

AUG  
2010

 Fenner Drives®



**EAGLE**  
POLYURETHANE BELTING & O-RINGS®

# EAGLE<sup>®</sup>

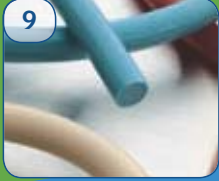
POLYURETHANE BELTING & O-RINGS



*The possibilities are endless with Eagle Polyurethane & 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.*



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## 4 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 workhorses for material transfer and light-duty power transmission applications.*

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



# Non-Reinforced Quick-Connect Belting

*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 except Can Cable
- O-Rings for line shaft, live roller and motion transfer conveyors
- High coefficient of friction
- Elastic with excellent memory
- Popular  $\frac{1}{8}$ ",  $\frac{3}{16}$ ",  $\frac{1}{4}$ ", 5mm and 6mm sizes in stock
- Additional sizes, colours and durometers are made to order
- Rapid order turnaround for all specials

# 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 Belt & Chain Tensioner®

*Eagle White 40D*  
*Eagle Blue 55D*



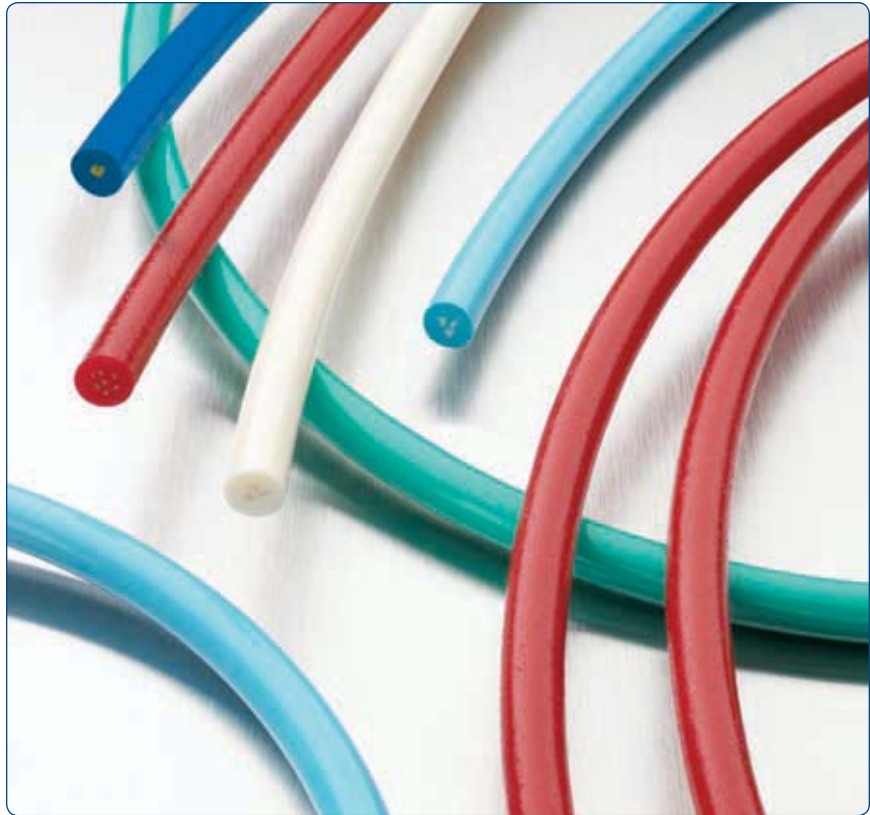
*Eagle® Polyester Belting — a low-stretch, hard-wearing option. Ideal for conveying heavy or abrasive materials; also for longer conveyor lengths.*

- 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
- Not self-tensioning — take up the slack with a Fenner Drives T-Max Belt & Chain Tensioner®



# Reinforced Can Cable

*Eagle Red 50D CC LCF*  
*Eagle Blue 55D CC*  
*Eagle Blue 55D*  
*Aramid 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
- Blue 55D Aramid is 100% polyester with high strength Aramid cord reinforcement
- High performance, low cost alternative to steel cables
- Fast installation — a zero downtime product
- Easily welded endless on site with Fenner Drives Overlap Welding Kit
- Eagle Red 50D has a lower coefficient of friction (LCF)
- Popular 3/8" (9.5mm) diameter cable always in stock
- Other sizes and colours made to order

# 10 Co-Extruded Polyurethane Belting

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



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

- 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 Belt & Chain Tensioner® from Fenner Drives

# SuperGrip Top Belting

*A variety of colours, durometers, and top surfaces are available.*



*Eagle® SuperGrip Top (SGT) Belting — incorporating high grip, low wear top surfaces. Ideally suited for ceramic, wood processing and corrugated conveying applications.*

- Polyurethane 80A, 85A, 89A, and 90A base durometers
- Polyester 40D base durometer
- Non-reinforced (SGT) and reinforced (RSGT) versions
- PVC SuperGrip Top for high grip — non-abrasive materials
- Polyurethane (PU) SuperGrip Top for heavier duty — highly abrasive materials
- Proprietary Thermoplastic Elastomer (TPE) SuperGrip Top with nearly the grip of PVC and the wear of polyurethane
- Integrally bonded top cannot delaminate
- Custom base and top surfaces available on request
- See page 17 for Fenner Drives' SuperGrip Top product range

*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



# Welding Kits

## EAGLE FREESTYLE™ BY FENNER DRIVES

### Cordless belt welding in the palm of your hand!

- Quick, effective welds for Eagle Non-Reinforced polyurethane belting
- Weld anywhere, any time – no plug required during welding
- Four specialty rechargeable batteries and charger included with kit – two to use, and two to spare



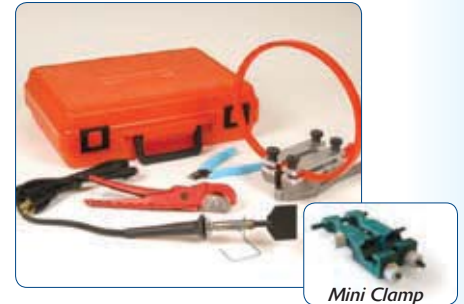
See the video demonstration at [www.youtube.com/FennerDrives](http://www.youtube.com/FennerDrives)

**Kit Includes:**  
 Welder  
 Flat Plate Adapters  
 Professional Battery Charger  
 (4) D Cell NiMH Batteries  
 Cutting Shears  
 Flash Cutters  
 Tool Bag

### BUTT WELDING

- Fast, economical way to join all Eagle Non-Reinforced and some Reinforced polyurethane belting
- Unique, reliable, easy-to-use clamping tool ensures proper belt-end alignment
- 75mm (3") hot knife available for larger profiles
- Available in 110 V or 240 V kits

**Kits Include:**  
 Hot Knife  
 Large Clamp  
 or Mini Clamp  
 Flash Cutters  
 Cutting Shears  
 Carrying Case



Mini Clamp

### OVERLAP WELDING

- Specifically designed to weld your Eagle Reinforced polyurethane and Can Cable belting
- Strongest weld you can make in the field, yet still flexible
- Proper weld delivers 100% of belts' maximum working load
- Smooth surfaces will not damage transferred product
- Available in 110 V or 240 V kits

**Kits Include:**  
 Welder  
 Control Box  
 Set of Dies  
 Flash Cutters  
 Cutting Shears  
 Carrying Case



Flash Cutters & Cutting Shears

*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 on a tray conveyor system, such as found in cafeterias, hospitals, etc.; chosen for its high strength, low stretch characteristics on long center distances.*
5. *Custom Eagle Blue, approved for direct food contact, used on tomato packaging line.*

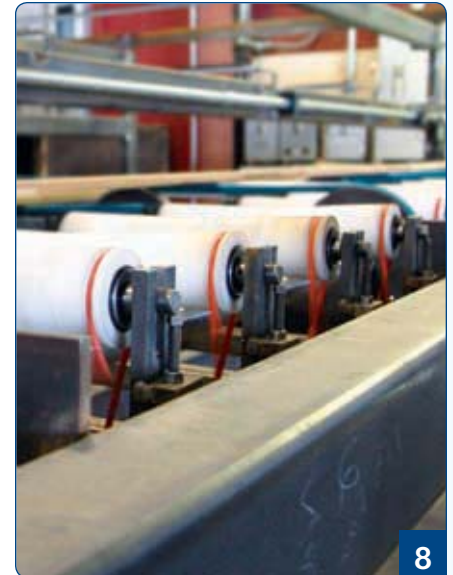




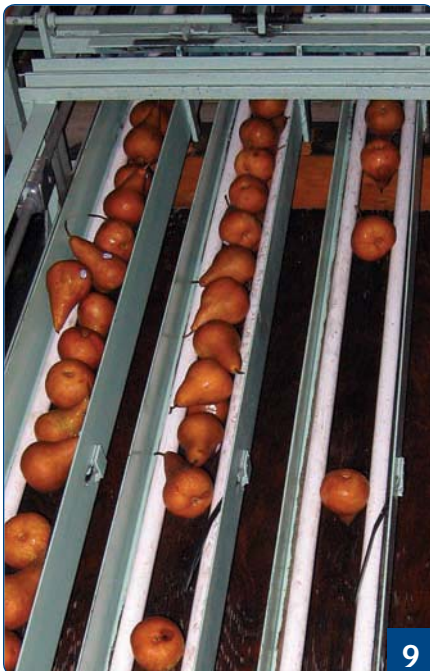
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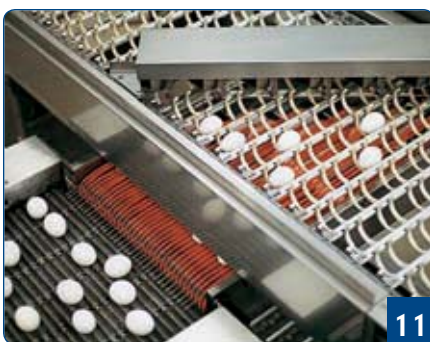
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9



10



11

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.*



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	
<b>Non-Reinforced Belting</b>																					
Eagle Opaque 80	○		○	○	○	○	○	○	○	○	○		○		○		○				
Eagle Orange 85 <sup>‡</sup>	●	●	●	●	●	●	●	●	●	●	●	●		●		●		●			
Eagle Clear 85 <sup>‡</sup>	○	○	○	○	○	○	○	○	○	○	○	○		○		○		○			
Eagle Ivory 85																					
Eagle Green 89	●			●		●		●	●		●	●	●			●		●		●	
Eagle Green 89 T	●		●	●	●	●		●	●		●	●			●		●		●		●
Eagle Red 90	●		●	●	●		●	●	●	●	●	●		●	●						
Eagle Beige 95 <sup>‡</sup>				●				●		●					●						
Eagle Clear 95 <sup>‡</sup>		○	○		○			○	○			○		○		○		○		○	
Eagle White 40D <sup>‡</sup>				○	○			○		○	○				○		○		○		○
Eagle Blue 55D <sup>‡</sup>										●					●		●		●		●
Eagle Red 85 CXF																					
Eagle Clear 85 QC <sup>‡</sup>				○	○	○		○	○			○	○			○					
Eagle Red 85 QC <sup>‡</sup>				●	●			●		●	●			●		●					
Eagle Yellow 85 QC <sup>‡</sup>				●		●		●	●			●			●		●				
Eagle Clear 85 TOR				●																	
Eagle Ivory 85 SGT*																					
Eagle Green 89 SGT PVC																					
Eagle Red 90 SGT PVC																					
Eagle White 40D SGT PVC																					
<b>Reinforced Belting</b>																					
Eagle Opaque 80 R								○		○					○						
Eagle Orange 85 R <sup>‡</sup>					●	●		●	●	●	●	●		●	●	●		●	●	●	●
Eagle Hyfen 85 R <sup>‡</sup>				●		●		●	●			●		●		●		●		●	
Eagle Ivory 85 R																					
Eagle Green 89 R																					
Eagle Green 89 RT				●	●		●	●		●	●				●		●				
Eagle Beige 95 R <sup>‡</sup>										●					●						
Eagle Hyfen 95 R <sup>‡</sup>																					
Eagle Hyfen 85 CXF/CXR																					
Eagle Ivory 85 RSGT*																					
Eagle Can Cable <sup>†,‡</sup>									●												
Eagle Fabricated Belts	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

\* Eagle Ivory 85 SGT and RSGT available with PVC, PU or TPE top surface.

† Can Cable available in Red 50D LCF, Blue 55D, Blue 55D Aramid, Natural 55D, Green 63D, and Natural 63D.

‡ These belts are manufactured from FDA compliant materials except Eagle Can Cable Red 50D LCF.



### 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/13 Lo-Ridge-Top	A/13 Ridge-Top	A/13 Hi-Ridge-Top	B/17	BB	B/17 Ribbed	B/17 Wing-Top	B/17 Ridge-Top	C/22	C/22 Ribbed	C/22 Ridge-Top	D/32	D/32 Ribbed	E/42 Ribbed			
																									Eagle Opaque 80	
																									Eagle Orange 85 <sup>†</sup>	
																									Eagle Clear 85 <sup>†</sup>	
																									Eagle Ivory 85	
																									Eagle Green 89	
																									Eagle Green 89 T	
																									Eagle Red 90	
																									Eagle Beige 95 <sup>†</sup>	
																									Eagle Clear 95 <sup>†</sup>	
																									Eagle White 40D <sup>†</sup>	
																									Eagle Blue 55D <sup>†</sup>	
																									Eagle Red 85 CXF	
																									Eagle Clear 85 QC <sup>†</sup>	
																									Eagle Red 85 QC <sup>†</sup>	
																									Eagle Yellow 85 QC <sup>†</sup>	
																									Eagle Clear 85 TOR	
																									Eagle Ivory 85 SGT <sup>+</sup>	
																									Eagle Green 89 SGT PVC	
																									Eagle Red 90 SGT PVC	
																									Eagle White 40D SGT PVC	
																									Eagle Opaque 80 R	
																									Eagle Orange 85 R <sup>†</sup>	
																									Eagle Hyfen 85 R <sup>†</sup>	
																									Eagle Ivory 85 R	
																									Eagle Green 89 R	
																									Eagle Green 89 RT	
																										Eagle Beige 95 R <sup>†</sup>
																									Eagle Hyfen 95 R <sup>†</sup>	
																										Eagle Hyfen 85 CXF/CXR
																									Eagle Ivory 85 RSGT <sup>+</sup>	
																									Eagle Can Cable <sup>†,‡</sup>	
																									Eagle Fabricated Belts	

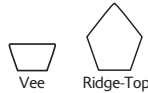
Non-Reinforced Belting

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 20 for cross sections. Additional cross sections, colours, and durometers are available. Contact Applications Engineering at ae@fennerdrives.com for design assistance.

**Eagle Opaque 80**DESCRIPTION  
Round, Non-ReinforcedHARDNESS  
80A  
FDA COMPLIANT  
NoCOEFFICIENT OF FRICTION  
Stainless Steel .75  
Steel .65  
UHMW .50TEMPERATURE RANGE  
-22°F to +150°F  
-30°C to +66°C

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	.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
1/4"	1/4	6.3	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
3/8"	3/8	9.5	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
1/2"	1/2	12.5	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-ReinforcedHARDNESS  
80A  
FDA COMPLIANT  
NoCOEFFICIENT OF FRICTION  
Stainless Steel .75  
Steel .65  
UHMW .50TEMPERATURE RANGE  
-22°F to +150°F  
-30°C to +66°C

Cross Section	Dimensions w x h* (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	1.10	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	3/8 x 7/32	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	1/2 x 5/16	2.25	56	4.2	18.7	8.8	39.1	14.0	62.3	19.0	84.5	.07	.10
B/17	1 1/16 x 13/32	3.00	76	7.3	32.5	15.2	67.6	24.2	107.6	32.8	145.9	.11	.16
B/17 Ridge-Top	17 x 19.5	5.50	140	7.3	32.5	15.2	67.6	24.2	107.6	32.8	145.9	.13	.19
C/22	2 9/32 x 17/32	3.88	98	12.7	56.5	26.7	118.8	42.5	189.0	57.6	256.2	.19	.28
C/22 Ridge-Top	22 x 24.5	7.75	196	12.7	56.5	26.7	118.8	42.5	189.0	57.6	256.2	.28	.41
C/22 Ridge-Top	22 x 28.5	7.75	196	12.7	56.5	26.7	118.8	42.5	189.0	57.6	256.2	.32	.47

# Technical Data

## Eagle Orange 85 Eagle Clear 85

DESCRIPTION  
Round, Non-Reinforced



HARDNESS  
85A  
FDA COMPLIANT  
Yes

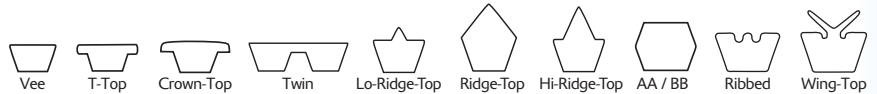
COEFFICIENT OF FRICTION  
Stainless Steel .70  
Steel .60  
UHMW .45

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

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)	(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	9.5	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	12.5	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 Eagle Clear 85

DESCRIPTION  
Trapezoidal, Non-Reinforced



HARDNESS  
85A  
FDA COMPLIANT  
Yes

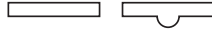
COEFFICIENT OF FRICTION  
Stainless Steel .70  
Steel .60  
UHMW .45

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

Cross Section	Dimensions w x h* (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)	(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 6.5	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	2.50	64	4.0	17.8	6.8	30.2	9.6	42.7	12.2	54.3	.07	.10	
A/13 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/13 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/13 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/17 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/17 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/22 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/32 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/42 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 [ae@fennerdrives.com](mailto:ae@fennerdrives.com).  
\* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the belting top surface.  
Dimensions are for reference only.

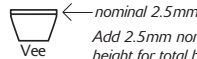
## Eagle Orange 85

DESCRIPTION  
Flat, Non-ReinforcedHARDNESS  
85A  
FDA COMPLIANT  
YesCOEFFICIENT OF FRICTION  
Stainless Steel .70  
Steel .60  
UHMW .45TEMPERATURE RANGE  
-22°F to +150°F  
-30°C to +66°C

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)		
.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"x1.50"	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"x1.75"	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"x2.00"	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"x3.00"	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"x1.00"	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"x1.00"	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"x1.25"	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"x1.50"	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"x2.00"	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  
NoCOEFFICIENT OF FRICTION  
Stainless Steel .70  
Steel .60  
UHMW .45TEMPERATURE RANGE  
-22°F to +150°F  
-30°C to +66°C

Cross Section	Dimensions w x h* (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)	(in)	(mm)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
A/13	1/2 x 5/16	13 x 8	3.00	76	4.7	20.9	7.4	32.9	10.1	44.9	12.5	55.6	.07	.10
B/17	1 1/16 x 13/32	17 x 11.5	4.00	102	8.0	35.6	12.6	56.0	17.1	76.1	21.4	95.2	.11	.16
C/22	2 9/32 x 17/32	22 x 14.5	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  
Eagle Yellow 85 QCDESCRIPTION  
Round, Hollow,  
Non-ReinforcedHARDNESS  
85A  
FDA COMPLIANT  
YesCOEFFICIENT OF FRICTION  
Stainless Steel .70  
Steel .60  
UHMW .45TEMPERATURE RANGE  
-22°F to +150°F  
-30°C to +66°C

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%			
	(in)	(mm)	(in)	(mm)	(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

† O.D. is the outer diameter of the belt. I.D. is the inner diameter of the belt.



# Technical Data

## Eagle Ivory 85 Eagle Ivory 85 SGT

DESCRIPTION  
Trapezoidal, Non-Reinforced  
SGT with Integrally Bonded Top



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

HARDNESS  
85A; SGT with 50A PVC Top,  
55A TPE Top or  
70A PU Top

FDA COMPLIANT  
No

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

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

Cross Section	Dimensions w x h* (in)	Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)		Weight per metre (kg)			
		(in) (Ivory 85) (SGT)	(mm) (Ivory 85) (SGT)	4% (lbs) (N)	6% (lbs) (N)	8% (lbs) (N)	10% (lbs) (N)	(Ivory 85) (SGT)	(Ivory 85) (SGT)	(Ivory 85) (SGT)	(Ivory 85) (SGT)						
8mmx5mm	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	1/2 x 5/16 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	11/16 x 13/32 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	29/32 x 17/32 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 Eagle Green 89 T

DESCRIPTION  
Round, Smooth or Textured,  
Non-Reinforced



HARDNESS  
89A  
FDA COMPLIANT  
No

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

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

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

Cross Section	Dimensions Ø (mm)	Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)		Weight per metre (kg)	
		(in)	(mm)	4% (lbs) (N)	6% (lbs) (N)	8% (lbs) (N)	10% (lbs) (N)	(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	.01	.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 Top



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

HARDNESS  
89A; SGT with 50A PVC Top  
FDA COMPLIANT  
No

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

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

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) (SGT)	(mm) (Green 89) (SGT)	4% (lbs) (N)	6% (lbs) (N)	8% (lbs) (N)	10% (lbs) (N)	(Green 89) (SGT)	(Green 89) (SGT)	(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	1/2 x 5/16 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/13 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	11/16 x 13/32 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/17 Ridge-Top	17 x 19.5	7.00	—	180	—	36.4	161.9	55.6	247.3	72.7	323.4	87.7	390.1	.13	—	.19	—
C/22	29/32 x 17/32 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
C/22 Ridge-Top	22 x 24.5	8.70	—	220	—	61.7	274.4	94.3	419.4	123.4	548.9	148.8	661.9	.28	—	.41	—
C/22 Ridge-Top	22 x 28.5	8.70	—	220	—	61.7	274.4	94.3	419.4	123.4	548.9	148.8	661.9	.32	—	.47	—

For technical assistance and drive design help, contact Applications Engineering at [ae@fennerdrives.com](mailto:ae@fennerdrives.com).

\* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the belting top surface.

Dimensions are for reference only.

**Eagle Red 90**DESCRIPTION  
Round, Non-ReinforcedHARDNESS  
90A  
FDA COMPLIANT  
NoCOEFFICIENT OF FRICTION  
Stainless Steel .60  
Steel .50  
UHMW .38TEMPERATURE RANGE  
-22°F to +150°F  
-30°C to +66°C

Cross Section	Dimensions Ø		Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
	(in)	(mm)	(in)	(mm)	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		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		5	1.88	47	6.0	26.5	8.6	38.2	10.8	48.1	12.6	56.2	.01	.015
¼"	¼	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	70	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
¾"	¾	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
12mm		12	4.72	120	37.8	168.3	54.5	242.5	68.6	305.2	80.3	357.2	.09	.14
½"	½	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

**Eagle Red 90  
Eagle Red 90 SGT**DESCRIPTION  
Trapezoidal, Non-Reinforced;  
SGT with Integrally Bonded Top← nominal 5mm  
Add 5mm nominal to listed  
height for total belt height.HARDNESS  
90A; SGT with 50A PVC Top  
FDA COMPLIANT  
NoCOEFFICIENT OF FRICTION  
Stainless Steel .65  
Steel .55  
UHMW .40TEMPERATURE RANGE  
-22°F to +150°F  
-30°C to +66°C

Cross Section	Dimensions w x h*		Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)		Weight per metre (kg)					
	(in)	(mm)	(Red 90)	(SGT)	(in)	(mm)	(Red 90)	(SGT)	4%		6%		8%		10%					
									(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(Red 90)	(SGT)	(Red 90)	(SGT)
8mmx5mm	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	½ x 5/16	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	1 1/16 x 13/32	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	29/32 x 17/32	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-ReinforcedHARDNESS  
95A  
FDA COMPLIANT  
YesCOEFFICIENT OF FRICTION  
Stainless Steel .55  
Steel .45  
UHMW .35TEMPERATURE RANGE  
-22°F to +150°F  
-30°C to +66°C

Cross Section	Dimensions Ø		Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
	(in)	(mm)	(in)	(mm)	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

# 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  
-22°F to +150°F  
-30°C to +66°C

Cross Section	Dimensions w x h* (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)		
A/13	1/2 x 5/16	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	1 1/16 x 13/32	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	29/32 x 17/32	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  
-22°F to +150°F  
-30°C to +66°C

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)		
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	6.3	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	9.5	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	12.5	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  
-22°F to +150°F  
-30°C to +66°C

Cross Section	Dimensions w x h* (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)		
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	13 x 8	3.13	79	7.6	33.8	12.3	54.7	16.6	73.8	20.2	89.8	.07	.10
A/13 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/13 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	1 1/16 x 13/32	17 x 11.5	4.13	105	13.1	58.3	21.3	94.7	28.6	127.2	34.8	154.8	.11	.16
BB	1 1/16 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	22 x 14.5	5.38	136	22.7	101.0	37.0	164.6	49.8	221.5	60.7	270.0	.19	.28
D/32 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 [ae@fennerdrives.com](mailto:ae@fennerdrives.com).

\* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the belting top surface. 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  
-22°F to +176°F  
-30°C to +80°C

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)		
3mm	3	1.18	30	1.9	8.3	2.9	12.8	3.8	16.8	4.5	20.2	.006	.009
4mm	4	1.57	40	3.3	14.8	5.1	22.8	6.7	29.8	8.1	35.9	.01	.015
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 Eagle White 40D SGT

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



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

MATERIAL/HARDNESS  
40D Polyester;  
SGT with 50A PVC Top

FDA COMPLIANT  
White 40D Only;  
Not SGT

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

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

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

Cross Section	Dimensions w x h* (in) (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)				
8mmx5mm	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 6.5	3.10	—	80	—	9.4	41.8	16.1	71.6	22.2	98.7	27.4	121.9	.05	—	.07	—
A/13	1/2 x 5/16 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	1 1/16 x 1 3/32 17 x 11.5	5.50	6.50	140	165	27.1	120.5	46.4	206.4	64.0	284.7	79.1	351.8	.19	.12	.28	.18
C/22	2 9/32 x 1 7/32 22 x 14.5	7.00	7.50	178	191	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  
-22°F to +176°F  
-30°C to +80°C

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)		
3mm	3	1.50	38	3.5	15.7	5.4	24.2	7.1	31.4	8.4	37.3	.006	.009
4mm	4	2.00	51	6.3	28.0	9.7	43.0	12.6	55.9	14.9	66.2	.01	.015
5mm	5	2.50	64	9.8	43.7	15.1	67.2	19.6	87.3	23.3	103.5	.015	.025
6mm	6	3.00	76	14.1	62.9	21.8	96.8	28.3	125.8	33.5	149.0	.02	.03
8mm	8	4.00	103	25.1	111.8	38.7	172.0	50.3	223.6	59.5	264.9	.04	.06
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



# Technical Data

## 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  
-22°F to +176°F  
-30°C to +80°C

Cross Section	Dimensions w x h* (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)		
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	1/2 x 5/16 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	11/16 x 13/32 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	29/32 x 17/32 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

## Eagle Opaque 80 R

DESCRIPTION  
Round, Reinforced



HARDNESS  
80A  
FDA COMPLIANT  
No

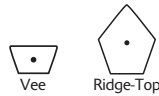
COEFFICIENT OF FRICTION  
Stainless Steel .75  
Steel .65  
UHMW .50

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

Cross Section	Dimensions Ø (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				1%		2%		3%		4%			
				(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	9.7	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  
-22°F to +150°F  
-30°C to +66°C

Cross Section	Dimensions w x h* (in) (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				1%		2%		3%		4%			
				(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
A/13	1/2 x 5/16 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/13 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	11/16 x 13/32 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/17 Ridge-Top	17 x 19.5	7.88	200	11.0	48.8	29.7	132.0	44.6	198.4	54.5	242.6	.13	.19

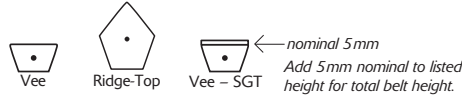
For technical assistance and drive design help, contact Applications Engineering at [ae@fennerdrives.com](mailto:ae@fennerdrives.com).

\* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the belting top surface.

Dimensions are for reference only.

## Eagle Ivory 85 R Eagle Ivory 85 RSGT

DESCRIPTION  
Trapezoidal, Reinforced  
RSGT with Integrally Bonded Top



HARDNESS  
85A; RSGT with 50A PVC Top,  
55A TPE Top or  
70A PU Top

FDA COMPLIANT  
No

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

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

Cross Section	Dimensions w x h* (in) (mm)	Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)		Weight per metre (kg)			
		(in) (Ivory 85 R)	(RSGT)	(mm) (Ivory 85 R)	(RSGT)	1% (lbs) (N)		2% (lbs) (N)		3% (lbs) (N)		4% (lbs) (N)		(Ivory 85 R)	(RSGT)	(Ivory 85 R)	(RSGT)
Z/10	10 x 6.5	2.38	—	60	—	2.9	12.7	8.6	38.2	13.7	60.8	17.4	77.6	.05	—	.07	—
A/13	1/2 x 5/16 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/13 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	1 1/16 x 1 3/32 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/17 Ridge-Top	17 x 19.5	7.88	—	200	—	8.8	39.4	26.7	118.8	42.5	189.2	54.3	241.3	.13	—	.19	—
C/22	2 9/32 x 1 7/32 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/22 Ridge-Top	22 x 24.5	11.00	—	280	—	14.6	65.1	44.2	196.7	70.4	313.1	89.8	399.4	.28	—	.41	—
C/22 Ridge-Top	22 x 28.5	11.00	—	280	—	14.6	65.1	44.2	196.7	70.4	313.1	89.8	399.4	.32	—	.47	—

## Eagle Orange 85 R

DESCRIPTION  
Round, Reinforced



HARDNESS  
85A  
FDA COMPLIANT  
Yes

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

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

Cross Section	Dimensions Ø		Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
	(in)	(mm)	(in)	(mm)	1% (lbs) (N)		2% (lbs) (N)		3% (lbs) (N)		4% (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	6.3	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	1.3	5.6	4.3	19.3	8.5	37.6	12.1	54.0	.04	.06
3/8"	3/8	9.5	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	12.5	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

## Eagle Orange 85 R

DESCRIPTION  
Trapezoidal, Reinforced



HARDNESS  
85A  
FDA COMPLIANT  
Yes

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

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

Cross Section	Dimensions w x h* (in) (mm)		Minimum Pulley Ø		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
	(in)	(mm)	(in)	(mm)	1% (lbs) (N)		2% (lbs) (N)		3% (lbs) (N)		4% (lbs) (N)			
Z/10		10 x 6.5	2.38	60	2.6	11.4	6.1	27.0	9.7	43.0	12.7	56.6	.05	.07
A/13	1/2 x 5/16	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	1 1/16 x 1 3/32	17 x 11.5	4.38	110	7.0	30.9	16.5	73.3	26.2	116.7	34.5	153.7	.11	.16
C/22	2 9/32 x 1 7/32	22 x 14.5	5.50	140	12.1	53.8	28.7	127.7	45.7	203.3	60.2	267.8	.19	.28

# Technical Data

## Eagle Hyfen 85 R

DESCRIPTION  
Round, Reinforced



HARDNESS  
85A  
FDA COMPLIANT  
Yes

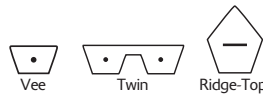
COEFFICIENT OF FRICTION  
Stainless Steel .70  
Steel .60  
UHMW .45

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

Cross Section	Dimensions Ø (in) (mm)		Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
					1%		2%		3%		4%			
					(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	6.3	2.75	70	3.0	13.4	9.5	42.3	14.9	66.3	18.7	83.2	.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	9.5	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	12.5	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

## Eagle Hyfen 85 R

DESCRIPTION  
Trapezoidal, Reinforced



HARDNESS  
85A  
FDA COMPLIANT  
Yes

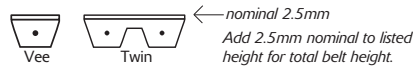
COEFFICIENT OF FRICTION  
Stainless Steel .70  
Steel .60  
UHMW .45

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

Cross Section	Dimensions w x h* (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				1%		2%		3%		4%			
				(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
3L Twin	15/16 x 17/64	3.00	76	14.4	63.9	20.7	91.9	27.8	123.8	35.3	156.8	.10	.15
A Ridge-Top	1/2 x 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 3/16 x 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 1/16	7.50	191	25.7	114.4	37.0	164.6	49.8	221.7	63.2	280.9	.13	.19
D	1 1/4 x 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 Eagle Hyfen 85 CXR

DESCRIPTION  
Trapezoidal, Reinforced



HARDNESS  
85A Base, 60A Top  
FDA COMPLIANT  
No

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

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

Cross Section	Dimensions w x h* (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				1%		2%		3%		4%			
				(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)		
A	1/2 x 5/16	4.50	114	22.2	98.6	29.6	131.7	36.7	163.1	43.4	193.2	.07	.10
A Twin	1 3/16 x 5/16	4.50	114	16.5	73.3	23.7	105.5	31.9	142.1	40.5	180.0	.15	.22
B	2 1/32 x 1 3/32	5.50	140	32.7	145.7	43.7	194.6	54.1	240.9	64.1	285.3	.11	.16
C	7/8 x 1 7/32	7.00	178	48.9	217.6	65.4	290.7	80.9	359.9	95.9	426.3	.15	.22
D	1 1/4 x 3/4	12.50	318	96.4	428.7	128.7	572.6	159.4	708.8	188.8	839.7	.38	.57

For technical assistance and drive design help, contact Applications Engineering at [ae@fennerdrives.com](mailto:ae@fennerdrives.com).

\* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the belting top surface.

Dimensions are for reference only.

**Eagle Green 89 RT**

DESCRIPTION  
Round, Reinforced, Textured



HARDNESS  
89A  
FDA COMPLIANT  
No

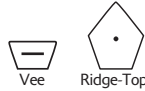
COEFFICIENT OF FRICTION  
Stainless Steel .50  
Steel .40  
UHMW .30

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

Cross Section	Dimensions Ø (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)		
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 Green 89 R**

DESCRIPTION  
Trapezoidal, Reinforced



HARDNESS  
89A  
FDA COMPLIANT  
No

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

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

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	3.70	95	13.4	59.8	51.9	230.8	80.9	360.1	101.3	450.8	.07	.10
A/13 Ridge-Top	13 x 16	6.30	160	13.4	59.8	51.9	230.8	80.9	360.1	101.3	450.8	.09	.13
B/17	17 x 11	4.70	120	19.6	87.2	71.8	319.3	127.1	565.6	166.4	740.7	.11	.16
B/17 Ridge-Top	17 x 19.5	8.10	205	19.6	87.2	71.8	319.3	127.1	565.6	166.4	740.7	.13	.19
C/22	22 x 14	5.90	150	35.0	155.7	131.5	218.8	218.8	873.8	280.5	1248.3	.19	.28
C/22 Ridge-Top	22 x 24.5	11.00	280	35.0	155.7	131.5	218.8	218.8	873.8	280.5	1248.3	.28	.41
C/22 Ridge-Top	22 x 28.5	11.00	280	35.0	155.7	131.5	218.8	218.8	873.8	280.5	1248.3	.32	.47

**Eagle Beige 95 R**

DESCRIPTION  
Round, Reinforced



HARDNESS  
95A  
FDA COMPLIANT  
Yes

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

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

Cross Section	Dimensions Ø (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)		
5mm	5	2.38	60	1.5	6.7	2.7	12.2	4.1	18.1	5.3	80.5	.02	.03
8mm	8	3.75	96	3.8	17.1	7.0	31.2	10.4	46.2	13.6	205.5	.04	.06
10mm	10	4.75	120	6.0	26.7	11.0	48.8	16.2	72.2	21.2	321.1	.06	.09
15mm	15	7.10	180	13.5	60.1	24.7	109.7	36.5	162.5	47.8	722.8	.14	.21



# Technical Data

## Eagle Beige 95 R

DESCRIPTION  
Trapezoidal, Reinforced



HARDNESS  
95A  
FDA COMPLIANT  
Yes

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

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

Cross Section	Dimensions w x h* (in) (mm)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				1%		2%		3%		4%			
		(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)				
3L	3/8 x 7/32	2.63	67	11.1	49.2	25.8	114.8	37.9	168.4	46.6	207.2	.03	.05
3L Cogged	3/8 x 7/32	2.38	60	11.1	49.4	25.8	114.8	37.9	168.6	46.6	207.3	.03	.05
Z/10	10 x 6.5	2.81	72	12.5	55.6	29.0	129.0	42.6	189.5	52.4	233.1	.05	.07
A/13	1/2 x 3/8	3.75	96	20.6	91.6	48.0	213.5	70.5	313.6	86.7	385.6	.07	.10
A/13 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	21/32 x 1/2	5.19	132	35.5	157.9	83.0	369.2	121.7	541.3	149.8	666.3	.11	.16
B/17 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	7/8 x 5/8	6.63	168	61.9	275.3	144.5	642.7	212.0	943.0	260.9	1160.5	.19	.28
C/22 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  
-22°F to +150°F  
-30°C to +66°C

Cross Section	Dimensions w x h* (in)	Minimum Pulley Ø (in) (mm)		Working Load @ Percent Tension								Weight per foot (lbs)	Weight per metre (kg)
				1%		2%		3%		4%			
		(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 is an Engineered Polymer

HARDNESS  
See Chart

FDA COMPLIANT  
All except Red

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

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

Product	Durometer Hardness	Dimension Ø	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	.06	.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	.06	.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	.06	.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	.06	.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	.06	.09
Blue 55D Aramid CC	55D	9.5mm	12.00	305	41.7	185.5	149.1	663.2	281.1	1250.4	N/A	N/A	.06	.09

For technical assistance and drive design help, contact Applications Engineering at [ae@fennerdrives.com](mailto:ae@fennerdrives.com).

\* w (width) is the widest part of the belt. h (height) is the tallest part of the belt, NOT including the belting top surface.

Dimensions are for reference only.

## V-Belts

All polyurethane V-belts in the "classical" profiles (A, B, C, and D), and light duty 3L cross section are designed to fit RMA compliant pulleys as per the groove details illustrated in Fig. 1 below.

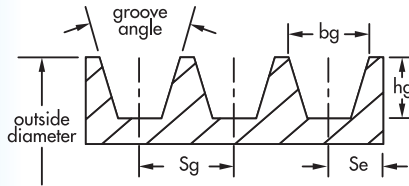


Figure 1

Cross Section	Datum Diameter Range	Groove Angle	$b_g$ (in.)	$h_g$ Min (in.)	$S_g$ (in.)	$S_e$ (in.)
A/13	Up thru 5.4"	34° ±0.33°	0.494	0.460	0.625 ±0.025	0.375 +0.090 -0.062
	Over 5.4"	38° ±0.33°	0.504 ±0.005			
B/17	Up thru 7.0"	34° ±0.33°	0.637	0.550	0.750 ±0.025	0.500 +0.120 -0.065
	Over 7.0"	38° ±0.33°	0.650 ±0.006			
C/22	Up thru 7.99"	34° ±0.33°	0.879	0.750	1.000 ±0.025	0.688 +0.160 -0.070
	8.0" thru 12.0"	36° ±0.33°	0.887 ±0.007			
D/32	Up thru 12.99"	34° ±0.33°	1.259	1.020	1.438 ±0.025	0.875 +0.220 -0.080
	13.0" thru 17.0"	36° ±0.33°	1.271 ±0.008			
	Over 17.0"	38° ±0.33°	1.283			
3L	2.2" thru 3.1"	34° ±0.33°	0.364 ±0.005	0.406	0.500 ±0.025	0.313 +0.062 -0.032
	3.2" thru 4.2"	36° ±0.33°				
	Over 4.2"	38° ±0.33°				

Dimensions in inches unless otherwise indicated.

## 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 at right shows the dimensional data when a round belt is used in a V-groove.

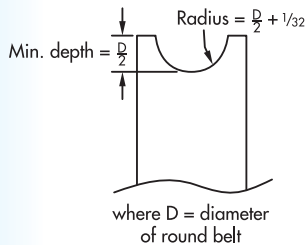


Figure 2

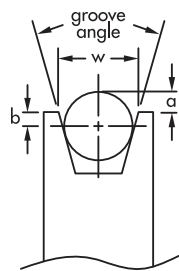


Figure 3

Pulley Size	Pulley Diameter (inches)	Groove Angle	Round Belt	Dimensions		
				w	a	b
2L	Under 1.50"	32°	3/16"	.240	.010	.084
2L	1.50" to 1.99" O.D.	34°	3/16"	.243	.016	.078
			1/4"	.243	.153	-.028
2L	2.00" to 2.50" O.D.	36°	3/16"	.246	.020	.074
			1/4"	.246	.151	-.026
2L	Over 2.50" O.D.	38°	3/16"	.250	.020	.074
			1/4"	.250	.146	-.021
3L	Under 2.20" O.D.	32°	1/4"	.360	-.049	.174
			5/16"	.360	.094	.062
3L	2.20" to 3.19" O.D.	34°	1/4"	.364	-.043	.168
			5/16"	.364	.094	.062
3L	3.20" to 4.20" O.D.	36°	1/4"	.368	-.037	.062
			5/16"	.368	.095	.061
3L	Over 4.20" O.D.	38°	1/4"	.372	-.031	.156
			5/16"	.372	.095	.061
			3/8"	.494	-.118	.274
A/13	2.60" to 5.40" D.D.	34°	5/16"	.494	.019	.168
			3/8"	.494	.297	-.047
			1/2"	.494	.297	-.047
A/13	Over 5.40" D.D.	38°	5/16"	.504	-.097	.253
			3/8"	.504	.030	.157
			1/2"	.504	.286	.036
B/17	4.60" to 7.00" D.D.	34°	1/2"	.637	.062	.188
			9/16"	.637	.199	.082
			5/8"	.637	.340	-.027
B/17	Over 7.00" D.D.	38°	1/2"	.650	.074	.176
			9/16"	.650	.200	.081
			5/8"	.650	.331	-.018
C/22	7.00" to 7.99" D.D.	34°	5/8"	.879	-.056	.369
			3/4"	.879	.218	.157
C/22	8.00" to 12.00" D.D.	36°	5/8"	.887	-.041	.354
			3/4"	.887	.222	.153
			5/8"	.895	-.027	.340
C/22	Over 12.00" D.D.	38°	5/8"	.895	.226	.149
			3/4"	.895	.226	.149

Note: above dimensions are belt fit in groove under no tension.  
Dimensions in inches unless otherwise indicated.

## 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 center 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.

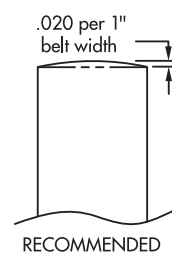


Figure 4

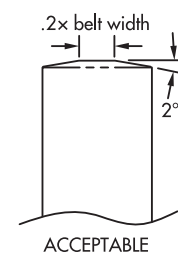


Figure 5

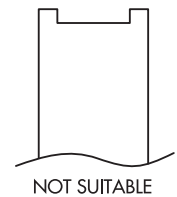


Figure 6

# Engineering Data — Metric Pulley Sections

## V-Belts

All polyurethane V-belts in the "classical" profiles, i.e. Z/10, A/13, B/17, C/22, and D/32, are designed to fit ISO and DIN 2215 compliant pulleys as per the groove details illustrated in Fig. 1 below.

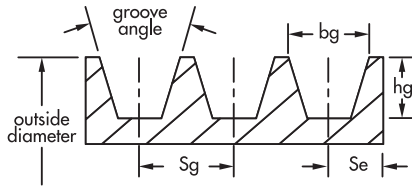


Figure 1

Cross Section	Datum Diameter Range	Groove Angle	$b_g$ (mm)	$h_g$ Min (mm)	$S_g$ (mm)	$S_e$ (mm)
Z/10	Up thru 80mm Over 80mm	$34^\circ \pm 1^\circ$ $38^\circ \pm 1^\circ$	9.7	11	12 $\pm 0.3$	8 $\pm 0.6$
A/13	Up thru 118mm Over 118mm	$34^\circ \pm 1^\circ$ $38^\circ \pm 1^\circ$	12.7	14	15 $\pm 0.3$	10 $\pm 0.6$
B/17	Up thru 190mm Over 190mm	$34^\circ \pm 1^\circ$ $38^\circ \pm 1^\circ$	16.3	18	19 $\pm 0.4$	12.5 $\pm 0.8$
C/22	Up thru 315mm Over 315mm	$34^\circ \pm 1^\circ$ $38^\circ \pm 30'$	22	24	25.5 $\pm 0.5$	17 $\pm 1.0$
D/32	Up thru 500mm Over 500mm	$36^\circ \pm 30'$ $38^\circ \pm 30'$	32	28	37 $\pm 0.6$	24 $\pm 2.0$

Dimensions in millimetres unless otherwise indicated.

## 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 at right shows the dimensional data when a round belt is used in a V-groove.

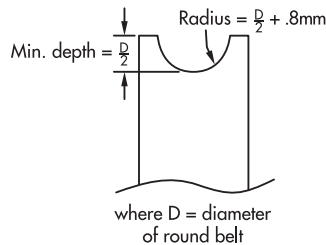


Figure 2

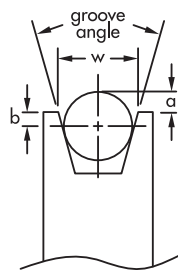


Figure 3

Pulley Size	Pulley Diameter O.D. (mm)	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
C/22	Over 315mm	38°	20	22	9.00	1.23

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

## 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.

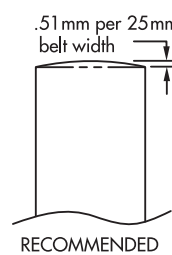


Figure 4

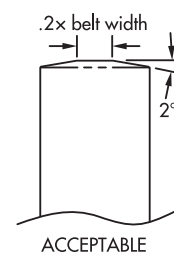


Figure 5

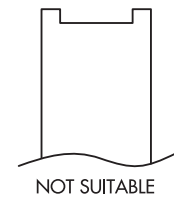


Figure 6

## Belt Installation Tension

All belts require a certain amount of tension to function properly in the application. The specific installation tension is determined from several factors including belt type, construction and working load. Belt details are in the Technical Data section of this catalog and working load is derived from your application.

**Non-Reinforced Belting:** When non-reinforced belting is stretched and released, elasticity is the property 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 continues to lose elasticity over its life span. This loss in elasticity is evident as tension decay. To overcome tension decay effects, a non-reinforced belt requires a relatively high installed tension. Installation tensions ranging from 6% to 10% will normally be sufficient for most applications. If higher tensions are required, the application may exceed the belt’s load capacity.

**Reinforced Belting:** Reinforced belts contain a reinforcing tensile member which increases the belt’s modulus of elasticity. This reduces the belt’s ability to stretch and minimizes tension decay. This allows a reinforced belt to carry a greater load than a non-reinforced belt. Since an endless reinforced belt is essentially a fixed length, it cannot be stretched on like a non-reinforced belt. Consequently, reinforced belts require a mechanical take-up mechanism to apply the appropriate installation tension as well as accommodating any eventual small amount of tension decay that may occur. This mechanism should accommodate at least 4% of the belt’s length.

## Belt Installation Length

In this section, we will refer to two different lengths that are defined as follows:

1. **Reference Length:** The length determined by taking a measuring tape and following the path of the belt around all of the pulleys, or through computer aided design (CAD) techniques. This length may also be obtained from the equation below. Take up mechanisms should be adjusted to the minimum position to allow for maximum adjustment of the belt prior to taking or calculating length. Note: this equation applies to two-pulley drives only.

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

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

2. **Cut Length:** The length the belt is cut to prior to welding.

Apply the following formulas to determine the Cut Length from Reference Length:

**Butt weld non-reinforced:**

$$\text{Cut Length} = \text{Reference Length} \div (1 + \% \text{ tension})$$

Example: Reference Length for a non-reinforced belt is 44" (1120mm), requires 8% tension and will be butt welded. Cut Length is calculated on right.

$$\begin{aligned} \text{Cut Length} &= 44" \div (1 + 8\%) & \text{Cut Length} &= 1120\text{mm} \div (1 + 8\%) \\ &= 44" \div 1.08 & &= 1120\text{mm} \div 1.08 \\ &= 40.7" & &= 1037\text{mm} \end{aligned}$$

**Overlap weld reinforced:**  $\text{Cut Length} = \text{Reference Length} + 1.5" (38\text{mm})$

Example: Reference Length for a reinforced belt is 44" (1120mm) and will be overlap welded. The overlap weld consumes 1.5" (38mm) of belt length. Cut Length is calculated on right.

$$\begin{aligned} \text{Cut Length} &= 44" + 1.5" & \text{Cut Length} &= 1120\text{mm} + 38\text{mm} \\ &= 45.5" & &= 1158\text{mm} \end{aligned}$$

**Butt weld reinforced:**  $\text{Cut Length} = \text{Reference Length}$

Example: Reference Length for a reinforced belt is 44" (1120mm) and will be butt welded. The weld consumes a negligible amount of belt length, consequently, Cut Length and Reference Length are the same. Cut Length is calculated on right.

$$\begin{aligned} \text{Cut Length} &= 44" & \text{Cut Length} &= 1120\text{mm} \end{aligned}$$

## Temperature

The temperature range of polyurethane belting is determined by the thermoplastic resin. Like all thermoplastic resins its physical properties change with changes in temperature. At higher temperatures the material will soften, lose strength and can elongate excessively to the point of premature failure. At colder temperatures the material will become more brittle and stiff which can result in cracking. The temperature ranges are guidance and listed under each individual belt type in the Technical Data section.

## Minimum Pulley Diameter

The most common serious mistake in designing belt drives is the selection of a pulley diameter that is too small. In most cases, 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 tensile member. Listed under each individual belt type in the Technical Data section 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 3/16" (5 mm) diameter:	± 0.005" (± .127mm)
Over 3/16" (5 mm) up to and including 1/4" (6.3 mm) diameter:	± 0.007" (± .178mm)
Over 1/4" (6.3 mm) up to and including 9/16" (14 mm) diameter:	± 0.010" (± .254mm)
Over 9/16" (14 mm) in diameter:	± 0.012" (± .305mm)

**Flat and V-Belts:**

All profiles:	± 0.015" (± .381mm)
---------------	---------------------

*If a tighter tolerance is required, consult Fenner Drives Applications Engineering Group with your requirements.*



# Engineering Data — Selection Procedure, Conveying

- Refer to the Technical Data chart for the belt material and cross section selected.
- Use the following formula that meets your application requirements (Note: if belt supported by rollers use .17 for  $\mu$ ):
  - Horizontal Transport with Slider Bed
 
$$T_e = W_t \times \mu + B_{wt}$$
  - Horizontal Transport with Slider Bed and Product Accumulation
 
$$T_e = W_t \times \mu + B_{wt} + A_{wt}$$
  - Incline or Decline Transport with Slider Bed
 
$$T_e = \frac{W_t}{C} \times (H_t + \mu \times \sqrt{C^2 + H_t^2}) + B_{wt}$$
  - Incline or Decline Transport with Slider Bed and Product Accumulation
 
$$T_e = \frac{W_t}{C} \times (H_t + \mu \times \sqrt{C^2 + H_t^2}) + B_{wt} + A_{wt}$$
- Determine Tight Tension ( $T_1$ ).  
 Flat and round belts:  $T_1 = T_e \times 2$   
 V-belts:  $T_1 = T_e \times 1.25$
- Refer to the Technical Data chart for the material and cross section selected and compare  $T_1$  to the Working Load at maximum % tension. If only one belt is desired,  $T_1$  may not be greater than the Working Load at maximum % tension. If more than one belt is required, divide  $T_1$  by the Working Load at maximum % tension to arrive at number of belts. Round up to the nearest whole number of belts.
- 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.

Where:

$T_e$  = Effective Tension

$W_t$  = Total Weight on Conveyor

$C$  = Conveyor Centre Distance

$B_{wt}$  = Belt weight/unit length  $\times C$

$A_{wt}$  = Accumulating weight  $\times \mu'$   
 (where  $\mu'$  is the COF between belt and product)

$H_t$  = Incline or decline height

$\mu$  = COF on slider bed material from chart

To determine the required belt length, please refer to the "Belt Installation Length" section on the previous page.

## Engineering Data — Selection Example

Cross Section	Dimensions $\varnothing$ (in) (mm)	Minimum Pulley $\varnothing$ (in) (mm)	Working Load @ Percent Tension				Weight per foot (lbs)	Weight per metre (kg)					
			4% (lbs) (N)	6% (lbs) (N)	8% (lbs) (N)	10% (lbs) (N)							
6 mm	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

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

### Example 1

Type of belt being considered = Eagle Orange 85 in 1/4" round

Head-to-tail center distance (C) = 10 feet

Incline or decline = none

Product accumulation on belt(s)? = none

Total weight on belt(s) = 15 lbs.

Type of belt support = UHMW slider bed

- Horizontal Transport with Slider Bed.  
 Since the belt will run in UHMW slider bed the COF( $\mu$ ) of .45 is used from Technical Data chart. From the chart the belt weight is .03 lbs/ft giving a total belt weight of .30 lbs (.03  $\times$  10').  
 $T_e = 15 \text{ lbs} \times .45 + .30 = 7.05$
- Determine Tight Tension ( $T_1$ ).  
 round belts  $T_1 = 7.05 \times 2 = 14.10$
- 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.  
 1/4" round rated 4.8 lbs @ 10% tension.  $14.10 \div 4.8 = 2.94$  call 3 belts
- 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 =  $14.10 \div 3 = 4.70$  lbs  
 corresponding installed tension = 9.8%

### Example 2

Eagle Orange 85 in 6mm round

Head-to-tail center distance (C) = 3 Metres

Incline or decline = none

Product accumulation on belt(s)? = none

Total weight on belt(s) = 6 kg

Type of belt support = UHMW slider bed

- Horizontal Transport with Slider Bed.  
 Since the belt will run in UHMW slider bed the COF( $\mu$ ) of .45 is used from Technical Data chart. From the chart the belt weight is .04 kgs/M giving a total belt weight of .12 kg (.04  $\times$  3M).  
 $T_e = 6 \text{ kg} \times .45 + .12 = 2.82 \text{ kg}$
- Determine Tight Tension ( $T_1$ ).  
 round belts  $T_1 = 2.82 \times 2 = 5.64 \text{ kg} = 55.3 \text{ Newtons} (5.64 \times 9.81)$
- 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.  $55.3 \div 19.1 = 2.89$  call 3 belts
- 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 =  $55.3 \text{ N} \div 3 = 18.4 \text{ Newtons}$   
 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 Applications 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.

<b>Acids</b>	<b>Rating</b>	<b>Fuels</b>	<b>Rating</b>	<b>Solvents</b>	<b>Rating</b>
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	<b>Oils</b>	<b>Rating</b>	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
<b>Alkalines</b>	<b>Rating</b>	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	Paraffin 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
<b>Aqueous Solutions</b>	<b>Rating</b>	Transmission Oil A	A	Methyl Glycol	C
Aluminum Chloride, 10%	C			Methylene Chloride	C
Ammonium Chloride, 10%	C	<b>Greases</b>	<b>Rating</b>	N-Methyl Pyrrolidone	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	<b>Miscellaneous</b>	<b>Rating</b>	Tetrahydrofuran	C
Ferric Chloride, 10%	C	Dioctyl 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	Ethylene 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

**Q** *Are all of the Eagle® Belting products food grade?*

**A** Many of our belts are manufactured from FDA compliant materials. For a complete listing, see either the Product Range Chart (pg 16) or the Technical Data Section.

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

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

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

**A** Polyurethane is resistant to water and many industrial chemicals, but not resistant to all. Consult the Chemical Resistance Chart in this catalog or contact Fenner Drives Applications Engineering group with the contaminants present and we will make a recommendation.

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

**A** Yes! At Fenner Drives, we welcome the opportunity. Contact Fenner Drives Applications Engineering group at [ae@fennerdrives.com](mailto:ae@fennerdrives.com) for assistance.

*For any questions about our extensive line of products, just call 1-800-243-3374 or +44 (0) 870 7577007 and your Inside Sales Specialist will help you.*

**Q** *Are the Polyurethane and Polyester belting products RoHS compliant?*

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

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

**A** Yes. All of our "classical" polyurethane belts, i.e. Z/10, A/13, B/17, C/22 and D/32, are designed to fit RMA/BS/DIN/ISO compliant pulleys.

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

**A** You can, but it will be necessary to drill back the reinforcement. Follow butt welding instructions available at [www.fennerdrives.com](http://www.fennerdrives.com).

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

**A** 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 Belt & Chain Tensioner® with a PowerMax™ Idler Pulley.

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

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

# Count on Fenner Drives.

We've got the right product for your application.



**EAGLE**  
POLYURETHANE BELTING & O-RINGS

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V-BELTS

**SUPER T LINK**  
SP WEDGE BELTS

**NUT LINK**  
V-BELTS

**T-MAX**  
BELT & CHAIN TENSIONERS

**PowerMax**  
PULLEYS & IDLERS

**B-LOC**  
KEYLESS BUSHINGS

**Trantorque**  
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