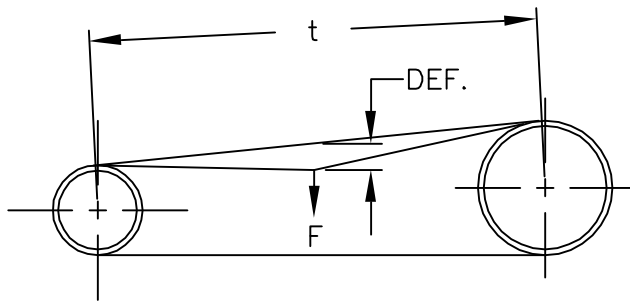


Method of Tensioning HTD Gearbelt Drives

Place belt on sprockets and adjust takeup so that belt teeth mesh securely with sprocket grooves. Measure belt span "t". Then tighten belt so that it deflects 1/64" for each inch of belt span when a force is applied as specified in the table below.

Deflection 1/64" per inch of span. (Measure or calculate the span length "t" as shown in sketch below.)

FORMULA:

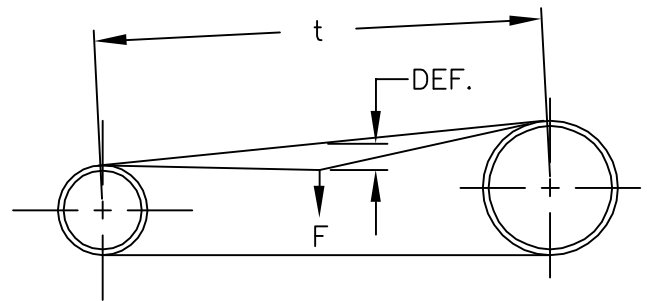


$$t = \sqrt{C^2 - \left(\frac{D-d}{2}\right)^2}$$

$$\text{DEF.} = \frac{1}{64} (t)$$

t = Span Length
 C = Center Distance
 D = Pitch Dia. (Large Pulley)
 d = Pitch Dia. (Small Pulley)
 F = Deflecting Force (see Table)
 DEF. = Amount of Deflection in inches

EXAMPLE:



i.e.

$$D = \text{P80-8M-85 (8.02)}$$

$$d = \text{P40-8M-85 (4.02)}$$

$$C = \text{880-8M-85 (7.61)}$$

$$t = \sqrt{7.61^2 - \left(\frac{8.02-4.02}{2}\right)^2}$$

$$t = 7.34$$

$$\text{DEF.} = \frac{1}{64} (7.34)$$

$$\text{DEF.} = .115$$

Belt Pitch	Belt Width	Force
5 mm	9 mm	9 to 18 oz.
	15 mm	1 to 2 lbs.
	25 mm	1-1/2 to 3 lbs.
8 mm	20 mm	3 to 4 lbs.
	30 mm	5 to 6-1/2 lbs.
	50 mm	9 to 12 lbs.
	85 mm	16 to 20 lbs.

Note:

For belts wider than two inches, it is suggested that a 3/4 or 1 inch strip of metal be placed across the belt between the tension tester and the belt to prevent belt distortion.