

- Eliminate belt whip, belt twist and belt turn over
- Ideal for drives with pulsating loads
- Available for ISO and RMA pulleys
- Heat and oil resistant

On applications where pulsating or shock loads cause instability in matched sets of Wedge or V-belts, Fenner Banded belts can provide the ideal solution.

By joining together a number of belts with a tie band the banded belt has sufficient lateral rigidity to eliminate problems caused by belts whipping or turning over, and by keeping the belts running into the grooves in a straight line excessive jacket wear is avoided resulting in longer belt life.

Fenner Banded belts can be used in Fenner Taper Lock pulleys manufactured to ISO standards but they are also available for RMA profile pulleys.

When ordering Banded belts it is important that the correct groove profile is selected. The groove spacing i.e. dimension 'e' is given in the following table.

Belt section	Pulley types	e (mm)
SPZ	ISO	12.0
SPA	standard	15.0
SPB	only	19.0
SPC		25.5
9J (Alpha, 3V)	RMA	10.3
15J (Beta, 5V)	only	17.5
25J (Delta, 8V)		28.6
HA	RMA only	15.9
B	RMA and ISO	19.0
C		25.5
D		37.0

Note

- 1) Pulleys and belts defined as ISO conform exactly to BS 3790:1981.
- 2) RMA denotes Rubber Manufacturers Association of America standards and often applies to agricultural machinery.

Anti-Static Properties

Fenner Concord Plus banded belts can be supplied with anti-static properties to order.

Tensioning

Banded belts should be installed with the same tension as for Power Plus wedge belts (page 75).

The Fenner spring plunger belt tension indicator can be used, as for individual belts but with the same setting force MULTIPLIED by the number of belts in a band (2, 3, 4 or 5).

A piece of rigid bar placed across the band width can ensure even deflection of all belts in the band.

SELECTION

- (a) Determine whether any pulsating loads will be present in the drive, which would cause excessive vibration.
- (b) Using the wedge belt selection procedure, pages 38–39, select the number and size of belts and sizes of pulleys to suit the particular drive*.
- (c) Select a banded belt length from page 69 nearest to the length found in step (b).

*RMA wedge belts and HA section V-belts are only intended for replacement purposes. New drives should be designed using ISO wedge or classical section belts.

If the exact length is not listed opposite, re-calculate the centre distance using the formula below:-

$$C = A + \sqrt{A^2 - B}$$

where: $A = \frac{L}{4} - 0.3925 (D+d)$

$$B = \frac{(D-d)^2}{8}$$

C = centre distance in mm

D = pitch diameter of larger pulley in mm

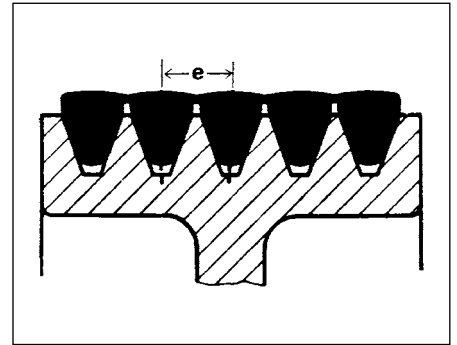
d = pitch diameter of smaller pulley in mm

L = pitch length of belt in mm

It is normal practice to use no more than five belts in one band. Accumulation of manufacturing tolerances on pulley groove pitch (dimension 'e') can result in incorrect belt seating when more than 5 belts are used in a single band.

Therefore when more than 5 belts are needed use two or more bands e.g. :-

- 6 belts - use 2 bands of 3
- 8 belts - use 2 bands of 4
- 9 belts - use 1 band of 4 and 1 band of 5



ORDERING INSTRUCTIONS

When ordering Banded Belts it is important to state the number of belts per band; the section and the belt length as follows:-

Banded 4 9J 2840 is 4 Banded 9J 2840
Banded 5 SPB 3170 is 5 Banded SPB 3170
Banded 2 C 3100 is 2 Banded C 3100

Complete the catalogue codes on page 69 by adding 2, 3, 4 or 5 indicating the number of belts in the band.

e.g.

Banded 4 9J 2840 is 212Z02844

Banded 5 SPB 3170 is 216B03175

Banded 2 C 3100 is 214C03102

Note: When ordering banded belts it is important to specify the correct pulley groove profile, as ISO and RMA grooves have different spacings (dimension e) for essentially the same belt section.

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WEDGE BELTS FOR ISO PULLEYS

SPZ 10 x 8 mm		SPA 13 x 10 mm		SPB 16 x 13 mm		SPC 22 x 18 mm	
Catalogue Code	Belt Length	Catalogue Code	Belt Length	Catalogue Code	Belt Length	Catalogue Code	Belt Length
216Z0127 –	1270	216A0100 –	1000	216B0141 –	1410	216C0265 –	2650
0132 –	1320	0112 –	1120	0160 –	1600	0280 –	2800
0134 –	1340	0125 –	1250	0180 –	1800	0300 –	3000
0140 –	1400	0140 –	1400	0200 –	2000	0315 –	3150
0142 –	1420	0150 –	1500	0202 –	2020	0335 –	3350
0147 –	1470	0160 –	1600	0212 –	2120	0355 –	3550
0150 –	1500	0140 –	1700	0224 –	2240	0375 –	3750
0152 –	1520	0180 –	1800	0236 –	2360	0400 –	4000
0156 –	1560	0190 –	1900	0250 –	2500	0425 –	4250
0160 –	1600	0200 –	2000	0265 –	2650	0450 –	4500
0170 –	1700	0212 –	2120	0280 –	2800	0475 –	4750
0180 –	1800	0224 –	2240	0300 –	3000	0500 –	5000
0190 –	1900	0236 –	2360	0315 –	3150	0530 –	5300
0200 –	2000	0250 –	2500	0335 –	3350	0560 –	5600
0212 –	2120	0265 –	2650	0355 –	3550	0600 –	6000
0224 –	2240	0280 –	2800	0375 –	3750	0630 –	6300
0236 –	2360	0300 –	3000	0400 –	4000	0670 –	6700
0250 –	2500	0315 –	3150	0425 –	4250	0710 –	7100
0265 –	2650	0335 –	3350	0450 –	4500	0750 –	7500
0280 –	2800	0355 –	3550	0475 –	4750	0800 –	8000
0300 –	3000	0375 –	3750	0500 –	5000	0850 –	8500
0315 –	3150	0400 –	4000	0530 –	5300	0900 –	9000
0335 –	3350	0425 –	4250	0560 –	5600	0950 –	9500
0375 –	3750	0450 –	4500	0600 –	6000	1000 –	10000
0400 –	4000			0630 –	6300	1060 –	10600
				0710 –	7100	1120 –	11200
				0750 –	7500	1180 –	11800
				0800 –	8000	1250 –	12500

WEDGE BELTS FOR RMA (AMERICAN STANDARD) PULLEYS

9J (ALPHA, 3V)		15J (BETA, 5V)		25J (DELTA, 8V)	
Catalogue Code	Belt Length	Catalogue Code	Belt Length	Catalogue Code	Belt Length
212Z0127 –	1270	212B0141 –	1410	212D0265	2650
0140 –	1400	0150 –	1500	0283	2830
0150 –	1500	0160 –	1600	0316	3160
0152 –	1520	0180 –	1800	0354	3540
0156 –	1560	0202 –	2020	0379	3790
0160 –	1600	0215 –	2150	0405	4050
0165 –	1650	0228 –	2280	0456	4560
0170 –	1700	0241 –	2410	0506	5060
0180 –	1800	0253 –	2530	0567	5670
0185 –	1850	0268 –	2680	0633	6330
0190 –	1900	0284 –	2840	0710	7100
0203 –	2030	0300 –	3000	0799	7990
0216 –	2160	0317 –	3170	0900	9000
0228 –	2280	0335 –	3350	1014	10140
0241 –	2410	0355 –	3550		
0254 –	2540	0380 –	3800		
0269 –	2690	0406 –	4060		
0284 –	2840	0431 –	4310		
0300 –	3000	0456 –	4560		
0317 –	3170	0482 –	4820		
0355 –	3550	0507 –	5070		
0375 –	3750	0538 –	5380		
0400 –	4000	0568 –	5680		
		0600 –	6000		
		0634 –	6340		
		0710 –	7100		
		0800 –	8000		

V-BELTS FOR RMA & ISO PULLEYS

HA*
13 x 8 mm
Range of pitch lengths 1300–4500
B**
17 x 11 mm
Range of pitch lengths 1310–7000
C**
22 x 14 mm
Range of pitch lengths 1950–10050
D †
32 x 19 mm
Range of pitch lengths 3130–14400

- * RMA Pulleys only
- ** RMA & ISO Pulleys
- † ISO Pulleys only

8 digit catalogue codes are made up in the same style as for wedge belts, but first 3 digits are 214.

Belt lengths are pitch lengths in millimetres.

Other belt lengths may be available – consult your local Authorised Distributor.

Note: The ISO 4184 standard now refers to 'datum' lengths, which are essentially the same as 'pitch' lengths.