



Power Transmission Products

# Elongation Method of Tensioning

## Recommended Elongation Factors

### Tensioning Stock BESTORQ® V-Belts & Banded V-Belts

#### ELONGATION METHOD OF TENSIONING 2-PULLEY V-BELT DRIVES

This method is chiefly used for larger belt drives.

This method must be used with care and accuracy on belts with Kevlar Cord (BESTORQ Thunder) due to the low elongation of the belt.

##### Method 1 :

1. For your drive look up the ELONGATION FACTOR for the belt cross section and type as shown on graphs on the following pages.
2. Mark off a 50" length on the belt (or 24" or 30" or 100") when no tension is on the belt.
3. Multiply the length you marked off by the Elongation Factor from the table. For example, if you marked off 30" and you have a 5VX with 9" smallest pulley; the elongation factor is 1.014. Multiply 30" X 1.014 = 30.42" (30-27/64")
3. Tighten the belt until the reading you marked is 30.42" and the belt is correctly tensioned.
4. This works on banded or singles.

##### Method 2:

1. Measure the outside length of the entire belt with no tension applied to get the "FREE LENGTH" (Note: if this a used belt on an existing drive you must slack off the drive until no tension is on the belt.)
2. Multiply the "FREE LENGTH" by the "ELONGATION FACTOR" from the tables on the following pages.. This gives you the "TENSIONED LENGTH" of the belt.
3. Tighten the drive until the outside length of the belt equals the "TENSIONED LENGTH" you calculated in step 2.
4. EXAMPLE: 20" Diameter 8V driver pulley and 36" Diameter Driven Pulley and an 8V2000 banded or single Belt. The 8V2000 belt is measured around the outside with a steel tape, and it measures 200-3/8" (200.375"); this is the "FREE LENGTH". Look on the chart for a 20 inch diameter 8V pulley and the "ELONGATION FACTOR" is 1.017. Multiplying the "FREE LENGTH" (200.375") times " ELONGATION FACTOR" (1.017) equals "203.78", this is the "TENSIONED LENGTH". The belt would need to be tensioned until the outside length of the belt measures 203.78"; the "TENSIONED LENGTH".

**Special note: DO NOT use a string to measure around the belt due to the fact the string will stretch too much. You must use something that will not stretch, such as slim steel tape measure.**

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