



BESTORQ®

Power Transmission Products
BESTORQ Corporate USA office



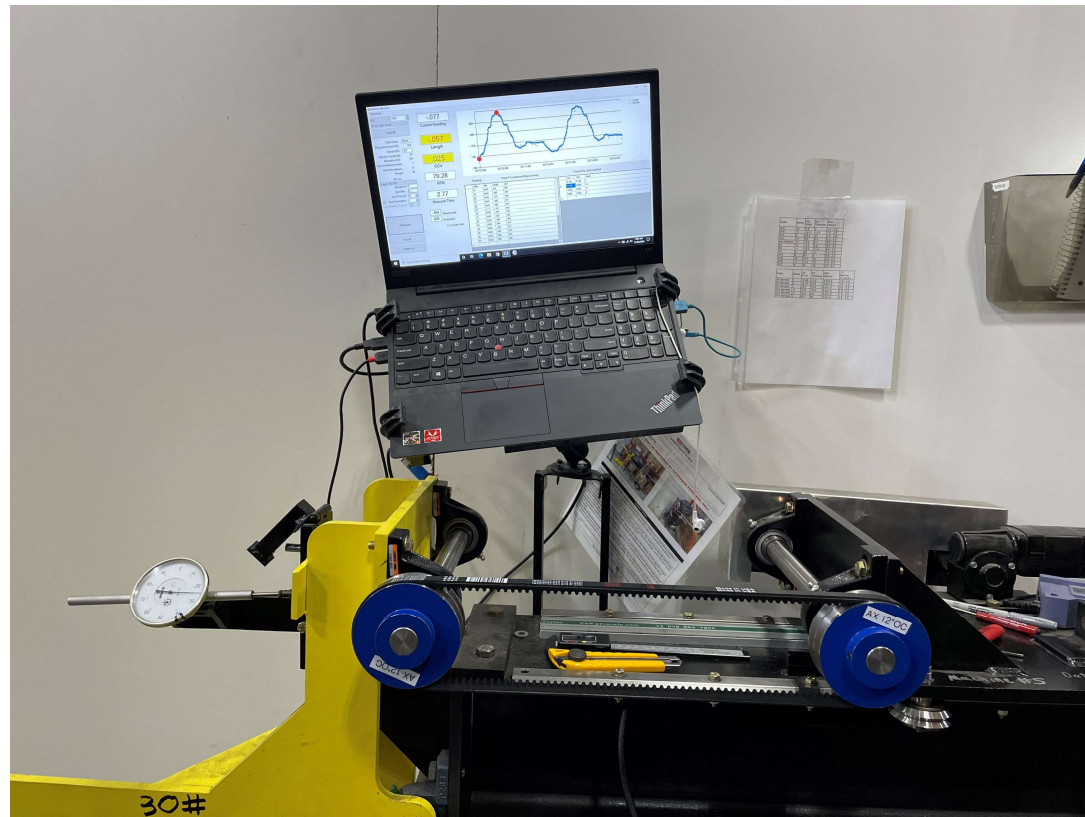
BESTORQ® is one of the world's largest and highest quality manufacturers of Power Transmission Belts.

THE SUBJECT OF THIS PRESENTATION IS HOW TO BEST IDENTIFY BELT TYPE AND MEASURE BELT LENGTH IN THE FIELD.

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This is an ARPM industry standard measure machine with industry standard pulleys and industry standard weight separating the pulleys. This machine determines the industry standard length within 0.002" inch. This is the precise method used in the Tech Center at Bestorq.

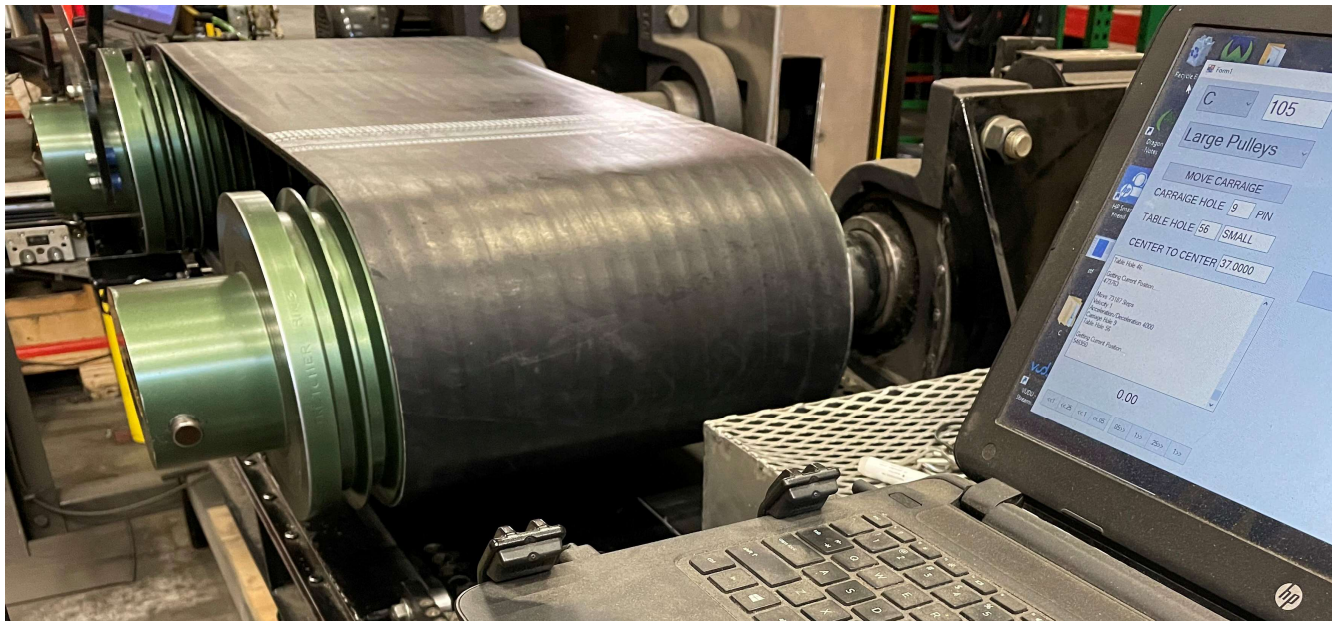




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This large Bestorq measure machine at the Bestorq Tech Center measures the exact length within 0.030" on a 600" belt and can also measure the exact length of banded belts with correct ARPM tension using ARPM standard pulley grooves



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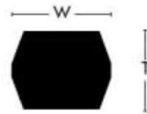
To determine belt type and length in the field, first you need to determine the type of belt you are measuring.

1. Measure the width and thickness of the belt cross section carefully with a ruler or with any caliper.
2. Compare that with against the approximate W (width) and T (thickness) in the Belt ID chart
3. Once you determine the type of belt, proceed to the next step to determine the belt length.

Double Sided V-Belts

Double Sided

Cross Section	W	T
AA	1/2"	13/32"
BB	21/32"	17/32"
CC	7/8"	11/16"

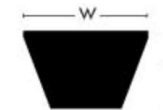


Double Sided V-Belts, known as hexagonal belts, are constructed from pre-stretched polyester cord (AA, BB, CC). For belt part number, use OC and subtract the following values: AA- subtract 3.3", BB- subtract 4.7", CC- subtract 6.2".
Example: AA55= 1/2" wide; 58.3" OC

Single V-Belts

Classical

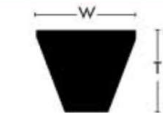
Cross Section	W	T
A, AX, AK	1/2"	5/16"
B, BX, BK	21/32"	13/32"
C, CX, CK	7/8"	17/32"
D	1 1/4"	3/4"



Classical belts constructed from pre-stretched polyester cord (A, B, C, D). "X" designates molded cogged construction (AX, BX, CX). "K" designates Thunder Classical V-Belts®, heavy-duty belts constructed from aramid tensile cord (AK, BK, CK). For belt part number, use Inside Circumference (IC). To calculate IC, measure Outside Circumference (OC) and subtract the following values: A- subtract 2", B- subtract 3", C- subtract 4", D- subtract 5". For part number on belt over 210" measure OC and subtract the following values: B- subtract 1.5", C- subtract 2", D- subtract 2.5". Example: A30= 1/2" wide; 30" IC (32" OC)

Wedge

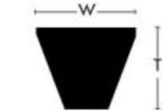
Cross Section	W	T
3V, 3VX, 3VK	3/8"	21/64"
5V, 5VX, 5VK	5/8"	35/64"
8V, 8VK	1"	7/8"



Wedge belts constructed from pre-stretched polyester cord (3V, 5V, 8V). "X" designates molded cogged construction (3VX, 5VX). "K" designates Thunder Wedge V-Belts®, heavy-duty belts constructed from aramid tensile cord (3VK, 5VK, 8VK). For belt part number, use OC measurement to the tenth of an inch. Example: 3V425= 3/8" wide; 42.5" OC

Metric

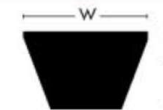
Cross Section	W	T
SPZ, SPZX, XPZ	10mm	8mm
SPA, SPAX, XPA	13mm	10mm
SPB, SPBX, XPB	16mm	13mm
SPC, SPCX, XPC	22mm	18mm



Metric belts constructed from pre-stretched polyester cord (SPZ, SPA, SPB, SPC). "X" designates molded cogged construction (SPZX or XPZ, SPAX or XPA, SPBX or XPB, SPCX or XPC). For belt part number, use OC and subtract the following values: Z- subtract 13mm, A- subtract 18mm, B- subtract 22mm, D- subtract 30mm. Example: SPA1600= 13mm wide; 1618mm OC

FHP

Cross Section	W	T
3L	3/8"	7/32"
4L	1/2"	5/16"
5L	21/32"	3/8"



Fractional Horsepower (FHP) belts constructed from pre-stretched polyester cord (3L, 4L, 5L). For belt part number, use OC measurement to the tenth of an inch. Example: 4L400= 1/2" wide; 40.0" OC



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For Banded Belts, one more step is necessary to determine the belt part number after the type and length is determined

Banded V-Belts

Classical



Classical V-Belts bound together with a fabric tie band. For belt part number, indicate the number of ribs and Classical V-Belt part number.
Example: 4/C225= 4 rib C225

Wedge



Wedge or Thunder Wedge V-Belts bound together with a fabric tie band. For belt part number, indicate number of ribs and Wedge V-Belt part number.
Example: 4/8V3150= 4 rib 8V3150



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Thin steel tape or cloth tape

The best method to measure belt length in the field.

The belt used in this demonstration is an exact “to ARPM standard” length BX50 as measured on an ARPM industry standard measure machine with industry standard pulleys and industry standard weight separating the pulleys.

1. The BX50 in this case is 52.9” actual “effective length” (perfect by standard)
2. “Effective length” is the length measured at the outside edge of a perfect ARPM standard pulley
3. This belt outside actually rides out of the perfect pulley by 0.080”, making the “outside length” $52.9” + 2 (3.1416) \times 0.080 = 53.4”$ “outside length”





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Thin steel or cloth tape

As can be seen in the picture below this belt actually measures 53.4" "outside length" using the thin steel tape method. This is a very accurate method.





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Thin steel or cloth tape

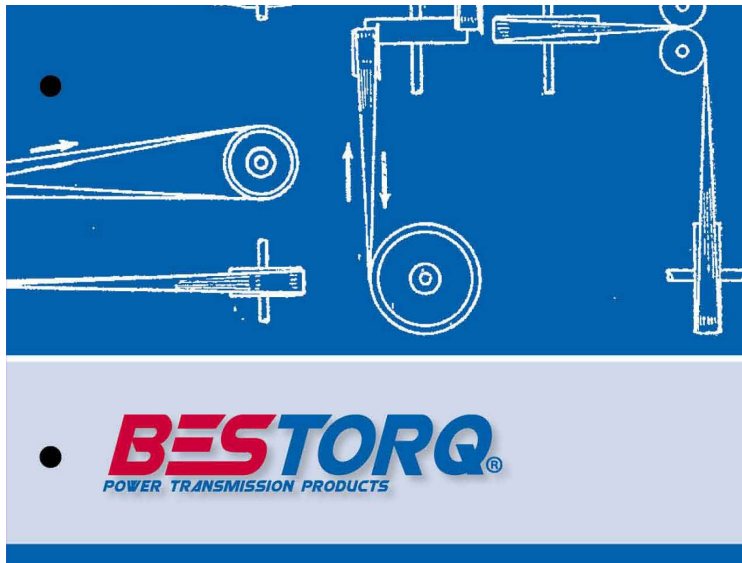
As can be seen in the picture below this nominal length BX50 banded belt actually measures 54" "outside length" using the thin steel tape method. A banded belt rides out of the pulleys more (0.170" ride out) than a single belt due to the extra backing. This make the "outside length" greater than the single BX50. This again is a very accurate method.



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The belt **“Effective length”** for all belts is shown in the Bestorq Price Pages booklet as “OL inch” as measured at the outside edge of a perfect ARPM standard pulley. Remember that this is the “Effective length” to be used to determine the correct “outside length”.



BESTORQ List Prices Stock Belts - February 21, 2008

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Part #	OL Inch	List Price	Part #	OL Inch	List Price	Part #	OL Inch	List Price	Part #	OL Inch	List Price
BX											
BX22	25.0	\$10.23	BX59	62.0	\$18.54	BX96	99.0	\$26.94	CX51	55.0	\$31.86
BX23	26.0	\$10.44	BX60	63.0	\$18.76	BX97	100.0	\$27.17	CX55	59.0	\$33.34
BX24	27.0	\$10.66	BX61	64.0	\$18.99	BX98	101.0	\$27.40	CX60	64.0	\$35.20
BX25	28.0	\$10.88	BX62	65.0	\$19.22	BX99	102.0	\$27.62	CX68	72.0	\$38.17
BX26	29.0	\$11.10	BX63	66.0	\$19.44	BX100	103.0	\$27.85	CX72	76.0	\$39.66
BX27	30.0	\$11.33	BX64	67.0	\$19.67	BX101	104.0	\$28.08	CX75	79.0	\$40.78
BX28	31.0	\$11.55	BX65	68.0	\$19.90	BX103	106.0	\$28.53	CX78	82.0	\$41.90
BX29	32.0	\$11.77	BX66	69.0	\$20.12	BX104	107.0	\$28.76	CX81	85.0	\$43.01
BX30	33.0	\$11.99	BX67	70.0	\$20.35	BX105	108.0	\$28.99	CX85	89.0	\$44.50
BX31	34.0	\$12.22	BX68	71.0	\$20.58	BX106	109.0	\$29.22	CX90	94.0	\$46.36
BX32	35.0	\$12.44	BX69	72.0	\$20.81	BX108	111.0	\$29.67	CX96	100.0	\$48.60
BX33	36.0	\$12.66	BX70	73.0	\$21.03	BX109	112.0	\$29.90	CX100	104.0	\$50.09
BX34	37.0	\$12.89	BX71	74.0	\$21.26	BX110	113.0	\$30.13	CX101	105.0	\$50.46
BX35	38.0	\$13.11	BX72	75.0	\$21.49	BX112	115.0	\$30.58	CX105	109.0	\$51.95
BX36	39.0	\$13.34	BX73	76.0	\$21.71	BX113	116.0	\$30.81	CX106	110.0	\$52.32
BX37	40.0	\$13.56	BX74	77.0	\$21.94	BX114	117.0	\$31.04	CX107	111.0	\$52.70
BX38	41.0	\$13.79	BX75	78.0	\$22.17	BX115	118.0	\$31.26	CX109	113.0	\$53.44
BX39	42.0	\$14.01	BX76	79.0	\$22.40	BX116	119.0	\$31.49	CX112	116.0	\$54.56
BX40	43.0	\$14.24	BX77	80.0	\$22.62	BX120	123.0	\$32.40	CX115	119.0	\$55.68
BX41	44.0	\$14.46	BX78	81.0	\$22.85	BX121	124.0	\$32.63	CX116	120.0	\$56.05
BX42	45.0	\$14.69	BX79	82.0	\$23.08	BX123	126.0	\$33.08	CX120	124.0	\$57.54
BX43	46.0	\$14.91	BX80	83.0	\$23.30	BX124	127.0	\$33.31	CX124	128.0	\$59.03
BX44	47.0	\$15.14	BX81	84.0	\$23.53	BX125	128.0	\$33.54	CX125	129.0	\$59.41
BX45	48.0	\$15.37	BX82	85.0	\$23.76	BX128	131.0	\$34.22	CX128	132.0	\$60.52
BX46	49.0	\$15.59	BX83	86.0	\$23.99	BX133	136.0	\$35.36	CX136	140.0	\$63.51
BX47	50.0	\$15.82	BX84	87.0	\$24.21	BX136	139.0	\$36.04	CX142	146.0	\$65.74
BX48	51.0	\$16.04	BX85	88.0	\$24.44	BX140	143.0	\$36.95	CX144	148.0	\$66.49
BX49	52.0	\$16.27	BX86	89.0	\$24.67	BX144	147.0	\$37.86	CX150	154.0	\$68.73
BX50	53.0	\$16.50	BX87	90.0	\$24.90	BX148	151.0	\$38.77	CX158	162.0	\$71.71
BX51	54.0	\$16.72	BX88	91.0	\$25.12	BX150	153.0	\$39.23	CX162	166.0	\$73.20
BX52	55.0	\$16.95	BX89	92.0	\$25.35	BX154	157.0	\$40.14	CX173	177.0	\$77.30
BX53	56.0	\$17.18	BX90	93.0	\$25.58	BX158	161.0	\$41.05	CX176	180.0	\$78.42
BX54	57.0	\$17.40	BX91	94.0	\$25.81	BX162	165.0	\$41.96	CX180	184.0	\$79.91
BX55	58.0	\$17.63	BX92	95.0	\$26.03	BX173	176.0	\$44.47	CX195	199.0	\$85.51
BX56	59.0	\$17.86	BX93	96.0	\$26.26	BX180	183.0	\$46.06			
BX57	60.0	\$18.08	BX94	97.0	\$26.49	BX195	198.0	\$49.47			
BX58	61.0	\$18.31	BX95	98.0	\$26.71						

V-Belts & V-Ribbed Belts
list price pages

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This is an excellent Thin Steel Tape for Measuring the OL of a belt



A cloth tape commonly used for sewing is also very accurate.

This Tape Measure is a poor Choice for Measuring as it does not fit snugly around the belt



Also a poor Choice for measuring is string and rope, both of which stretches and therefore is not accurate





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“Rolling the belt” method

“Rolling the belt” method is very inaccurate as it slips on the surface. On this belt the exact distance around the belt was 33.5” and the belt slipped by ½” as you can see by the end picture. If not careful with this method, slip can be even greater.

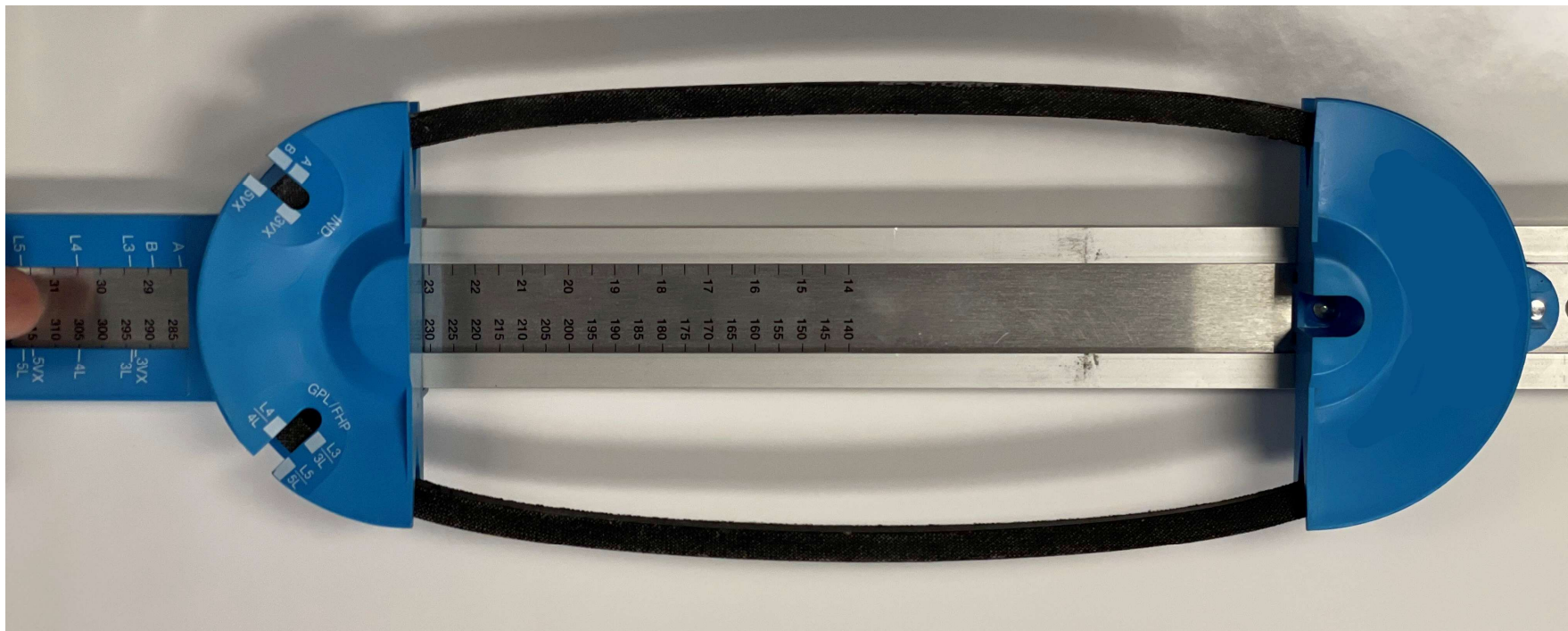




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Power Transmission Products Belt Sliding Measure Stick

Sliding stick method (sometimes called a belt ruler) nearly always indicates a reading that is too short as not enough tension is put on the belt to properly seat the belt in and perfectly straighten it out. In this example an exactly nominal length A29 (4L310) is shown and you can see on the scale it shows it to be $\frac{3}{4}$ " to 1" shorter than it really is.





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Belt Length Measuring Assistance

**If you have any questions or need assistance please call or email
Bestorq Customer Service**

Email: orders@Bestorq.com

Call Toll Free: 877.773.9966 or call 402.423.3077