No			Yes	No*
	Eagle Clear 85	● ▽	● ▽						No			Yes	No*
	Eagle Ivory 85	□	□	□					No			No	No
	Eagle Green 89	● ▽	● ▽	● ▽		● ▽			No			No	No
	Eagle Green 89 T	●	●	●	●	●			No			No	No*
	Eagle Red 90		● ▽	● ▽				●	No			No	No*
	Eagle Clear 95	● ▽	● ▽	● ▽					No			Yes	No*
	Eagle Beige 95		● □	● □					No			Yes	No
	Eagle White 40D		○ □	○ □				○ □	Yes			Yes	No
	Eagle Blue 55D		● ▽	● ▽				● ▽	Yes			No	No
	Eagle Red 85 CXF	▽	▽						No	▽	▽	No	No
	Eagle Quick-Connect	● ○ ●							No			Yes	No*
	Eagle Ivory 85 SGT PU		□	□					No	□	□	No	No
	Eagle Green 89 SGT		▽	▽					No	▽	▽	No	No
	Eagle Red 90 SGT		▽	▽					No	▽	▽	No	No
	Eagle White 40D SGT		□	□					Yes	□	□	No	No
Reinforced Belting	Eagle Opaque 80 R	● ▽	● ▽						Yes			No	No
	Eagle Orange 85 R	● ▽	● ▽						Yes			Yes	No
	Eagle Hyfen 85 R		● ▽	▽					Yes			Yes	No*
	Eagle Ivory 85 R		□	□					Yes			No	No
	Eagle Green 89 R	● ▽	● ▽	● ▽	●				Yes			No	No
	Eagle Green 89 RT	●	●	●		●			Yes			No	No
	Eagle Beige 95 R		● □	● □					Yes			Yes	No
	Eagle Hyfen 95 R			▽					Yes			Yes	No*
	Eagle Hyfen 85 CXF/CXR			▽					Yes	▽	▽	No	No
	Eagle Ivory 85 RSGT PU		□	□					Yes	□	□	No	No
	Eagle Red 50D CC			●	●	●	●		Yes			No	No
	Eagle Blue 55D CC			●			●		Yes			No	No
	Eagle Natural 55D CC			●			●		Yes			Yes	No
	Eagle Green 63D CC			●			●		Yes			Yes	No
	Eagle Natural 63D CC			●			●		Yes			Yes	No

* Standard product is not static dissipating. A static dissipative version is available. May be subject to minimum order. Consult factory for availability.

Eagle® Belting provides solutions for all sorts of applications in virtually every industry. For inspiration on how we can solve your application problem, here's just a small sampling of our belting products at work. Not sure what you need? Contact us for advice on your specific application.



- 1. Eagle®Hyfen® Ridge-Top on a pop-up diverter conveying wood products.*
- 2. Eagle Orange 85 belts conveying pizzas.*
- 3. Wood panels being moved by Eagle Opaque 80 chosen for its non-marking characteristics.*
- 4. Eagle Hyfen R on a tray conveyor system, such as found in cafeterias, hospitals, etc.; chosen for its high strength, low stretch characteristics on long centre distances.*
- 5. Custom Eagle Blue, approved for direct food contact, used on tomato*



- 6. *Eagle® Red 90 moving roofing tile; chosen for its excellent abrasion resistance.*
- 7. *Eagle Twisted O-Rings easily installed without dismantling line shaft.*
- 8. *Eagle Orange 85 belts driving the roller conveyor.*
- 9. *Custom Eagle White profile for pear sorting machine.*
- 10. *Co-extruded reinforced Eagle Hyfen 85 CXF® on conveying system. Lower durometer top surface increases coefficient of friction for excellent grip to convey or move products.*
- 11. *Eagle Orange 85 on egg conveyor.*

EAGLE[®]

POLYURETHANE BELTING & O-RINGS

Round Belting

	2mm	2.4mm	3mm	4mm	5mm	6mm	6.3mm	7mm	8mm	9.5mm	10mm	12mm	12.5mm	13mm	14mm	15mm	16mm	18mm	19mm	20mm	
Non-Reinforced Belting																					
Eagle Opaque 80	○		○	○	○	○	○	○	○	○	○		○			○		○			
Eagle Orange 85	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●			●		
Eagle Clear 85	●	●	●	●	●	●	●	●	●	●	●	●			●	●			●		
Eagle Ivory 85																					
Eagle Green 89	●			●		●		●	●		●	●	●			●		●		●	
Eagle Green 89 T	●		●	●	●	●		●	●		●	●				●		●		●	
Eagle Red 90	●		●	●	●		●		●	●			●		●	●		●			
Eagle Beige 95					●				●		●					●					
Eagle Clear 95		●	●		●		●		●	●			●		●	●			●		
Eagle White 40D				○	○			○		○	○					○		○		○	
Eagle Blue 55D											●					●		●		●	
Eagle Red 85 CXF																					
Eagle Clear 85 QC					○	○	○		○	○			○	○		○	○				
Eagle Red 85 QC					●	●			●	●			●	●		●	●				
Eagle Yellow 85 QC					●		●		●	●			●			●					
Eagle Clear 85 TOR				●																	
Eagle Ivory 85 SGT/SGT PU																					
Eagle Green 89 SGT																					
Eagle Red 90 SGT																					
Eagle White 40D SGT																					
Reinforced Belting																					
Eagle Opaque 80 R									○		○					○					
Eagle Orange 85 R						●	●		●	●	●	●	●		●	●			●	●	
Eagle Hyfen 85 R					●		●		●	●			●		●	●			●		
Eagle Ivory 85 R																					
Eagle Green 89 R																					
Eagle Green 89 RT					●	●		●	●		●	●				●		●			
Eagle Hyfen 95 R																					
Eagle Beige 95 R											●					●					
Eagle Hyfen 85 CXF/CXR																					
Eagle Ivory 85 RSGT/RSGT PU																					
Eagle Can Cable*				●																	
Eagle Fabricated Belts	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

* Can Cable available in Red 50D LCF, Blue 55D, Natural 55D, Green 63D, and Natural 63D

V Belting

6mm x 4mm	8mm x 5mm	3L	3L T-Top	3L Crown-Top	3L Twin	Z/10	A/13	AA	A Twin	A Lo-Ridge-Top	A Ridge-Top	A Hi-Ridge-Top	B/17	BB	B Ribbed	B Wing-Top	B Ridge-Top	C/22	C Ribbed	C Ridge-Top	D/32	D Ribbed	E Ribbed	
																								Eagle Opaque 80
																								Eagle Orange 85
																								Eagle Clear 85
																								Eagle Ivory 85
																								Eagle Green 89
																								Eagle Green 89 T
																								Eagle Red 90
																								Eagle Beige 95
																								Eagle Clear 95
																								Eagle White 40D
																								Eagle Blue 55D
																								Eagle Red 85 CXF
																								Eagle Clear 85 QC
																								Eagle Red 85 QC
																								Eagle Yellow 85 QC
																								Eagle Clear 85 TOR
																								Eagle Ivory 85 SGT/SGT PU
																								Eagle Green 89 SGT
																								Eagle Red 90 SGT
																								Eagle White 40D SGT
																								Eagle Opaque 80 R
																								Eagle Orange 85 R
																								Eagle Hyfen 85 R
																								Eagle Ivory 85 R
																								Eagle Green 89 R
																								Eagle Green 89 RT
																								Eagle Hyfen 95 R
																								Eagle Beige 95 R
																								Eagle Hyfen 85 CXF/CXR
																								Eagle Ivory 85 RSGT/RSGT PU
																								Eagle Fabricated Belts

Non-Reinforced Belting

Reinforced Belting

Note: Some diameters and cross sections may be subject to minimum orders. Dimensions are for reference only. Flat belting available in Eagle Orange 85. See page 26 for cross sections. Additional cross sections, colours, and durometers are available. Contact Applications Engineering for design assistance

V Profiles

REINFORCED BELTING									
	Eagle Opaque 80	Eagle Orange 85	Eagle Hyfen 85 R	Eagle Ivory 85 R	Eagle Green 89 R	Eagle Hyfen 95 R	Eagle Beige 95 R	Eagle Ivory 85 RSGT	Eagle Ivory 85 RSGT PU
3L Twin			5299010						
Z/10		L04QG85ZR							
A/13	L04OP80AR	L04QG85AR		L04I85AR	L04G89AR	5260200	L04BE95AR	L04I85ARSG	L04I85ARSGPU
A Ridge-Top	L04OP80ARXH		5299007	L04I85ARXH	L04G89ARXH				
A Twin			5299019						
A Cogged						5220000	L04BE95ARXC		
B/17	L04OP80BR	L04QG85BR		L04I85BR	L04G89BR	5260300	L04BE95BR	L04I85BRSG	L04I85BRSGPU
B Ridge-Top	L04OP80BRXH		5299009	L04I85BRXH	L04G89BRXH				
B Cogged						5230000	L04BE95BRXC		
C/22		L04QG85CR		L04I85CR	L04G89CR	5260400	L04BE95CR	L04I85CRSG	
C Ridge-Top				L04I85CRXH	L04G89CRXH				
C Cogged						5240000	L04BE95CRXC		
D/32			5260500						

Quick-Connect Round Profiles

	NON-REINFORCED	
	Eagle Clear 85 QC	Eagle Red 85 QC
5mm	L04QC855M	L04QR855M
6mm	L04QC856M	L04QR856M
8mm	L04QC858M	L04QR858M
10mm		L04QR8510M
12mm		L04QR8512M
13mm	L04QC8513	L04QR8513
16mm	L04QC8516M	L04QR8516M

Co-Extruded V Profiles

	NON-REINFORCED	REINFORCED	
	Eagle Red 85 CXF	Eagle Hyfen 85 CXF	Eagle Hyfen 85 CXR
A/13	4924320	A	5260520 5260525
B/17	4924330	A Twin	5260572 5260577
C/22	4924345	B	5260530 5260535
		C	5260540 5260545
		D	5260550 5260555

SGT V Profiles

NON-REINFORCED BELTING					
	Eagle Ivory 85 SGT	Eagle Ivory 85 SGT PU	Eagle Green 89 SGT	Eagle Red 90 SGT	Eagle White 40D SGT
A/13	L04I85ASG	L04I85ASGPU	L04G89ASG	L04R90ASG	L04BY40ASG
B/17	L04I85BSG	L04I85BSGPU	L04G89BSG	L04R90BSG	L04BY40BSG
C/22	L04I85CSG		L04G89CSGT	L04R90CSG	L04BY40CSG

Eagle Welding Kits

	Mini Butt Welding Kit & Components	Butt Welding Kit & Components	Overlap Welding Kit & Components		
L04MINIWELD110V	Mini Butt Welding Kit 110V	L04FULLWELD110V	Butt Welding Kit 110V	L04OVERLWELD110	Overlap Welding Kit 110V
L04MINIWELD240V	Mini Butt Welding Kit 240V	L04FULLWELD240V	Butt Welding Kit 240V	L04OVERLWELD240	Overlap Welding Kit 240V
L04MINIWELD240E	Mini Butt Welding Kit 240V (Euro)	L04FULLWELD240E	Butt Welding Kit 240V (Euro)	L04OVERLWELD240E	Overlap Welding Kit 240V (Euro)
L04MCLAMP	Mini Clamp	L04HANDCLAMP	Butt Welder Clamp	L04BCLAMP	Bench Clamp
L04HKNIFE110	Hot Knife 110V	L04HKNIFE110	Hot Knife 110V	L04HKNIFE110	Hot Knife 110V
L04HKNIFE240	Hot Knife 240V	L04HKNIFE240	Hot Knife 240V	L04HKNIFE240	Hot Knife 240V
L04HKNIFE240E	Hot Knife 240V (Euro)	L04HKNIFE240E	Hot Knife 240V (Euro)	L04HKNIFE240E	Hot Knife 240V (Euro)
L04CUTTER	Mini Kit Belt Cutters	L04SHEARS	Belt Cutters	L04SHEARS	Belt Cutters
L04FCUTTER	Belt Flash Trimmers	L04FCUTTER	Belt Flash Trimmers	L04FCUTTER	Belt Flash Trimmers
L04CASEBLM	Mini Kit Case	L04CASEBKST	Standard Kit Case	L04CASEBKO	Overlap Kit Case
		L04DRILLBITS	Drill Bit Set	L04DRILLBITS	Drill Bit Set
				L04J0506	Clamping Jaws 5mm & 6mm
				L04J0608	Clamping Jaws 6mm & 8mm
				L04J1012	Clamping Jaws 10mm & 12mm
				L04J1238	Clamping Jaws 1/2" & 3/8"
				L04J1518	Clamping Jaws 15mm & 18mm
				L04J3LACTB	Clamping Jaws 3L & A Cogged
				L04JAB	Clamping Jaws A & B
				L04JBC	Clamping Jaws B & C
				L04JBCC	Clamping Jaws B & C Cogged

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007. Dimensions are for reference only.

TECHNICAL DATA

Eagle Opaque 80

DESCRIPTION
Round, Non-Reinforced



HARDNESS
80A
FDA COMPLIANT
No

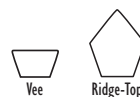
COEFFICIENT OF FRICTION
Stainless Steel .75
Steel .65
UHMW .50

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (in) (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
2mm	2	.56	14	0.2	0.8	0.4	1.8	0.5	2.2	0.6	2.7	.003	.004
3mm	3	.81	21	0.5	2.2	0.8	3.6	1.1	4.9	1.4	6.2	.006	.009
4mm	4	1.19	30	0.8	3.6	1.4	6.2	2.0	8.9	2.5	11.1	.01	.015
5mm	5	1.38	35	1.3	5.8	2.2	9.8	3.1	13.8	3.9	17.3	.02	.03
6mm	6	1.63	42	1.8	8.0	3.0	13.3	4.2	18.6	5.3	23.4	.025	.04
6.3mm	1/4 6.3	1.75	44	1.8	8.0	3.0	13.3	4.2	18.6	5.3	23.4	.03	.04
7mm	7	1.93	49	2.6	11.4	4.3	19.1	6.0	26.3	7.6	33.7	.03	.04
8mm	8	2.25	56	3.3	14.7	5.6	24.9	7.8	34.0	9.9	44.0	.04	.06
9.5mm	3/8 9.5	2.63	67	4.0	17.6	6.7	29.9	9.4	34.7	11.9	52.7	.06	.09
10mm	10	2.75	70	5.2	23.1	8.8	39.1	12.3	54.7	15.4	68.5	.07	.10
12.5mm	1/2 12.5	3.50	89	7.0	31.3	12.0	53.2	16.7	74.4	21.1	93.7	.10	.15
15mm	15	4.13	105	11.6	51.6	19.7	87.6	27.6	122.8	34.7	154.3	.14	.21
18mm	18	5.00	126	16.7	74.3	28.4	126.3	39.7	176.6	50.0	222.4	.22	.33

Eagle Opaque 80

DESCRIPTION
Trapezoidal, Non-Reinforced



HARDNESS
80A
FDA COMPLIANT
No

COEFFICIENT OF FRICTION
Stainless Steel .75
Steel .65
UHMW .50

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (in) (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
6mm x 4mm	6 x 4	1.10	28	0.8	3.6	1.6	7.1	2.6	12.7	3.6	17.1	.02	.03
8mm x 5mm	8 x 5	1.38	35	1.7	7.6	3.6	16.0	5.7	25.4	7.7	34.2	.02	.03
3L	9.5 x 6	1.50	39	2.3	10.2	4.7	20.9	7.5	33.4	10.2	45.4	.03	.05
Z/10	10 x 6.5	1.63	42	2.7	12.0	5.6	24.9	8.9	39.6	12.1	53.8	.05	.07
A/13	13 x 8	2.25	56	4.2	18.7	8.8	39.1	14.0	62.3	19.0	84.5	.07	.10
B/17	17 x 11.5	3.00	77	7.3	32.5	15.2	67.6	24.2	107.6	32.8	145.9	.11	.16
B Ridge-Top	17 x 20	5.50	140	7.3	32.4	15.2	67.6	24.2	107.6	32.8	145.9	.13	.19
C/22	22 x 14.5	3.88	98	12.7	56.5	26.7	118.8	42.5	189.0	57.6	256.2	.19	.28
C Ridge-Top	22 x 28	7.75	196	12.7	56.5	26.7	118.8	42.5	189.0	57.6	256.2	.25	.37

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

* w (width) is the widest part of the belt. b (height) is the tallest part of the belt.

Dimensions are for reference only.

Eagle Orange 85

DESCRIPTION
Round, Non-Reinforced



HARDNESS
85A
FDA COMPLIANT
Yes

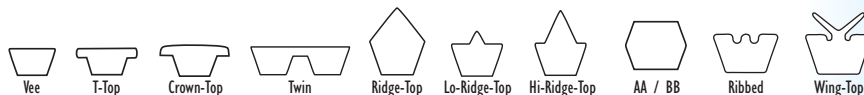
COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (in) (mm)	Minimum Pulley Ø (in) (mm)	Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
			4%		6%		8%		10%			
			(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
2mm	2	.63 16	0.2	0.9	0.3	1.3	0.4	1.8	0.5	2.2	.003	.004
3/32"	3/32	.75 19	0.2	0.9	0.3	1.3	0.4	1.8	0.5	2.2	.004	.006
3mm	3	.94 24	0.5	2.2	0.7	3.1	1.0	4.4	1.2	5.3	.006	.009
4mm	4	1.25 32	0.8	3.6	1.2	5.3	1.6	7.1	1.9	8.5	.01	.015
3/16"	3/16	1.50 38	1.1	4.9	1.7	7.6	2.2	9.8	2.7	12.0	.01	.015
5mm	5	1.56 40	1.2	5.3	1.8	8.0	2.4	10.7	3.0	13.3	.02	.03
6mm	6	1.88 48	1.7	7.6	2.6	11.6	3.5	15.6	4.3	19.1	.025	.04
1/4"	1/4	2.00 51	1.9	8.5	2.9	12.9	3.9	17.3	4.8	21.4	.03	.04
7mm	7	2.20 56	2.4	10.4	3.6	16.1	4.8	21.4	6.0	26.5	.03	.04
5/16"	5/16	2.50 64	3.0	13.3	4.6	20.5	6.1	27.1	7.6	33.8	.04	.06
8mm	8	2.50 64	3.0	13.3	4.6	20.5	6.1	27.1	7.6	33.8	.04	.06
3/8"	3/8	3.00 76	4.3	19.1	6.6	29.4	8.8	39.1	10.9	48.5	.06	.09
10mm	10	3.13 80	4.7	20.9	7.3	32.5	9.7	43.1	12.0	53.4	.07	.10
12mm	12	3.75 96	6.8	30.5	10.6	47.3	14.1	62.9	17.4	77.4	.09	.13
1/2"	1/2	4.00 102	7.6	33.8	11.8	52.5	15.7	69.8	19.3	85.8	.10	.15
9/16"	9/16	4.50 114	9.7	43.1	14.9	66.3	19.9	88.5	24.5	109.0	.13	.19
5/8"	5/8	5.00 127	11.9	52.9	18.4	81.8	24.5	109.0	30.2	134.3	.16	.24
3/4"	3/4	6.00 152	17.7	78.7	26.5	117.9	35.3	157.0	43.5	193.5	.23	.34

Eagle Orange 85

DESCRIPTION
Trapezoidal, Non-Reinforced



HARDNESS
85A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (in) (mm)	Minimum Pulley Ø (in) (mm)	Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)	
			4%		6%		8%		10%				
			(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)			
6mm x 4mm	6 x 4	1.25 32	0.9	4.0	1.6	7.1	2.2	9.8	2.8	12.5	.02	.03	
3L	3/8 x 7/32	1.75 45	2.2	9.8	3.7	16.5	5.2	23.1	6.5	28.9	.03	.04	
3L T-Top	9/16 x 19/64	2.38 60	3.2	14.2	5.5	24.5	7.7	34.2	9.7	43.1	.05	.07	
3L Crown-Top	9/16 x 1/4	2.00 51	3.2	14.2	5.5	24.5	7.7	34.2	9.7	43.1	.05	.07	
3L Twin	15/16 x 17/64	2.13 54	6.1	27.1	10.3	45.8	14.5	64.5	18.4	81.8	.10	.15	
Z/10	10 x 6	1.88 48	2.4	10.7	4.1	18.2	5.8	25.8	7.3	32.5	.05	.07	
A/13	1/2 x 5/16	13 x 8	2.50 64	4.0	17.8	6.8	30.2	9.6	42.7	12.2	54.3	.07	.10
A Lo-Ridge-Top	1/2 x 7/16	2.50 64	4.0	17.8	6.8	30.2	9.6	42.7	12.2	54.3	.07	.10	
A Ridge-Top	13 x 16	5.00 127	4.0	17.8	6.8	30.2	9.6	42.7	12.2	54.3	.09	.13	
A Hi-Ridge-Top	1/2 x 5/8	5.00 127	6.7	29.8	11.3	50.3	15.9	70.7	20.1	89.4	.09	.13	
A Twin	1 3/16 x 5/16	2.50 64	8.2	36.5	14.0	62.3	19.6	87.2	24.8	110.3	.15	.22	
AA	1/2 x 13/32	3.25 83	5.8	25.8	9.8	43.6	13.7	60.9	17.4	77.4	.09	.13	
B/17	11/16 x 13/32	17 x 11.5	3.25 83	7.0	31.1	11.8	52.5	16.6	73.8	21.0	93.4	.11	.16
B Ribbed	11/16 x 13/32	3.25 83	7.0	31.1	11.8	52.5	16.6	73.8	21.0	93.4	.11	.16	
B Wing-Top	11/16 x 5/8	3.25 83	7.0	31.1	11.8	52.5	16.6	73.8	21.0	93.4	.11	.16	
BB	11/16 x 9/16	4.25 108	8.8	39.1	14.9	66.3	20.9	93.0	26.5	117.9	.16	.24	
C/22	29/32 x 17/32	22 x 14.5	4.50 114	12.1	53.8	20.6	91.6	28.9	128.5	36.6	162.8	.19	.28
C Ribbed	29/32 x 17/32	4.50 114	12.1	53.8	20.6	91.6	28.9	128.5	36.6	162.8	.19	.28	
D Ribbed	1 5/16 x 3/4	7.00 178	25.2	112.1	42.7	189.9	59.9	266.4	75.8	337.2	.38	.57	
E Ribbed	1 11/16 x 1 3/32	15.00 381	47.8	212.6	81.1	360.7	113.9	505.9	144.0	640.5	.71	1.06	

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

* w (width) is the widest part of the belt. b (height) is the tallest part of the belt. Dimensions are for reference only.

Eagle Orange 85

DESCRIPTION
Flat, Non-Reinforced

HARDNESS
85A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
				(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
.055" x .375"	3/8 x 7/128	.38	10	0.9	3.9	1.3	5.8	1.7	7.6	2.1	9.3	.01	.015
.062" x .500"	1/2 x 1/16	.50	13	1.3	5.9	2.0	8.8	2.6	11.5	3.1	13.9	.02	.03
.062" x .750" **	3/4 x 1/16	1.00	25	2.0	8.8	3.0	13.2	3.9	17.2	4.7	20.9	.03	.04
.062" x 1.50"	1 1/2 x 1/16	.50	13	4.0	17.6	5.9	26.4	7.8	34.5	9.4	41.8	.05	.07
.062" x 1.75"	1 3/4 x 1/16	.50	13	4.6	20.5	6.9	30.8	9.0	40.2	11.0	48.8	.06	.09
.062" x 2.00"	2 x 1/16	.50	13	5.3	23.5	7.9	35.2	10.3	46.0	12.5	55.8	.07	.10
.062" x 3.00"	3 x 1/16	.50	13	7.9	35.2	11.9	52.7	15.5	68.9	18.8	83.7	.10	.15
.125" x .625"	5/8 x 1/8	1.00	25	3.3	14.8	5.0	22.2	6.5	29.0	7.9	35.1	.04	.06
.125" x 1.00"	1 x 1/8	1.00	25	5.3	23.6	8.0	35.4	10.4	46.3	12.6	56.2	.07	.10
.250" x .625"	5/8 x 1/4	2.00	51	6.6	29.6	10.0	44.3	13.0	57.9	15.8	70.3	.08	.12
.078" x .750"	3/4 x 5/64	.63	16	2.5	11.1	3.7	16.6	4.9	21.7	5.9	26.3	.03	.04
.090" x 1.00"	1 x 3/32	.75	19	3.8	17.0	5.7	25.5	7.5	33.4	9.1	40.5	.05	.07
.090" x 1.25"	1 1/4 x 3/32	.75	19	4.8	21.3	7.2	31.9	9.4	41.7	11.4	50.6	.06	.09
.090" x 1.50"	1 1/2 x 3/32	.75	19	5.7	25.5	8.6	38.3	11.3	50.0	13.7	60.7	.07	.10
.090" x 2.00"	2 x 3/32	.75	19	7.7	34.1	11.5	51.0	15.0	66.7	18.2	81.0	.09	.13

** belt has .156" radius guide.

Eagle Red 85 CXF

DESCRIPTION
Trapezoidal, Non-Reinforced with Co-Extruded Flat Top



← nominal 2.5mm
Add 2.5mm nominal to listed height for total belt height.

HARDNESS
85A Base, 60A Top
FDA COMPLIANT
No

COEFFICIENT OF FRICTION
Stainless Steel 1.00
Steel .90
UHMW .85

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
				(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
A/13	1/2 x 5/16	3.00	76	4.7	20.9	7.4	32.9	10.1	44.9	12.5	55.6	.07	.10
B/17	11/16 x 13/32	4.00	102	8.0	35.6	12.6	56.0	17.1	76.1	21.4	95.2	.11	.16
C/22	29/32 x 17/32	5.00	127	14.0	62.3	22.1	98.3	30.0	133.4	37.4	166.4	.19	.28

Eagle Clear 85 QC Eagle Red 85 QC

DESCRIPTION
Round, Hollow, Non-Reinforced



HARDNESS
85A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions O.D. x I.D. † (inches or mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
				(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
3/16"	.1875" x .080"	2.00	51	0.5	2.2	0.7	3.1	0.9	4.0	1.1	4.9	.01	.015
5mm	5mm x 2mm	2.00	51	0.5	2.2	0.7	3.1	0.9	4.0	1.1	4.9	.01	.015
6mm	6mm x 2.5mm	2.50	64	0.8	3.6	1.3	5.8	1.7	7.6	2.1	9.3	.02	.03
1/4"	.25" x .098"	2.50	64	0.8	3.6	1.3	5.8	1.7	7.6	2.1	9.3	.02	.03
5/16"	.3125" x .126"	3.00	76	1.3	5.8	2.0	8.9	2.7	12.0	3.3	14.7	.03	.04
8mm	8mm x 3.2mm	3.00	76	1.3	5.8	2.0	8.9	2.7	12.0	3.3	14.7	.03	.04
3/8"	.375" x .152"	3.50	89	1.8	8.0	2.9	12.9	3.8	16.9	4.7	20.9	.05	.07
10mm	10mm x 3.8mm	3.50	89	1.8	8.0	2.9	12.9	3.8	16.9	4.7	20.9	.05	.07
12mm	12mm x 5.2mm	3.75	95	3.3	14.7	5.1	22.7	6.8	30.2	8.4	37.4	.09	.13
1/2"	.500" x .214"	4.50	114	3.3	14.7	5.1	22.7	6.8	30.2	8.4	37.4	.09	.13
13mm	13mm x 5.2mm	4.50	114	3.3	14.7	5.1	22.7	6.8	30.2	8.4	37.4	.09	.13
5/8"	.625" x .273"	5.50	140	5.0	22.2	7.7	34.2	10.3	45.8	18.6	82.7	.13	.19
16mm	16mm x 6.8mm	5.50	140	5.0	22.2	7.7	34.2	10.3	45.8	18.6	82.7	.13	.19

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

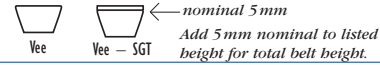
* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the nominal 2.5mm of co-extruded belting.

† O.D. is the outer diameter of the belt. I.D. is the inner diameter of the belt. Dimensions are for reference only.

TECHNICAL DATA

Eagle Ivory 85

DESCRIPTION
Trapezoidal, Non-Reinforced
SGT with Integrally Bonded Polyurethane Top



HARDNESS
85A; SGT with 70A Top

COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

FDA COMPLIANT
No

Cross Section	Dimensions w x h* (mm)	Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)		Weight per metre (kg)			
		(in) (Ivory 85)	(mm) (SGT)	4%		6%		8%		10%		(Ivory 85)	(SGT)	(Ivory 85)	(SGT)		
8mm x 5mm	8 x 5	1.88	—	48	—	4.4	19.5	6.7	29.7	8.8	39.1	10.6	47.3	.02	—	.03	—
Z/10	10 x 6.5	2.00	—	52	—	7.1	31.7	10.9	48.4	14.3	63.7	17.3	77.0	.05	—	.07	—
A/13	13 x 8	2.50	3.00	64	76	11.4	50.7	17.4	77.4	22.9	101.9	27.7	123.2	.07	.08	.10	.12
B/17	17 x 11.5	3.60	4.10	92	104	20.2	89.8	30.9	137.4	40.6	180.6	49.1	218.4	.11	.12	.16	.18
C/22	22 x 14.5	4.50	5.00	116	127	33.5	149.0	51.1	227.3	67.1	298.5	81.3	361.6	.19	.20	.28	.30

Eagle Green 89

DESCRIPTION
Round, Smooth or Textured, Non-Reinforced



HARDNESS
89A

COEFFICIENT OF FRICTION
Stainless Steel .65
Steel .55
UHMW .40

COEFFICIENT OF FRICTION (Textured)
Stainless Steel .50
Steel .40
UHMW .30

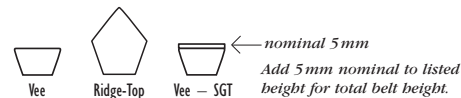
TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

FDA COMPLIANT
No

Cross Section	Dimensions Ø (mm)	Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)		Weight per metre (kg)	
		(in)	(mm)	4%		6%		8%		10%		(lbs)	(kg)	(lbs)	(kg)
2mm	2	.75	19	0.2	0.9	0.4	1.8	0.5	2.2	0.7	3.1	.003	.004		
3mm	3	1.00	27	0.6	2.7	0.9	4.0	1.2	5.3	1.5	6.7	.006	.009		
4mm	4	1.44	36	1.0	4.4	1.6	7.1	2.1	9.3	2.6	11.6	.010	.015		
5mm	5	1.75	45	1.5	6.7	2.4	10.7	3.3	14.7	4.1	18.2	.02	.03		
6mm	6	2.13	54	2.2	9.8	3.5	15.6	4.7	20.9	5.9	26.2	.025	.04		
7mm	7	2.50	63	3.0	13.3	4.7	20.9	6.4	28.5	8.0	35.6	.03	.04		
8mm	8	2.83	72	3.9	17.3	6.2	27.6	8.4	37.4	10.4	46.3	.04	.06		
10mm	10	3.50	90	6.1	27.1	9.7	43.1	13.1	58.3	16.3	72.5	.07	.10		
12mm	12	4.25	108	8.7	38.7	13.9	61.8	18.9	84.1	23.5	104.5	.09	.13		
15mm	15	5.25	135	13.6	60.5	21.7	96.5	29.6	131.7	36.6	162.8	.14	.21		
18mm	18	6.38	162	18.8	83.6	30.9	137.4	42.5	189.0	53.0	235.7	.22	.33		
20mm	20	7.00	180	23.2	103.2	38.2	169.9	52.4	233.1	65.5	291.3	.23	.34		

Eagle Green 89 Eagle Green 89 SGT

DESCRIPTION
Trapezoidal, Non-Reinforced
SGT With Integrally Bonded PVC Top



HARDNESS
89A; SGT with 55A Top

COEFFICIENT OF FRICTION
Stainless Steel .65
Steel .55
UHMW .40

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

FDA COMPLIANT
No

Cross Section	Dimensions w x h (mm)	Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)		Weight per metre (kg)			
		(in) (Green 89)	(mm) (SGT)	4%		6%		8%		10%		(Green 89)	(SGT)	(Green 89)	(SGT)		
Z/10	10 x 6.5	2.30	—	59	—	11.9	52.9	18.2	80.9	23.8	105.9	28.7	127.7	.05	—	.07	—
A/13	13 x 8	2.80	3.30	72	84	20.5	91.2	31.3	139.2	41.0	182.4	49.5	220.2	.07	.08	.10	.12
A Ridge-Top	13 x 16	5.70	—	144	—	20.5	91.2	31.3	139.2	41.0	182.4	49.5	220.2	.09	—	.13	—
B/17	17 x 11.5	4.10	4.60	104	117	36.4	161.9	55.6	247.3	72.7	323.4	87.7	390.1	.11	.12	.16	.18
B Ridge-Top	17 x 20	7.00	—	180	—	36.4	161.9	55.6	247.3	72.7	323.4	87.7	390.1	.13	—	.19	—
C/22	22 x 14.5	5.10	5.60	130	142	61.7	274.4	94.3	419.4	123.4	548.9	148.8	661.9	.19	.20	.28	.30

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

* w (width) is the widest part of the belt. b (height) is the tallest part of the belt. Dimensions are for reference only.

Eagle Red 90

DESCRIPTION
Round, Non-Reinforced



HARDNESS
90A
FDA COMPLIANT
No

COEFFICIENT OF FRICTION
Stainless Steel .60
Steel .50
UHMW .38

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (in) (mm)	Minimum Pulley Ø (in) (mm)	Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)		
			4%		6%		8%		10%					
			(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)				
2mm	2	.75	20	1.1	4.7	1.5	6.7	1.9	8.5	2.2	9.9	.003	.004	
3mm	1/8	3	1.19	30	2.4	10.5	3.4	15.2	4.3	19.1	5.0	22.3	.006	.009
4mm	4	1.56	40	4.2	18.7	6.1	26.9	7.6	33.9	8.9	39.7	.01	.015	
5mm	3/16	5	1.88	47	6.0	26.5	8.6	38.2	10.8	48.1	12.6	56.2	.01	.015
6.3mm	1/4	6.3	2.75	70	10.6	47.1	15.3	67.9	19.2	85.4	22.5	100.0	.03	.04
7mm	7	2.75	7	13.7	61.0	19.8	87.8	24.9	110.5	29.1	129.4	.03	.04	
8mm	8	3.13	80	16.8	74.8	24.2	107.7	30.5	135.6	35.7	158.7	.04	.06	
9.5mm	3/8	9.5	3.75	95	23.8	106.0	34.3	152.7	43.2	192.2	50.6	224.9	.06	.09
10mm	10	3.94	100	28.9	123.1	39.9	177.4	50.2	223.3	58.8	261.3	.07	.10	
12.5mm	1/2	12.5	5.00	127	42.4	188.5	61.0	271.5	76.8	341.7	89.9	399.9	.10	.15
9/16"	9/16	5.63	143	50.8	225.7	73.1	352.2	92.0	409.2	107.7	478.9	.13	.19	
15mm	15	5.90	150	59.1	262.9	85.2	378.8	107.2	476.7	125.4	557.8	.14	.21	
18mm	18	7.00	180	85.1	378.6	122.6	545.4	154.3	686.5	180.6	803.3	.22	.33	

Eagle Red 90

DESCRIPTION
Trapezoidal, Non-Reinforced;
SGT with Integrally Bonded PVC Top



← nominal 5mm
Add 5mm nominal to listed height for total belt height.

HARDNESS
90A; SGT with 55A Top
FDA COMPLIANT
No

COEFFICIENT OF FRICTION
Stainless Steel .60
Steel .50
UHMW .38

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (mm)	Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)		Weight per metre (kg)			
		(in) (Red 90)	(mm) (SGT)	(in) (Red 90)	(mm) (SGT)	4%		6%		8%		10%		(Red 90)	(SGT)	(Red 90)	(SGT)
						(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)				
8mm x 5mm	8 x 5	2.00	—	50	—	9.5	42.1	15.0	66.8	19.9	88.7	24.0	106.9	.02	—	.03	—
Z/10	10 x 6.5	2.50	—	65	—	14.8	65.8	23.4	104.3	31.1	138.5	37.5	167.0	.05	—	.07	—
A/13	13 x 8	3.13	4.13	80	105	24.1	107.0	38.1	169.5	50.6	225.3	61.0	271.5	.07	.08	.10	.12
B/17	17 x 11.5	4.50	5.50	115	140	43.9	195.2	69.5	309.3	92.4	411.0	111.3	495.3	.11	.12	.16	.18
C/22	22 x 14.5	5.75	6.75	145	172	72.2	321.2	114.4	508.9	152.0	676.2	183.2	814.9	.19	.20	.28	.30

Eagle Beige 95

DESCRIPTION
Round, Non-Reinforced



HARDNESS
95A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .55
Steel .45
UHMW .35

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (mm)	Minimum Pulley Ø (in) (mm)	Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)	
			4%		6%		8%		10%				
			(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)			
5mm	5	2.00	50	5.3	23.6	7.5	33.4	9.4	41.8	11.0	48.8	.02	.03
8mm	8	3.10	80	13.6	60.5	19.2	85.6	24.0	106.9	28.1	125.1	.04	.06
10mm	10	3.90	100	21.2	94.5	30.1	133.8	37.6	167.1	43.9	195.4	.07	.10
15mm	15	5.90	150	47.8	212.5	67.7	301.0	84.5	375.9	98.8	439.6	.14	.21

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the nominal 5mm of the integrally bonded top surface belting.

Dimensions are for reference only.

TECHNICAL DATA

Eagle Beige 95

DESCRIPTION
Trapezoidal, Non-Reinforced



HARDNESS
95A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .55
Steel .45
UHMW .35

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
A/13	13 x 8	3.10	80	16.8	74.7	25.2	112.1	32.5	144.6	38.9	173.0	.07	.10
B/17	17 x 11.5	4.50	115	29.9	133.0	44.6	197.9	57.7	256.6	69.1	307.4	.11	.16
C/22	22 x 14.5	5.70	145	49.4	219.7	73.9	328.7	95.4	424.3	114.3	508.4	.19	.28

Eagle Clear 95

DESCRIPTION
Round, Non-Reinforced



HARDNESS
95A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .55
Steel .45
UHMW .35

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
3/32"	3/32	1.00	25	0.7	3.1	1.2	5.3	1.5	6.7	1.9	5.3	.004	.006
1/8"	1/8	1.25	32	0.9	4.0	1.4	6.2	1.7	7.6	2.1	6.2	.01	.015
3/16"	3/16	1.88	48	2.0	8.9	3.0	13.3	3.9	17.3	4.6	13.3	.01	.015
1/4"	1/4	2.50	64	3.6	16.0	5.4	24.0	6.9	30.7	8.2	24.0	.03	.04
5/16"	5/16	3.13	79	5.7	25.4	8.4	37.4	10.8	48.0	12.9	37.4	.04	.06
3/8"	3/8	3.75	95	8.2	36.5	12.1	53.8	15.6	69.4	18.5	53.8	.06	.09
1/2"	1/2	5.00	127	14.5	64.5	21.6	96.1	27.7	123.2	32.9	96.1	.10	.15
9/16"	9/16	5.63	143	18.4	81.8	27.3	121.4	35.0	155.7	41.7	121.4	.13	.19
5/8"	5/8	6.25	159	22.7	101.0	33.7	149.9	43.3	192.6	51.4	149.9	.16	.24
3/4"	3/4	7.50	190	32.7	145.4	48.5	215.7	62.3	277.1	74.1	215.7	.23	.34

Eagle Clear 95

DESCRIPTION
Trapezoidal, Non-Reinforced



HARDNESS
95A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .55
Steel .45
UHMW .35

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
3L	3/8 x 7/32	2.19	56	4.1	18.2	6.6	29.4	8.9	39.6	10.8	48.0	.03	.04
3L T-Top	9/16 x 19/64	2.50	64	6.1	27.1	9.9	44.0	13.3	59.2	16.2	72.1	.05	.07
3L Twin	15/16 x 17/64	2.50	64	11.4	50.7	18.6	82.7	25.0	111.2	30.5	135.7	.10	.15
A/13	1/2 x 5/16	3.13	79	7.6	33.8	12.3	54.7	16.6	73.8	20.2	89.8	.07	.10
A Lo-Ridge-Top	1/2 x 7/16	3.13	79	7.6	33.8	12.3	54.7	16.6	73.8	20.2	89.8	.07	.10
A Hi-Ridge-Top	1/2 x 5/8	6.00	152	12.5	55.6	20.3	90.3	27.4	121.9	33.4	148.6	.09	.13
A Twin	1 3/16 x 5/16	3.13	79	15.4	68.5	25.1	111.6	33.8	150.3	41.2	183.3	.15	.22
AA	1/2 x 13/32	4.13	105	10.8	48.0	17.6	78.3	23.7	105.4	28.8	128.1	.09	.13
B/17	11/16 x 13/32	4.13	105	13.1	58.3	21.3	94.7	28.6	127.2	34.8	154.8	.11	.16
BB	11/16 x 9/16	5.63	143	16.5	73.4	26.8	119.2	36.1	160.6	44.0	195.7	.16	.24
C/22	29/32 x 17/32	5.38	136	22.7	101.0	37.0	164.6	49.8	221.5	60.7	270.0	.19	.28
D Ribbed	1 5/16 x 3/4	8.50	216	47.1	209.5	76.8	341.6	103.3	459.5	125.9	560.0	.38	.57

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

* w (width) is the widest part of the belt. b (height) is the tallest part of the belt. Dimensions are for reference only.

Eagle White 40D

DESCRIPTION
Round, Non-Reinforced



MATERIAL
Polyester

HARDNESS
40D
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .55
Steel .45
UHMW .35

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
5mm	5	2.00	50	5.2	23.1	8.0	35.6	10.5	46.7	12.6	56.0	.02	.03
6mm	6	2.38	60	7.5	33.7	11.5	51.2	15.1	67.2	18.2	80.9	.025	.04
8mm	8	3.10	80	13.3	59.2	20.5	91.2	26.8	119.2	32.3	143.7	.04	.06
10mm	10	4.00	100	20.8	92.5	32.0	142.2	41.9	186.5	50.5	224.6	.07	.10
12mm	12	4.75	120	29.9	133.2	46.0	204.7	60.4	268.5	72.7	323.5	.09	.13
15mm	15	5.90	150	46.8	208.1	71.9	319.9	94.3	419.6	113.6	505.4	.14	.21
18mm	18	7.10	180	67.4	299.7	103.6	460.6	135.8	604.2	163.6	727.8	.22	.33
20mm	20	7.88	200	83.2	370.0	127.9	568.7	167.7	745.9	202.0	898.5	.23	.34

Eagle White 40D

DESCRIPTION
Trapezoidal, Non-Reinforced;
SGT with Integrally Bonded PVC Top



← nominal 5 mm
Add 5 mm nominal to listed height for total belt height.

MATERIAL
Polyester Base;
SGT with 55A Top

HARDNESS
40D Base, 55A Top
FDA COMPLIANT
White 40 D Only; Not SGT

COEFFICIENT OF FRICTION
Stainless Steel .55
Steel .45
UHMW .35

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)		Weight per metre (kg)			
		(White 40D)	(SGT)	(White 40D)	(SGT)	4%		6%		8%		10%		(White 40D)	(SGT)	(White 40D)	(SGT)
						(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)				
8mm x 5mm	8 x 5	2.60	—	65	—	6.3	28.0	10.8	48.0	14.8	65.8	18.3	81.4	.02	—	.03	—
Z/10	10 x 6	3.10	—	80	—	9.4	41.8	16.1	71.6	22.2	98.7	27.4	121.9	.05	—	.07	—
A/13	13 x 8	4.00	4.50	102	114	15.7	69.8	26.9	120.0	37.0	164.6	45.8	203.7	.13	.08	.19	.12
B/17	17 x 11	5.50	6.50	140	160	27.1	120.5	46.4	206.4	64.0	284.7	79.1	351.8	.19	.12	.28	.18
C/22	22 x 14	7.00	7.50	178	180	47.3	210.4	80.8	359.4	111.4	495.5	137.8	612.9	.28	.20	.42	.30

Eagle Blue 55D

DESCRIPTION
Round, Non-Reinforced



MATERIAL
Polyester

HARDNESS
55D
FDA COMPLIANT
No

COEFFICIENT OF FRICTION
Stainless Steel .50
Steel .40
UHMW .30

TEMPERATURE RANGE
-30°C to +80°C
-22°F to +176°F

Cross Section	Dimensions Ø (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
		(in)	(mm)	4%		6%		8%		10%			
				(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
10mm	10	5.00	127	39.3	174.6	60.4	268.7	78.5	349.2	93.0	413.8	.07	.10
15mm	15	7.50	190	88.3	392.9	135.9	604.5	176.7	785.8	209.3	931.0	.14	.21
18mm	18	9.00	229	127.2	565.8	195.7	870.5	254.4	1131.5	301.4	1340.6	.22	.33
20mm	20	10.00	254	157.0	698.5	241.6	1074.7	314.1	1396.9	372.1	1655.1	.23	.34

Eagle Blue 55D

DESCRIPTION
Trapezoidal, Non-Reinforced



MATERIAL
Polyester

HARDNESS
55D
FDA COMPLIANT
No

COEFFICIENT OF FRICTION
Stainless Steel .50
Steel .40
UHMW .30

TEMPERATURE RANGE
-30°C to +80°C
-22°F to +176°F

Cross Section	Dimensions w x h* (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
		(in)	(mm)	4%		6%		8%		10%			
				(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
Z/10	10 x 6.5	3.13	80	22.2	98.8	32.7	145.2	41.0	182.4	47.5	211.2	.05	.07
A/13	13 x 8	4.00	102	35.5	158.1	52.3	232.4	65.6	291.8	76.0	337.9	.07	.10
B/17	17 x 11.5	5.50	140	61.2	272.2	90.0	400.1	112.9	502.4	130.8	581.7	.11	.21
C/22	22 x 14.5	7.00	178	108.5	482.7	159.5	709.5	200.3	890.8	231.9	1031.5	.19	.28

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the nominal 5 mm of the integrally bonded top surface belting.

Dimensions are for reference only.

TECHNICAL DATA

Eagle Opaque 80 R

DESCRIPTION
Round, Reinforced



HARDNESS
80A
FDA COMPLIANT
No

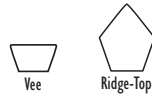
COEFFICIENT OF FRICTION
Stainless Steel .75
Steel .65
UHMW .50

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
8mm	8	3.13	80	4.3	19.2	10.7	47.6	15.4	68.4	19.0	84.6	.04	.06
10mm	10	3.93	100	9.74	43.1	24.1	107.2	34.6	153.9	42.8	190.3	.06	.09
15mm	15	5.90	150	21.8	97.0	54.2	241.1	77.9	346.4	96.3	428.2	.14	.21

Eagle Opaque 80 R

DESCRIPTION
Trapezoidal, Reinforced



HARDNESS
80A
FDA COMPLIANT
No

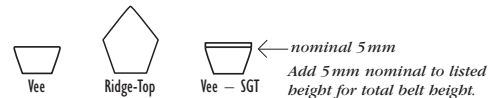
COEFFICIENT OF FRICTION
Stainless Steel .75
Steel .65
UHMW .50

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				1%		2%		3%		4%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
A/13	13 x 8	3.13	80	6.2	27.5	16.7	74.4	25.2	111.9	30.8	136.8	.07	.10
A Ridge-Top	13 x 16	6.30	160	6.2	27.5	16.7	74.4	25.2	111.9	30.8	136.8	.09	.13
B/17	17 x 11	4.38	110	11.0	48.8	29.7	132.0	44.6	198.4	54.5	242.6	.11	.16
B Ridge-Top	17 x 20	7.88	200	11.0	48.8	29.7	132.0	44.6	198.4	54.5	242.6	.13	.19

Eagle Ivory 85 R Eagle Ivory 85 RSGT PU

DESCRIPTION
Trapezoidal, Reinforced
SGT with Integrally Bonded Polyurethane Top



HARDNESS
85A; SGT with 70A Top
FDA COMPLIANT
No

COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (mm)	Minimum Pulley Ø (in)		Minimum Pulley Ø (mm)		Working Load @ Percent Tension								Weight per foot (lbs)		Weight per metre (kg)	
		(Ivory 85 R)	(SGT)	(Ivory 85 R)	(SGT)	1%		2%		3%		4%		(Ivory 85 R)	(SGT)	(Ivory 85 R)	(SGT)
		(in)	(mm)	(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)				
Z/10	10 x 6	2.38	—	60	—	2.9	12.7	8.6	38.2	13.7	60.8	17.4	77.6	.05	—	.07	—
A/13	13 x 8	3.13	3.60	80	92	5.0	22.2	15.1	67.0	24.0	106.7	30.6	136.1	.07	.08	.10	.12
A Ridge-Top	13 x 16	6.30	—	160	—	5.0	22.2	15.1	67.0	24.0	106.7	30.6	136.1	.09	—	.13	—
B/17	17 x 11	4.38	4.88	110	124	8.8	39.4	26.7	118.8	42.5	189.2	54.3	241.3	.11	.12	.16	.18
B Ridge-Top	17 x 20	7.88	—	200	—	8.8	39.4	26.7	118.8	42.5	189.2	54.3	241.3	.13	—	.19	—
C/22	22 x 14	5.50	6.00	140	152	14.6	65.1	44.2	196.7	70.4	313.1	89.8	399.4	.19	.20	.28	.30
C Ridge-Top	22 x 28	11.00	—	280	—	14.6	65.1	44.2	196.7	70.4	313.1	89.8	399.4	.25	—	.37	—

Eagle Hyfen 85 R

DESCRIPTION
Round, Reinforced



HARDNESS
85A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
3/16"	3/16	2.00	51	2.8	12.5	8.4	37.4	11.9	52.9	14.7	65.4	.01	.015
1/4"	1/4	2.75	70	3.7	16.5	12.4	55.2	20.0	89.0	27.8	123.7	.03	.05
5/16"	5/16	3.44	87	3.7	16.5	12.4	55.2	20.0	89.0	27.8	123.7	.04	.06
3/8"	3/8	4.13	105	7.3	32.5	26.2	116.5	43.5	193.5	57.4	255.3	.06	.09
1/2"	1/2	5.50	140	7.3	32.5	26.2	116.5	43.5	193.5	57.4	255.3	.10	.15
9/16"	9/16	6.19	157	16.7	74.3	36.6	162.8	58.0	258.0	75.8	337.2	.13	.19
5/8"	5/8	6.88	175	16.7	74.3	36.6	162.8	58.0	258.0	75.8	337.2	.16	.24
3/4"	3/4	8.25	210	16.7	74.3	36.6	162.8	58.0	258.0	75.8	337.2	.23	.34

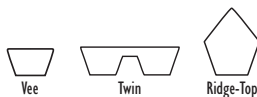
For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

* w (width) is the widest part of the belt. b (height) is the tallest part of the belt. Dimensions are for reference only.

TECHNICAL DATA

Eagle Hyfen 85 R

DESCRIPTION
Trapezoidal, Reinforced



HARDNESS
85A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)				
3L Twin	1 ⁵ / ₁₆ x 1 ⁷ / ₆₄	3.00	76	14.4	63.9	20.7	91.9	27.8	123.8	35.3	156.8	.10	.15
A Ridge-Top	1 ¹ / ₂ x 9 ⁹ / ₁₆	6.19	157	17.4	77.4	25.1	111.4	33.8	150.1	42.8	190.2	.09	.13
A Twin	1 3 ³ / ₁₆ x 5 ⁵ / ₁₆	3.44	87	16.5	73.3	23.7	105.5	31.9	142.1	40.5	180.0	.15	.22
B Ridge-Top	2 ¹ / ₃₂ x 1 ¹¹ / ₁₆	7.50	191	25.7	114.4	37.0	164.6	49.8	221.7	63.2	280.9	.13	.19
D	1 1 ¹ / ₄ x 3 ³ / ₄	12.00	305	77.1	343.0	111.0	493.6	149.5	664.9	189.4	842.4	.38	.57

Eagle Hyfen 85 CXF

DESCRIPTION
Trapezoidal, Reinforced



HARDNESS
85A Base, 60A Top
FDA COMPLIANT
No

COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)				
A	1 ¹ / ₂ x 5 ⁵ / ₁₆	4.50	115	22.2	98.6	29.6	131.7	36.7	163.1	43.4	193.2	.07	.10
A Twin	1 3 ³ / ₁₆ x 5 ⁵ / ₁₆	4.50	115	21.0	93.3	28.0	124.7	34.7	154.4	41.1	182.9	.38	.57
B	2 ¹ / ₃₂ x 1 ¹³ / ₃₂	5.50	140	32.7	145.7	43.7	194.6	54.1	240.9	64.1	285.3	.11	.16
C	7 ⁷ / ₈ x 1 ¹⁷ / ₃₂	7.00	178	48.9	217.6	65.4	290.7	80.9	359.9	95.9	426.3	.15	.22
D	1 1 ¹ / ₄ x 3 ³ / ₄	12.50	318	96.4	428.7	128.7	572.6	159.4	708.8	188.8	839.7	.19	.28

Eagle Orange 85 R

DESCRIPTION
Round, Reinforced



HARDNESS
85A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (in) (mm)		Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
					4%		6%		8%		10%			
				(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)			
6mm		6	2.38	60	0.8	3.6	2.8	12.3	5.4	24.1	7.8	34.6	.025	.04
1/4"	1/4		2.50	64	0.8	3.6	2.8	12.3	5.4	24.1	7.8	34.6	.03	.05
5/16"	5/16		3.13	79	1.3	5.6	4.3	19.3	8.5	37.6	12.1	54.0	.04	.06
8mm		8	3.13	80	1.8	8.0	6.2	27.8	12.2	54.2	17.5	77.8	.04	.06
3/8"	3/8		3.75	95	1.8	8.0	6.2	27.8	12.2	54.2	17.5	77.8	.06	.09
10mm		10	3.94	100	2.6	11.6	10.1	39.5	17.1	76.1	24.9	110.7	.06	.09
12mm		12	4.75	120	3.3	14.7	11.5	51.2	22.5	100.0	32.3	143.7	.09	.13
1/2"	1/2		5.00	127	3.2	14.2	11.1	49.4	21.6	96.3	31.1	138.2	.10	.15
9/16"	9/16		5.63	143	4.1	18.0	14.0	62.5	27.4	121.9	39.3	175.0	.13	.19
15mm		15	5.90	150	4.5	20.0	15.5	68.9	30.2	134.3	43.4	193.0	.14	.21
5/8"	5/8		6.25	159	5.0	22.3	17.3	77.1	33.8	150.4	48.6	216.0	.16	.24
3/4"	3/4		7.50	191	7.2	32.1	25.0	111.1	48.7	216.6	69.9	311.1	.23	.34
20mm		20	7.88	200	7.6	33.8	26.3	116.9	51.1	227.3	73.4	326.5	.23	.34

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the nominal 2.5mm of the integrally bonded top surface belting.

Dimensions are for reference only.

Eagle Orange 85 R

DESCRIPTION
Trapezoidal, Reinforced



HARDNESS
85A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (mm)	Minimum Pulley Ø (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				1%		2%		3%		4%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
Z/10	10 x 6	2.38	60	2.6	11.4	6.1	27.0	9.7	43.0	12.7	56.6	.05	.07
A/13	13 x 8	3.13	80	4.0	17.9	9.5	42.4	15.2	67.6	20.0	89.0	.07	.10
B/17	17 x 11	4.38	110	7.0	30.9	16.5	73.3	26.2	116.7	34.5	153.7	.11	.16
C/22	22 x 14	5.50	140	12.1	53.8	28.7	127.7	45.7	203.3	60.2	267.8	.19	.28

Eagle Green 89 RT

DESCRIPTION
Round, Reinforced, Textured



HARDNESS
89A
FDA COMPLIANT
No

COEFFICIENT OF FRICTION
Stainless Steel .50
Steel .40
UHMW .30

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (mm)	Minimum Pulley Ø (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
5mm	5	2.00	50	1.7	7.4	5.0	22.2	10.2	45.5	15.8	70.1	.02	.03
6mm	6	2.38	60	2.4	10.6	7.2	32.0	14.7	65.5	22.7	101.0	.025	.04
7mm	7	2.75	70	3.3	14.5	9.8	43.5	20.0	89.1	30.9	137.4	.03	.05
8mm	8	3.13	80	4.3	18.9	12.8	56.8	26.2	116.4	40.4	179.5	.04	.06
10mm	10	3.94	100	6.6	29.6	20.0	88.8	40.9	181.9	63.1	280.5	.06	.09
12mm	12	4.75	120	9.6	42.6	28.8	127.9	58.9	262.0	90.8	403.9	.09	.13
15mm	15	5.90	150	15.0	66.5	44.9	199.8	92.0	409.3	141.9	631.1	.14	.21
18mm	18	7.00	180	21.5	95.8	64.7	287.8	132.5	589.4	204.3	908.8	.22	.33

Eagle Beige 95 R

DESCRIPTION
Round, Reinforced



HARDNESS
95A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .55
Steel .45
UHMW .35

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions Ø (mm)	Minimum Pulley Ø (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
5mm	5	2.38	60	1.5	6.7	2.7	12.2	4.1	18.1	5.3	23.8	.02	.03
8mm	8	3.75	96	3.8	17.1	7.0	31.2	10.4	46.2	13.6	60.5	.04	.06
10mm	10	4.75	120	6.0	26.7	11.0	48.8	16.2	72.2	21.2	95.0	.06	.09
15mm	15	7.10	180	13.5	60.1	24.7	109.7	36.5	162.5	47.8	215.0	.14	.21

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

* w (width) is the widest part of the belt. b (height) is the tallest part of the belt. Dimensions are for reference only.

Eagle Beige 95 R

DESCRIPTION
Trapezoidal, Reinforced



HARDNESS
95A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .55
Steel .45
UHMW .35

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				1%		2%		3%		4%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
3L	9.5 x 6	2.63	67	11.1	49.2	25.8	114.8	37.9	168.4	46.6	207.2	.03	.05
3L Cogged	9.5 x 6	2.63	67	11.1	49.4	25.8	114.8	37.9	168.6	46.6	207.3	.03	.05
Z/10	10 x 6	2.81	72	12.5	55.6	29.0	129	42.6	189.5	52.4	233.1	.05	.07
A/13	13 x 8	3.75	96	20.6	91.6	48.0	213.5	70.5	313.6	86.7	385.6	.07	.10
A Cogged	13 x 8	3.13	80	20.6	91.6	48.0	213.5	70.5	313.6	86.7	385.6	.06	.09
B/17	17 x 11	5.19	132	35.5	157.9	83.0	369.2	121.7	541.3	149.8	666.3	.11	.16
B Cogged	17 x 11	4.38	110	35.5	157.9	83.0	369.2	121.7	541.3	149.8	666.3	.10	.15
C/22	22 x 14	6.63	168	61.9	275.3	144.5	642.7	212.0	943.0	260.9	1160.5	.19	.28
C Cogged	22 x 14	5.50	140	61.9	275.3	144.5	642.7	212.0	943.0	260.9	1160.5	.18	.27

Eagle Hyfen 95 R

DESCRIPTION
Trapezoidal, Reinforced



HARDNESS
95A
FDA COMPLIANT
Yes

COEFFICIENT OF FRICTION
Stainless Steel .55
Steel .45
UHMW .35

TEMPERATURE RANGE
-30°C to +66°C
-22°F to +150°F

Cross Section	Dimensions w x h* (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				4%		6%		8%		10%			
		(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
A	1/2 x 3/8	4.50	114	22.3	99.2	32.4	144.2	41.6	185.2	50.4	224.1	.07	.10
A Cogged	1/2 x 3/8	3.50	89	22.3	99.2	32.4	144.2	41.6	185.2	50.4	224.1	.06	.09
B	21/32 x 1/2	6.00	152	32.9	146.5	47.9	213.0	61.5	273.5	74.4	330.9	.11	.16
B Cogged	21/32 x 1/2	4.50	114	32.9	146.5	47.9	213.0	61.5	273.5	74.4	330.9	.10	.15
C	7/8 x 5/8	7.50	191	49.2	218.8	71.5	318.2	91.9	408.6	111.2	494.4	.19	.28
C Cogged	7/8 x 5/8	6.50	216	49.2	218.8	71.5	318.2	91.9	408.6	111.2	494.4	.18	.27

Eagle Can Cable

DESCRIPTION
Round, Reinforced



MATERIAL
Polyester
Red: Engineered Polymer

HARDNESS
See Chart
FDA COMPLIANT
Natural & Green Only

TEMPERATURE RANGE (RED ONLY)
-30°C to +66°C
-22°F to +150°F

TEMPERATURE RANGE (ALL OTHERS)
-30°C to +80°C
-22°F to +176°F

Product	Durometer Hardness	Diameter Ø (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
					1%		2%		3%		4%			
			(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
Red 50D CC LCF	50D	3/8	10.00	254	23.8	105.9	57.8	257.2	104.3	463.7	152.2	677.2	0.06	0.09
Blue 55D CC	55D	3/8	12.00	305	18.1	80.5	42.8	190.4	79.4	353.2	118.4	526.6	0.06	0.09
Natural 55D CC	55D	3/8	12.00	305	18.1	80.5	42.8	190.4	79.4	353.2	118.4	526.6	0.06	0.09
Green 63D CC	63D	3/8	12.00	305	18.1	80.5	42.8	190.4	79.4	353.2	118.4	526.6	0.06	0.09
Natural 63D CC	63D	3/8	12.00	305	18.1	80.5	42.8	190.4	79.4	353.2	118.4	526.6	0.06	0.09

For technical assistance and drive design help, contact Applications Engineering at +44 (0)870 7577007.

* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the nominal 5 mm of the integrally bonded top surface belting.

Dimensions are for reference only.

V-Belts

All polyurethane V-belts in the “classical” profiles, i.e. A, B, C, and D, are designed to fit ISO and DIN 2215 compliant pulleys as per the groove details illustrated in Fig. 1 below.

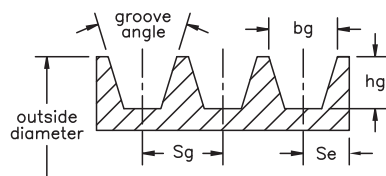
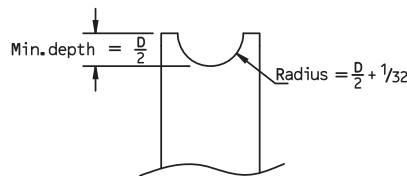


Figure 1

Cross Section	Diameter Range	Groove Angle	Groove Angle Tolerance	b _g	h _g Min	S _g	S _g Tolerance	S _e	S _e Tolerance
Z/10	Up thru 80mm Over 80mm	34° 38°	±1°	9.7	11	12	±0.3	8	±0.6
A/13	Up thru 118mm Over 118mm	34° 38°	±1°	12.7	14	15	±0.3	10	±0.6
B/17	Up thru 190mm Over 190mm	34° 38°	±1°	16.3	18	19	±0.4	12.5	±0.8
C/22	Up thru 315mm Over 315mm	34° 38°	±1° ±30'	22	24	25.5	±0.5	17	±1.0
D/32	Up thru 500mm Over 500mm	36° 38°	±30'	32	28	37	±0.6	24	±2.0

Round Belts

Round Eagle® belting is commonly run in pulleys with a round profile, see Fig. 2. In the absence of round groove pulleys, round belts can also be used in pulleys with vee grooves, Fig. 3. The table below shows the dimensional data when a round belt is used in a V-groove.



where D = diameter of round belt

Figure 2

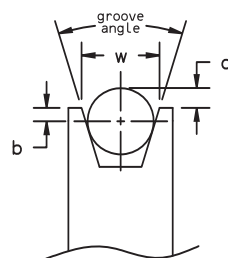


Figure 3

Pulley Size	Pulley Diameter	Groove Angle	Round Belt	Dimensions		
				w	a	b
Z/10	Up thru 80mm	34°	7	9.7	-0.39	3.89
			8	9.7	1.82	2.18
			9.5	9.7	5.14	-0.39
Z/10	Over 80mm	38°	7	9.7	0.17	3.34
			8	9.7	2.19	1.81
			9.5	9.7	5.25	-0.50
A/13	Up thru 118mm	34°	9.5	12.7	0.23	4.52
			10	12.7	1.33	3.67
			12	12.7	5.75	0.25
A/13	Over 118mm	38°	9.5	12.7	0.90	3.85
			10	12.7	1.91	3.09
			12	12.7	5.98	0.02
B/17	Up thru 190mm	34°	12	16.3	-0.14	6.14
			15	16.3	6.50	1.00
			16	16.3	8.71	-0.71
B/17	Over 190mm	38°	12	16.3	0.76	5.24
			15	16.3	6.87	0.63
			16	16.3	8.90	-0.90
C/22	Up thru 315mm	34°	20	22	8.22	1.78
	Over 315mm	38°	20	22	9.00	1.23

Note: above dimensions are belt fit in groove under no tension. Dimensions are in millimetres.

Flat Belts

All flat belts have a natural tendency to move laterally. Therefore a flat or straight pulley is not recommended, as the belt would walk off the pulley. To keep the belt in the centre of the pulley it must have a crown. Fig. 4 illustrates a round crown and is the preferred method. A modified round crown as illustrated in Fig. 5 is also acceptable. A flat pulley with guide flanges (Fig. 6) is not recommended. Even with the guide flanges the belt will move laterally and potentially could climb up onto them.

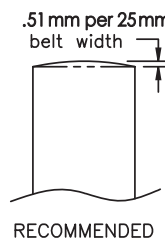


Figure 4

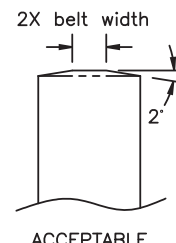


Figure 5



Figure 6

Belt Installation Tension

When non-reinforced Eagle® Belting is stretched and released, elasticity is the characteristic that brings the material back to its original shape. This “memory” is what gives our non-reinforced belting its self-tensioning properties.

When a non-reinforced belt is first installed (stretched) the material does not return to 100% of its original length and, in fact, continues to lose elasticity over its life span. This loss in elasticity causes what is commonly called tension decay.

To overcome the initial and continued stretching, a non-reinforced belt will require what is referred to as “installed” tension. Installation tensions in the 6% to 10% range will normally be sufficient for most applications. If higher tensions are required, the application may exceed the belt’s load capacity. For reference, below are installed tensions:

All Eagle Non-Reinforced Belting: 8 – 10% Quick-Connect Belting: 6 – 8%

All Eagle Reinforced Belts contain a reinforcing polyester tensile member, which increases the modulus elasticity of the material and reduces the “stretch” of a non-reinforced belt. Since an endless reinforced belt is essentially a fixed length, the eventual small amount of elongation from tension decay can be dealt with by mechanical take-up devices. This device should accommodate at least 4% of the belt’s length to overcome tension decay.

Belt Installation Length

The belt tension length, or “cut length,” can be determined from the measured belt length or calculated belt length. The measured length can be obtained by taking a measuring tape and following the path of the belt around all of the pulleys, or through computer aided design (CAD) techniques. The calculated length can be obtained from the following formula.

Note: this formula applies to two-pulley drives only.

$$L = 2C + 1.57(D + d) + \frac{(D - d)^2}{4C}$$

where: L = Installation length
 C = centre of pulley shaft to centre of pulley shaft distance
 D = pitch diameter of large pulley
 d = pitch diameter of small pulley

For non-reinforced belting, the cut length is determined by using the measured or calculated (reference) belt length times the percent of required installation tension (6 to 10%).

$$\begin{aligned} \text{Cut length} &= \text{reference length} \times \% \text{ tension} \\ \text{Example: } &1120\text{mm} \times 8\% \text{ tension} \\ &= 1120 \times .92 \\ &= 1030.4\text{mm} \end{aligned}$$

For reinforced belting, the cut length is the measured or calculated length plus 38mm (1½”).

Temperature

The temperature range of Eagle Belting is determined by the thermoplastic resin. Like all thermoplastic resins, its physical properties are reduced at higher temperatures. The material softens, loses strength and elongates excessively to the point of premature failure. Temperature ranges are listed under each individual belt type in the Technical Data section.

Minimum Pulley Diameter

Non-reinforced belts can operate on smaller diameter pulleys than belts with a reinforcing tensile member. Reinforced belts require a larger pulley diameter to prevent premature flex fatigue failure of the polyester tensile member. The most common serious mistake in designing belt drives is the selection of a pulley diameter that is too small. Listed under each individual belt type is the recommended minimum pulley diameter. Smaller diameters can be used only if a reduction in belt service life is acceptable.

Belt Profile Tolerance

Round Belts:

Up to and including 5mm (3/16") diameter:	± .127mm (0.005")
Over 5mm (3/16") up to and including 6.3mm (1/4") diameter:	± .178mm (0.007")
Over 6.3mm (1/4") up to and including 14mm (9/16") diameter:	± .254mm (0.010")
Over 14mm (9/16") in diameter:	± .305mm (0.012")

Flat and V-Belts:

All profiles: ± .381mm (0.015")

If a tighter tolerance is required, consult Fenner Drives application engineering group with your requirements.

1. Refer to the Technical Data chart for the belt material and cross section selected.
 2. Use the following formula that meets your application requirements (Note: if belt supported by rollers use .17 for μ):

a. Horizontal Transport with Slider Bed $T_e = W_t \times \mu + B_{wt}$	c. Incline or Decline Transport with Slider Bed $T_e = \frac{W_t}{C} \times (H_t + \mu \times \sqrt{C^2 + H_t^2}) + B_{wt}$
b. Horizontal Transport with Slider Bed and Product Accumulation $T_e = W_t \times \mu + B_{wt} + A_{wt}$	d. Incline or Decline Transport with Slider Bed and Product Accumulation $T_e = \frac{W_t}{C} \times (H_t + \mu \times \sqrt{C^2 + H_t^2}) + B_{wt} + A_{wt}$
- Where:
- | | |
|---|--|
| T_e = Effective Tension | A_{wt} = Accumulating weight $\times \mu$
(where μ is the COF between belt and product) |
| W_t = Total Weight on Conveyor | H_t = Incline or decline height |
| C = Conveyor Centre Distance | μ = COF on slider bed material from chart |
| B_{wt} = Belt weight/unit length $\times C$ | |
3. Determine Tight Tension (T_1).
 Flat and round belts — $T_1 = T_e \times 2$ V-belts — $T_1 = T_e \times 1.25$
 4. Refer to the Technical Data chart for the material and cross section selected and compare T_1 to the Working Load at 10% tension. If only one belt is desired, T_1 may not be greater than the Working Load at 10% tension. If more than one belt is required, divide T_1 by the Working Load at 10% tension to arrive at number of belts. Round up to the nearest whole number of belts.
 5. Find load per belt by dividing T_1 by number of belts. From the Technical Data chart, determine the percent installed tension for the load per belt.
 6. Belt cut length (mm) = measured or calculated belt length (mm) \times (1 - corresponding % tension).

Engineering Data — Selection Example

Type of belt being considered = Eagle Orange 85A in 6mm round
 Head-to-tail centre distance (C) = 3 Metres Total weight on belt(s) = 6 kg
 Incline or decline = none Type of belt support = UHMW slider bed
 Product accumulation on belt(s)? = no

1. Refer to the Technical Data chart for the belt material and cross section selected.

Eagle Orange 85		DESCRIPTION		HARDNESS		COEFFICIENT OF FRICTION				TEMPERATURE RANGE			
Eagle Clear 85		Round,	85A	Stainless Steel .70		Stainless Steel .70		-30°C to +66°C					
		Non-Reinforced	FDA COMPLIANT	Steel .60		Steel .60		-22°F to +150°F					
			Yes	UHMW .45		UHMW .45							
Cross Section	Dimensions \emptyset (in)	Minimum Pulley \emptyset (mm)	Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)	
			4%		6%		8%		10%				
	(mm)	(in)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)			
6mm	6	1.88	48	1.7	7.6	2.6	11.6	3.5	15.6	4.3	19.1	.025	.017
1/4"	1/4	2.00	51	1.9	8.5	2.9	12.9	3.9	17.3	4.8	21.4	.03	.020

2. Horizontal Transport with Slider Bed. Since the belt will run in UHMW slider bed the COF(μ) of .45 is used from Technical Data chart. From the chart the belt weight is .02 kgs/M giving a total belt weight of .06 kg (.02 \times 3).
 $T_e = 6 \text{ kg} \times .45 + .06 = 2.76 \text{ kg}$
3. Determine Tight Tension (T_1).
 round belts $T_1 = 2.76 \times 2 = 5.52 \text{ kg} = 54.1 \text{ Newtons} (5.52 \times 9.81)$
4. Refer to the Technical Data chart for the material and cross section selected and compare T_1 to the Working Load at 10% tension. If only one belt is desired, T_1 may not be greater than the Working Load at 10% tension. If more than one belt is required, divide T_1 by the Working Load at 10% tension to arrive at number of belts. Round up to the nearest whole number of belts.
 6mm round rated 19.1 kg @ 10% tension. $54.1 \div 19.1 = 2.84$ — round up to 3 belts
5. Find load per belt by dividing T_1 by number of belts. From the Technical Data chart, determine the percent installed tension for the load per belt.
 Load/belt = $54.1 \text{ N} \div 3 = 18.0 \text{ Newtons}$
 corresponding installed tension = 9.4%

Chemical Resistance Chart

Polyurethane is extremely resistant to many industrial oils and chemicals, but not all. Below are a wide variety of oils and chemicals found in industrial applications. Consult Fenner Drives application engineering group for assistance on projects with design criteria outside these parameters, or obtain a sample belt and determine its compatibility in the precise operating conditions.

Acids	Rating	Fuels	Rating	Solvents	Rating
Acetic, 5%	C	ASTM Fuel A	A	Acetone	C
Boric, 4%	C	ASTM Fuel B	C	Aniline	C
Chromic	C	ASTM Fuel C	C	Benzene	C
Citronic	C	Diesel Fuel	B	Benzyl Alcohol	C
Formic	C	Gasoline, Premium	C	Butane	C
HCl	B	Gasohol (10-15% Methanol)	C	Butyl Acetate	C
Hydrochloric, 10%	C	Jet Fuel, JP-4	A	Butyl Alcohol	C
Lactic	C	Kerosene	A	Carbon Tetrachloride	C
Nitric, >1%	C			Chlorobenzene	C
Oleic	C	Oils	Rating	Chloroform	C
Phosphoric	C	ASTM Oil #1	A	Cyclohexane	C
Sulfuric, <20%	B	ASTM Oil #2	A	Ethanol	C
Sulfuric, >20%	C	ASTM Oil #3	A	Ether	C
		Brake Fluid (ATE or ATS)	C	Ethyl Acetate	C
		Gear Box Oil (SAE 90)	A	Freon 11, 12, 22	C
Alkalines	Rating	Hydraulic Fluid	C	Freon 113	A
Ammonia, >10%	C	Hydraulic/Water Emulsion	C	Glycerine, Glycerol, Glycol	A
Detergent, 1%	A	Mineral Oil	A	Heptane	B
Potassium Hydroxide	B	Motor Oil	A	Hexane	C
Soap, 1%	A	Parafin Oil	A	Isopropyl Alcohol	C
Sodium Hydroxide, 10%	C	Petroleum (Texas Sour Crude)	A	Methanol	C
		Power Steering Fluid	B	Methyl Acetate	C
		Skydrol 500 Oil	C	Methyl Ethyl Ketone	C
Aqueous Solutions	Rating	Transmission Oil A	A	Methyl Glycol	C
Aluminum Chloride, 10%	C			Methylene Chloride	C
Ammonium Chloride, 10%	C	Greases	Rating	N-Methyl Pyrroidone	C
Bleaching Agent, 40%	B	Calcium Grease	B	Perchloroethylene	C
Bleaching Agent, 100%	C	Sodium Grease	B	Pyridine	C
Calcium Chloride, 40%	C	Teflon Grease	A	Turpentine	A
Caustic Soda, 10%	B			Tetrachloroethylene	C
Cola	A	Miscellaneous	Rating	Tetrahydrofuran	C
Ferric Chloride, 10%	C	Diocetyl Phthalate (DOP)	A	Toluene	C
Hydrogen Peroxide, 3%	B	Ethylene Chloride	C	Trichloroethylene	C
Isopropanol, 50%	C	Ethylene Dichloride	C	Xylene	C
Magnesium Chloride, 30%	C	Eythlene GlycoWater 50/50	C		
Potassium Chloride, 40%	C	Household Cleaner	B		
Potassium Dichromate, 10%	C	Naptha	A		
Potassium Permanganate, 5%	C	Silage (Silo) Juice	C		
Sea Water	B	Natural Perspiration	B		
Sodium Bisulfate, 10%	C	Tincture of Iodine	C		
Sodium Chloride, 10%	C	Tricresyl Phosphate	C		
Sodium Hypochlorite, 5%	C				
Sodium Thiosulfate, 20%	A				
Water, Deionized	A				

Rating Key

A - Fluid has little or no effect

B - Fluid has minor to moderate effect

C - Fluid has severe effect

Frequently Asked Questions

Are all of the Eagle® Belting products FDA compliant?

Eagle® Opaque 80, Ivory 85, Green 89, Red 90, Blue 55D, and Eagle Red and Blue Can Cable are not. Standard Eagle Red 85 CXF and Eagle Hyfen CXF and CXR are not; consult factory for availability of compliant materials. All of the other belts are manufactured from FDA compliant materials.

I have an application involving 93°C/200°F temperature. Can I use your polyurethane belting?

Our Eagle polyurethane products are usually limited to 66°C/150°F (see product info for details). At higher temperatures the polyurethane softens and loses strength, resulting in excessive stretch. However, Fenner Drives' PowerTwist Plus® should be considered as an option.

My application involves washdown. What effect will it have on the belt?

Polyurethane is resistant to water and many industrial chemicals, but not resistant to all. Consult the chemical resistance chart in this catalogue or contact Fenner Drives application engineering group with the contaminants present and we will make a recommendation.

The standard profiles shown do not appear to suit my needs. Do you make special profiles?

Yes! At Fenner Drives, we welcome the opportunity. Contact Fenner Drives application engineering group for assistance.

Are the Polyurethane and Polyester belting products RoHS compliant?

Yes. All of the Eagle Polyurethane and Polyester Belting products are RoHS compliant.

I plan on using a "B/17" section polyurethane belt. Will your belt fit pulleys that I can buy from numerous power transmission distributors?

Yes. All of our "classical" polyurethane belts, i.e. A/13, B/17, C/22 and D/32, are designed to fit BS/DIN/ISO compliant pulleys.

Why can't I butt weld your reinforced polyurethane belting?

You can, but in most applications it is not recommended. To receive the full load carrying capacity of the belt, an overlap weld is recommended.

Do I need some take-up adjustment when using your polyurethane belts?

When using non-reinforced polyurethane belting, take-up is not required. However, all reinforced type belting does require take-up. One good option is our T-Max™ Rotary Belt Tensioners with a PowerMax™ Idler Pulley.

On my conveying application, the product being moved could occasionally accumulate. What belt do you recommend for this?

Our Eagle Green 89 with its textured surface provides a lower coefficient of friction, ideal for applications where product accumulation can occur.

For any questions about our extensive line of products, just call +44 (0)870 7577007 and your Inside Sales Specialist will help you.

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PowerMax
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Trackstar
UHMW BELT & CHAIN GUIDES

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