JUNE
2014

Fenner Drives®

EAGLE®

POLYURETHANE BELTING & O-RINGS

Non-Reinforced Polyurethane Belting

Eagle Blue 80 EC
Eagle Clear 80 EC
Eagle Blue 80 MD
Eagle Brown 80
Eagle Opaque 80
Eagle Blue 85
Eagle Clear 85
Eagle Ivory 85
Eagle Orange 85
Eagle Red 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

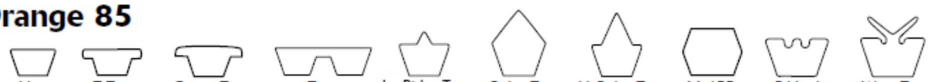
V Profiles – Non-Reinforced

	Eagle Blue 80 EC	Eagle Clear 80 EC	Eagle Blue 80 MD	Eagle Brown 80	Eagle Opaque 80	Eagle Blue 85	Eagle Clear 85	Eagle Ivory 85	Eagle Orange 85	Eagle Red 85
6mm × 4mm	4928009	4927009			L04OP806X4	L04BL850604	L04C850604			
8mm × 5mm	4928010	4927010		L04BR8058	4940006	L04BL8585M				L04R8585M
10mm × 4mm T-Top	4928011	4927011								
3L					4940007	L04BL853L	4912063		1032030	
3L T-Top							4912064		1032031	
3L Crown-Top									1032032	
3L Twin							4912065		1032033	
Z/10	4928012	4927012		L04BR80Z	4940008	L04BL85Z	4940118	L04I85Z	4940114	L04R85Z
A/13	4928013	4927013	4941108	L04BR80A	4940009	L04BL85A	4912066	L04I85A	1032038	L04R85A
A/13 Lo-Ridge-Top							4912067		1032039	
A/13 Ridge-Top							L04C85AXH		L04OG85AXH	
A/13 Hi-Ridge-Top							4911102		1032040	
A Twin							4912068		1032041	
AA							4912062		1232550	
B/17	4928014	4927014	4941109	L04BR80B	4940010	L04BL85B	4912069	L04I85B	1032047	L04R85B
B/17 Ridge-Top					4940097					
B/17 Ribbed									1032046	
B/17 Wing-Top									1032048	
BB							4912070		1232600	
C/22					4940015	L04BL85C	4912072	L04I85C	1032072	
C/22 Ridge-Top 24.5mm					4999557					
C/22 Ridge-Top 28.5mm					4940099					
C/22 Ribbed									1032054	
D/32 Ribbed							4908077		1032062	
E/42 Ribbed									1032070	

	Eagle Green 89	Eagle Red 90	Eagle Beige 95	Eagle Clear 95	Eagle White 40D	Eagle Blue 55D
8mm × 5mm		4940027			L04BY400805	
3L				4911063		
3L T-Top				4911064		
3L Twin				4911065		
Z/10	L04G89Z	4940028			L04BY40Z	L04BY55Z
A/13	L04G89A	4940029	L04BE95A	4911066	L04BY40A	L04BY55A
A/13 Lo-Ridge-Top				4911067		
A/13 Ridge-Top	L04G89AX					
A/13 Hi-Ridge-Top				4911101		
A Twin				4911068		
AA				4911062		
B/17	L04G89B	4940030	L04BE95B	4911069	L04BY40B	L04BY55B
B/17 Ridge-Top	L04G89BX					
B/17 Steeple-Top	4940250					
BB				4911070		
C/22	L04G89C	4999306	L04BE95C	4911072	L04BY40C	L04BY55C
C/22 Ridge-Top 24.5mm	4999514					
C/22 Ridge-Top 28.5mm	L04G89CX					
C/22 Steeple-Top	4940251					
D/32 Ribbed				4911077		

Eagle Orange 85

DESCRIPTION
Trapezoidal,
Non-Reinforced



Vee · T-Top · Crown-Top · Twin · Lo-Ridge-Top · Ridge-Top · Hi-Ridge-Top · AA / BB · Ribbed · Wing-Top

HARDNESS
85A

FDA COMPLIANT
Yes

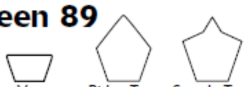
COEFFICIENT OF FRICTION
Stainless Steel .70
Steel .60
UHMW .45

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

Cross Section	Part Number	Dimensions w × h* (in)	(mm)	Minimum Pulley Ø (in)	(mm)	Working Load @ Percent Tension 4% (lbs)	4% (N)	6% (lbs)	6% (N)	8% (lbs)	8% (N)	10% (lbs)	10% (N)	Wt/ft (lbs)	Wt/m (kg)
3L	1032030	3/8 × 7/32		1.75	44	2.1	9.5	3.6	16.1	5.1	22.6	6.4	28.6	0.035	0.053
3L T-Top	1032031	9/16 × 19/64		2.38	60	3.5	15.7	6.0	26.5	8.4	37.2	10.6	47.2	0.058	0.087
3L Crown-Top	1032032	9/16 × 1/4		2.00	51	3.0	13.2	5.0	22.4	7.1	31.5	9.0	39.9	0.049	0.073
3L Twin	1032033	15/16 × 17/64		2.13	54	5.9	26.2	10.0	44.5	14.0	62.4	17.8	79.0	0.098	0.145
Z/10	4940114		10 × 6.5	1.88	52	2.5	10.9	4.2	18.5	5.8	26.0	7.4	32.9	0.041	0.061
A/13	1032038	1/2 × 5/16	13 × 8	2.50	64	4.0	17.6	6.7	29.9	9.4	41.9	11.9	53.1	0.066	0.098
A/13 Lo-Ridge-Top	1032039	1/2 × 7/16		3.50	89	4.3	19.1	7.3	32.4	10.2	45.4	12.9	57.5	0.071	0.106
A/13 Ridge-Top	L04OG85AXH		13 × 16	5.00	128	6.5	28.7	10.9	48.7	15.4	68.3	19.5	86.6	0.107	0.159
A/13 Hi-Ridge-Top	1032040	1/2 × 5/8		5.00	127	5.5	24.7	9.4	41.8	13.2	58.7	16.7	74.3	0.092	0.137
A Twin	1032041	1-3/16 × 5/16		2.50	64	9.3	41.4	15.8	70.2	22.1	98.5	28.1	124.8	0.154	0.230
AA	1232550	1/2 × 13/32		3.25	83	5.6	25.1	9.6	42.5	13.4	59.6	17.0	75.5	0.093	0.139
B/17	1032047	11/16 × 13/32	17.5 × 10	3.25	83	7.0	31.1	11.8	52.7	16.6	73.9	21.1	93.7	0.116	0.172
B/17 Ribbed	1032046	11/16 × 13/32	17.5 × 10	3.25	83	6.5	28.7	10.9	48.6	15.3	68.3	19.4	86.5	0.107	0.159
B/17 Wing-Top	1032048	11/16 × 5/8		5.00	127	7.8	34.6	13.2	58.7	18.5	82.3	23.5	104.3	0.129	0.192
BB	1232600	11/16 × 9/16		4.50	114	10.3	45.8	17.5	77.7	24.5	109.0	31.1	138.1	0.171	0.254
C/22	1032072	29/32 × 17/32	23 × 13.5	4.25	108	12.2	54.1	20.6	91.7	28.9	128.6	36.6	163.0	0.201	0.300
C/22 Ribbed	1032054	29/32 × 17/32	23 × 13.5	4.25	108	11.3	50.3	19.2	85.3	26.9	119.7	34.1	151.7	0.187	0.279
D/32 Ribbed	1032062	1-5/16 × 3/4	33.5 × 19	6.00	152	22.9	101.8	38.8	172.5	54.4	242.0	68.9	306.7	0.379	0.564
E/42 Ribbed	1032070	1-11/16 × 1-3/32	43 × 28	8.75	222	42.6	189.6	72.2	321.3	101.4	450.8	128.4	571.3	0.706	1.051

Eagle Green 89

DESCRIPTION
Trapezoidal,
Non-Reinforced



Vee · Ridge-Top · Steeple-Top

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	Part Number	Dimensions w × h* (in)	(mm)	Minimum Pulley Ø (in)	(mm)	Working Load @ Percent Tension 4% (lbs)	4% (N)	6% (lbs)	6% (N)	8% (lbs)	8% (N)	10% (lbs)	10% (N)	Wt/ft (lbs)	Wt/m (kg)
Z/10	L04G89Z		10 x 6.5	2.30	59	12.4	55.3	19.0	84.5	24.9	110.6	30.0	133.4	0.040	0.060
A/13	L04G89A	1/2 × 5/16	13 x 8	2.83	72	20.2	89.8	30.8	137.2	40.4	179.6	48.7	216.6	0.066	0.098
A/13 Ridge-Top	L04G89AX		13 x 16	5.67	144	33.0	146.8	50.4	224.3	66.0	293.6	79.6	354.1	0.107	0.159
B/17	L04G89B	21/32 × 7/16	17 x 11.5	4.07	104	37.0	164.4	56.4	251.1	73.9	328.7	89.1	396.4	0.120	0.178
B/17 Ridge-Top	L04G89BX		17 x 19.5	6.91	176	53.7	238.9	82.0	364.9	107.4	477.7	129.5	576.1	0.174	0.259
B/17 Steeple-Top	4940250		17 x 18.5	6.56	167	47.2	209.7	72.0	320.3	94.3	419.3	113.7	505.7	0.153	0.228
C/22	L04G89C	7/8 × 9/16	22 x 14.5	5.14	131	60.8	270.3	92.8	412.9	121.5	540.5	146.5	651.9	0.197	0.293
C/22 Ridge-Top	4999514		22 x 24.5	8.68	221	85.6	380.7	130.7	581.4	171.1	761.2	206.4	917.9	0.278	0.413
C/22 Ridge-Top	L04G89CX		22 x 28.5	10.10	257	98.7	439.2	150.8	670.8	197.4	878.1	238.1	1059.0	0.320	0.477
C/22 Steeple-Top	4940251		22 x 24.5	8.68	221	79.5	353.5	121.4	539.8	158.9	706.7	191.6	852.3	0.258	0.384

Engineering Data — Imperial Pulley Sections

V-Belts

Eagle® V-belts in "classical" A, B, C, D and light duty 3L cross sections are designed to fit RMA compliant pulleys as per the groove details illustrated in Figure 1.

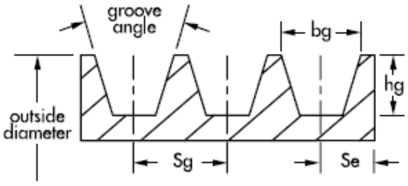


Figure 1

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" Over 5.4"	34° ±0.33° 38° ±0.33°	.494 .504 ±.005	.460	.625 ± .025	.375 +.090 −.062
B/17	Up thru 7.0" Over 7.0"	34° ±0.33° 38° ±0.33°	.637 .650 ±.006	.550	.750 ± .025	.500 +.120 −.065
C/22	Up thru 7.99" 8.0" thru 12.0" Over 12.0"	34° ±0.33° 36° ±0.33° 38° ±0.33°	.879 .887 ±.007 .895	.750	1.000 ± .025	.688 +.160 −.070
D/32	Up thru 12.99" 13.0" thru 17.0" Over 17.0"	34° ±0.33° 36° ±0.33° 38° ±0.33°	1.259 1.271 ±.008 1.283	1.020	1.438 ± .025	.875 +.220 −.080
3L	2.2" thru 3.1" 3.2" thru 4.2" Over 4.2"	34° ±0.33° 36° ±0.33° 38° ±0.33°	.364 ±.005	.406	.500 ± .025	.313 +.062 −.032

Dimensions in inches unless otherwise indicated.

Engineering Data — Metric Pulley Sections

V-Belts

Eagle® V-belts in "classical" Z/10, A/13, B/17, C/22 and D/32 cross sections are designed to fit ISO and DIN 2215 compliant pulleys as per the groove details illustrated in Figure 1.

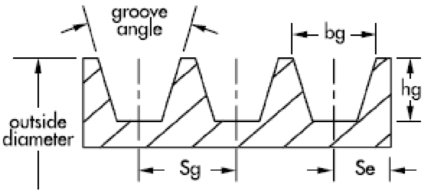


Figure 1

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° ±1° 38° ±1°	9.7	11	12 ±0.3	8 ±0.6
A/13	Up thru 118mm Over 118mm	34° ±1° 38° ±1°	12.7	14	15 ±0.3	10 ±0.6
B/17	Up thru 190mm Over 190mm	34° ±1° 38° ±1°	16.3	18	19 ±0.4	12.5 ±0.8
C/22	Up thru 315mm Over 315mm	34° ±1° 38° ±30'	22	24	25.5 ±0.5	17 ±1.0
D/32	Up thru 500mm Over 500mm	36° ±30' 38° ±30'	32	28	37 ±0.6	24 ±2.0

Dimensions in millimetres unless otherwise indicated.

Engineering Data

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 install 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 = centre of pulley shaft to centre 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: *Cut Length = Reference Length ÷ (1 + % 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.	Cut Length = 44" ÷ (1 + 8%) = 44" ÷ 1.08 = 40.7"	Cut Length = 1120mm ÷ (1 + 8%) = 1120mm ÷ 1.08 = 1037mm
Overlap weld reinforced: *Cut Length = Reference Length + 1.5" (38mm)* 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.	Cut Length = 44" + 1.5" = 45.5"	Cut Length = 1120mm + 38mm = 1158mm
Butt weld reinforced: *Cut Length = 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.	Cut Length = 44"	Cut Length = 1120mm

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 lower temperatures the material will become more brittle and stiff which can result in cracking. The temperature ranges are for 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 Tolerances

Round Belts:

Up to and including 3/16" (5mm) diameter:	± .005" (± 0.13mm)
Over 3/16" (5mm) up to and including 1/4" (7mm) diameter:	± .007" (± 0.18mm)
Over 1/4" (7mm) up to and including 9/16" (15mm) diameter:	± .010" (± 0.25mm)
Over 9/16" (15mm) up to and including 5/8" (18mm) diameter:	± .012" (± 0.30mm)
Over 5/8" (18mm) diameter:	± .015" (± 0.38mm)

Flat and V-Belts:

All profiles: ± .015" (± 0.38mm)

If tighter tolerances are required, consult Fenner Drives Applications Engineering Group with your requirements.

Engineering Data — Selection Procedure, Conveying

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

   $T_e = W_t \times \mu + B_{wt}$

   b. Horizontal Transport with Slider Bed and Product Accumulation

   $T_e = W_t \times \mu + B_{wt} + A_{wt}$

   c. Incline or Decline Transport with Slider Bed

   $T_e = \frac{W_t}{C} \times (H_t + \mu \times \sqrt{C^2 + H_t^2}\,) + B_{wt}$

   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

   W_t = Total Weight on Conveyor

   C = Conveyor Centre Distance

   B_{wt} = Belt weight/unit length × C

   A_{wt} = Accumulating weight × μ´

   (where μ´ is the COF between belt and product)

   H_t = Incline or decline height

   μ = COF on slider bed material from chart

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 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.

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.

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

Engineering Data — Selection Example

Eagle Orange 85

DESCRIPTION
Round,
Non-Reinforced

HARDNESS
85A

FDA COMPLIANT
Yes

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

TEMPERATURE RANGE
-22ºF to +150ºF
-30ºC to +66ºC

Cross Section	Part Number	Dimensions Ø (in)	Dimensions Ø (mm)	Minimum Pulley Ø (in)	Minimum Pulley Ø (mm)	Working Load @ Percent Tension 4% (lbs)	4% (N)	6% (lbs)	6% (N)	8% (lbs)	8% (N)	10% (lbs)	10% (N)	Wt/ft (lbs)	Wt/m (kg)
6mm	L04OG856M		6	1.89	48	1.7	7.7	2.7	11.8	3.5	15.8	4.4	19.4	0.023	0.034
¼"	1032008	¼	6.3	2.00	51	1.9	8.6	3.0	13.3	4.0	17.7	4.9	21.9	0.026	0.038

Example 1

Type of belt being considered = Eagle Orange 85 in ¼" round

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

Incline or decline = none

Product accumulation on belt(s)? = no

Total weight on belt(s) = 15 lbs.

Type of belt support = UHMW slider bed

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 .026 lbs/ft giving a total belt weight of .26 lbs (.026 × 10').

   T_e = 15 lbs × .45 + .26 = 7.01

3. Determine Tight Tension (T_1).

   round belts T_1 = 7.01 × 2 = 14.02

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.

   ¼" round rated 4.9 lbs @ 10% tension. 14.02 ÷ 4.9 = 2.86 use 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 = 14.02 ÷ 3 = 4.67 lbs

   corresponding installed tension = 9.7%

Example 2

Eagle Orange 85 in 6mm round

Head-to-tail centre distance (C) = 3 metres

Incline or decline = none

Product accumulation on belt(s)? = no

Total weight on belt(s) = 6 kg

Type of belt support = UHMW slider bed

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 .034 kgs/m giving a total belt weight of .102 kg (.034 × 3M).

   T_e = 6 kg × .45 + .102 = 2.802 kg

3. Determine Tight Tension (T_1).

   round belts T_1 = 2.802 × 2 = 5.604kg = 54.98 Newtons (5.604 × 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 19.4 N @ 10% tension. 54.98 ÷ 19.4 = 2.83 use 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 = 54.98 N ÷ 3 = 18.33 Newtons

   corresponding installed tension = 9.6%

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.

Acids	Rating
Acetic, 5%	C
Boric, 4%	C
Chromic	C
Citronic	C
Formic	C
HCl	B
Hydrochloric, 10%	C
Lactic	C
Nitric, >1%	C
Oleic	C
Phosphoric	C
Sulfuric, <20%	B
Sulfuric, >20%	C

Alkalines	Rating
Ammonia, >10%	C
Detergent, 1%	A
Potassium Hydroxide	B
Soap, 1%	A
Sodium Hydroxide, 10%	C

Aqueous Solutions	Rating
Aluminum Chloride, 10%	C
Ammonium Chloride, 10%	C
Bleaching Agent, 40%	B
Bleaching Agent, 100%	C
Calcium Chloride, 40%	C
Caustic Soda, 10%	B
Cola	A
Ferric Chloride, 10%	C
Hydrogen Peroxide, 3%	B
Isopropanol, 50%	C
Magnesium Chloride, 30%	C
Potassium Chloride, 40%	C
Potassium Dichromate, 10%	C
Potassium Permanganate, 5%	C
Sea Water	B
Sodium Bisulfate, 10%	C
Sodium Chloride, 10%	C
Sodium Hypochlorite, 5%	C
Sodium Thiosulfate, 20%	A
Water, Deionized	A

Fuels	Rating
ASTM Fuel A	A
ASTM Fuel B	C
ASTM Fuel C	C
Diesel Fuel	B
Gasoline, Premium	C
Gasohol (10-15% Methanol)	C
Jet Fuel, JP-4	A
Kerosene	A

Oils	Rating
ASTM Oil #1	A
ASTM Oil #2	A
ASTM Oil #3	A
Brake Fluid (ATE or ATS)	C
Gear Box Oil (SAE 90)	A
Hydraulic Fluid	C
Hydraulic/Water Emulsion	C
Mineral Oil	A
Motor Oil	A
Parafin Oil	A
Petroleum (Texas Sour Crude)	A
Power Steering Fluid	B
Skydrol 500 Oil	C
Transmission Oil A	A

Greases	Rating
Calcium Grease	B
Sodium Grease	B
Teflon Grease	A

Miscellaneous	Rating
Dioctyl Phthalate (DOP)	A
Ethylene Chloride	C
Ethylene Dichloride	C
Ethylene GlycoWater 50/50	C
Household Cleaner	B
Naptha	A
Silage (Silo) Juice	C
Natural Perspiration	B
Tincture of Iodine	C
Tricresyl Phosphate	C

Solvents	Rating
Acetone	C
Aniline	C
Benzene	C
Benzyl Alcohol	C
Butane	C
Butyl Acetate	C
Butyl Alcohol	C
Carbon Tetrachloride	C
Chlorobenzane	C
Chloroform	C
Cyclohexane	C
Ethanol	C
Ether	C
Ethyl Acetate	C
Freon 11, 12, 22	C
Freon 113	A
Glycerine, Glycerol, Glycol	A
Heptane	B
Hexane	C
Isopropyl Alcohol	C
Methanol	C
Methyl Acetate	C
Methyl Ethyl Ketone	C
Methyl Glycol	C
Methylene Chloride	C
N-Methyl Pyrrolidone	C
Perchloroethylene	C
Pyridine	C
Turpentine	A
Tetrachloroethylene	C
Tetrahydrofuran	C
Toluene	C
Trichloroethylene	C
Xylene	C

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 *I will be using Eagle® Belting in a high humidity environment. Will this affect the life of the belting?*

A High humidity will have some effect, although not believed to be significant, on the belt life.

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 Eagle Technical Data Brochure 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.

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 Eagle Technical Data Brochure for chemical resistance information 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 for assistance.

Q *Are Eagle® Polyurethane and Polyester belting products REACH compliant?*

A Most of our products do not contain substances listed as hazardous in the REACH Regulation. Please visit www.fennerdrives.com/ehs for further information.

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/install.

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

Product Range

EAGLE®
POLYURETHANE BELTING & O-RINGS

Round Belting

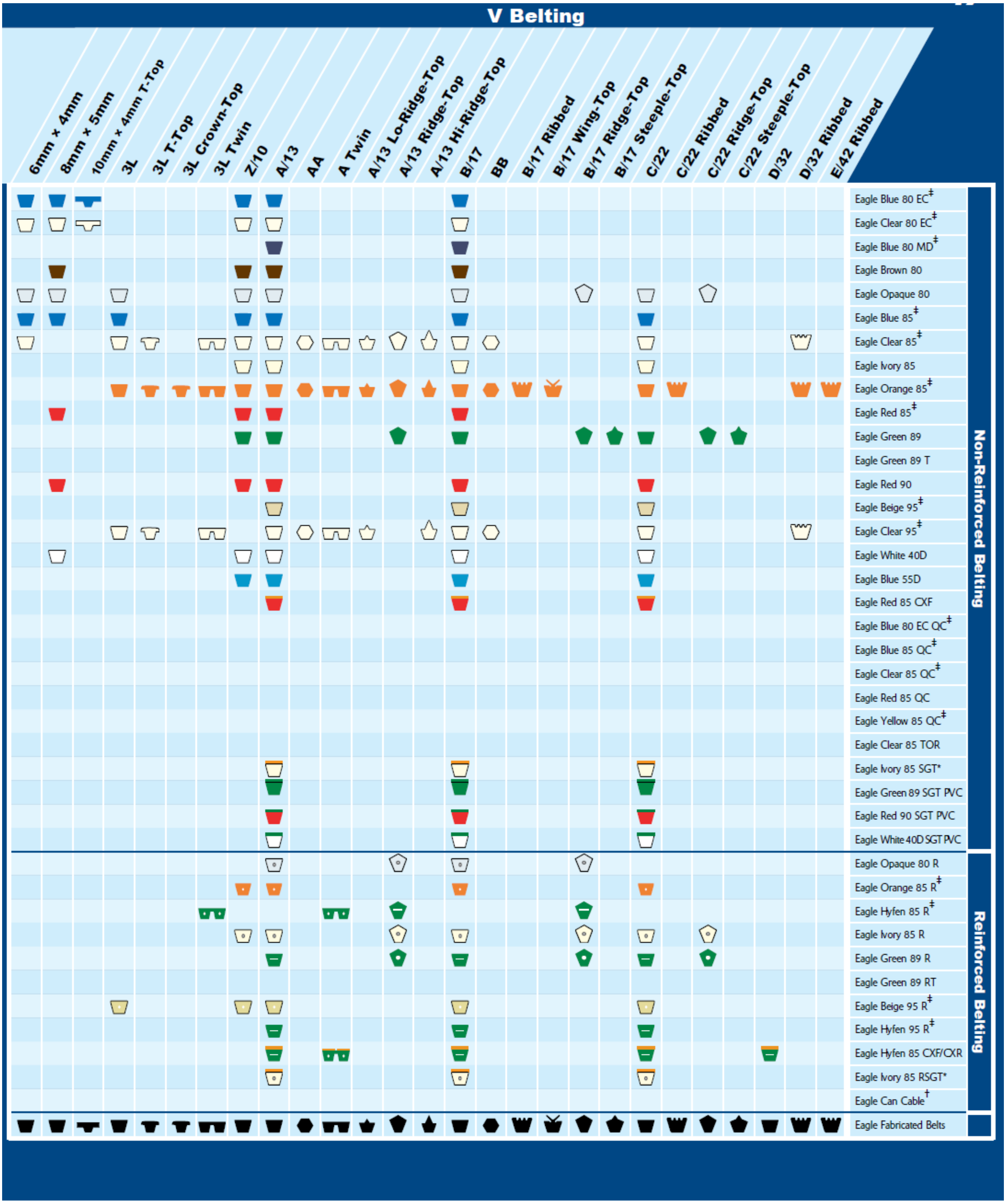
Product	2mm	2.4mm (3/32")	3mm (1/8")	4mm	5mm (3/16")	6mm	6.3mm (1/4")	7mm	8mm (5/16")	9mm	9.5mm (3/8")	10mm	12mm	12.7mm (1/2")	13mm	14mm (9/16")	15mm	16mm (5/8")	18mm	19mm (3/4")	20mm
Non-Reinforced Belting																					
Eagle Blue 80 EC ‡	●		●	●	●	●	●		●		●	●									
Eagle Clear 80 EC ‡	○		○	○	○	○	○		○		○	○									
Eagle Blue 80 MD ‡					●		●		●		●			●		●		●			
Eagle Brown 80	●		●	●	●		●		●		●			●			●		●		
Eagle Opaque 80	○		○	○	○	○	○	○	○		○	○		○			○		○		
Eagle Blue 85‡			●	●	●	●	●		●		●	●					●				
Eagle Clear 85‡	○	○	○	○	○	○	○	○	○		○	○	○	○		○		○		○	
Eagle Ivory 85																					
Eagle Orange 85‡	●	●	●	●	●	●	●	●	●		●	●	●	●		●		●		●	
Eagle Red 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 Blue 80 EC QC‡					◉	◉			◉		◉										
Eagle Blue 85 QC‡					◉	◉			◉			◉	◉								
Eagle Clear 85 QC‡					◉	◉	◉		◉		◉			◉	◉			◉			
Eagle Red 85 QC					◉	◉			◉			◉	◉		◉			◉			
Eagle Yellow 85 QC‡					◉		◉		◉		◉			◉				◉			
Eagle Clear 85 TOR					⊗																
Eagle Ivory 85 SGT*																					
Eagle Green 89 SGT PVC																					
Eagle Red 90 SGT PVC																					
Eagle White 40D SGT PVC																					
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 Beige 95 R‡									⊙			⊙					⊙				
Eagle Hyfen 95 R‡																					
Eagle Hyfen 85 CXF/CXR																					
Eagle Ivory 85 RSGT*																					
Eagle Can Cable†											⊙										
Eagle Fabricated Belts	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

R	*Reinforced*	*LCF*	*Low Coefficient of Friction*
T	*Textured*	*CXF*	*Co-extruded Flat*
RT	*Reinforced Textured*	*CXR*	*Co-extruded Ribbed*
QC	*Quick-Connect*	*SGT*	*SuperGrip Top*
TOR	*Twisted O-Rings*	*RSGT*	*Reinforced SuperGrip Top*

* *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 FDA compliant (unless cogged); QC belts are FDA compliant only when supplied with stainless steel connectors.*



Note: *Some diameters and cross sections may be subject to minimum orders. Dimensions are for reference only.*
Flat belting available in Eagle Orange 85. Additional cross sections, colours, and durometers are available.
Contact Applications Engineering at ae@fennerdrives.com for design assistance.