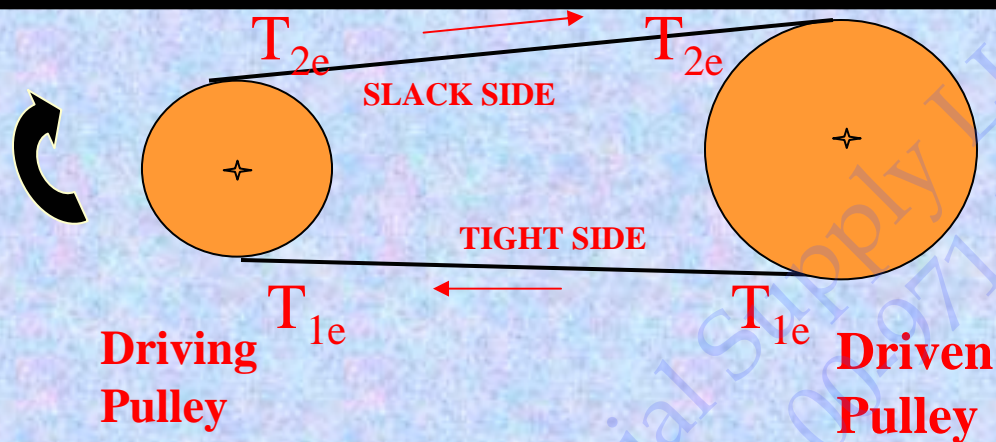


IMPORTANCE OF PROPER TENSIOING OF BELT DRIVES



$$\text{H.P.} = \frac{2\pi N T}{4500}$$

OR

$$\text{kW} = \frac{N T}{9550}$$

H.P. Or kW = K N T, Where K = Constant

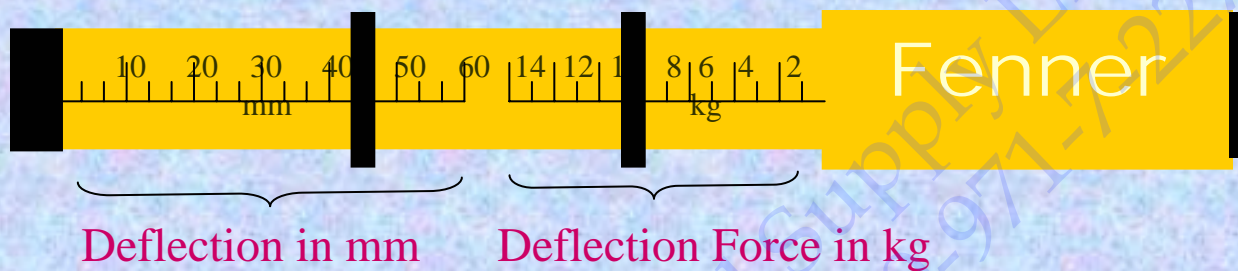
H.P. or kW \propto N T, H.P. or kW \propto T, For a given drive as Revns./Min are fixed

Torque = Force x Distance. For Belt Drives, Torque = Belt Tension x Pulley Radius

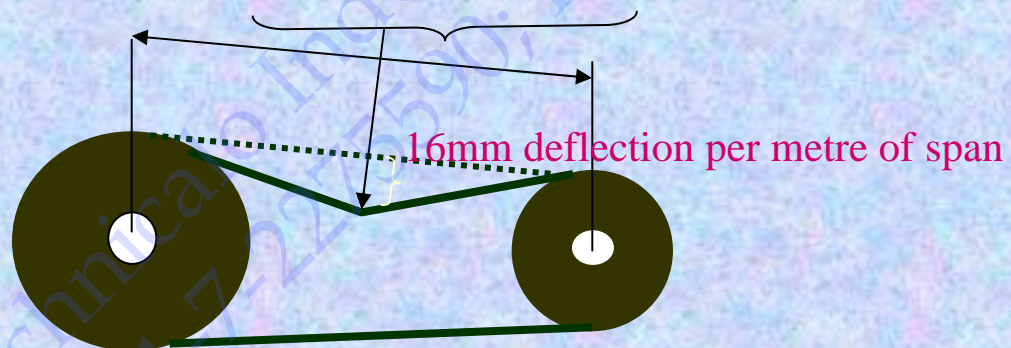
Thus for a given set of pulleys and belts, Torque \propto Tension

Thus H.P. or kW transmitted will directly depend on the Tension on the belts

Belt Tension Indicator



Belt Tension Indicator
applied to mid-span






As the high performance of Fenner premium Belts requires correct tension, we recommend using the Belt Tension Indicator.

Method of Belt Tensioning

- 1. Measure the span length**
- 2. Multiply the span length in metres by 16 to obtain the deflection distance in mm.**
- 3. Set the lower marker ring at the deflection distance required in mm on the lower scale.**
- 4. Set the upper marker ring against the bottom edge of the top tube.**

- 
- 5. Place the belt tension indicator on top of the belt at the centre of span, and apply a force at right angles to the belt deflecting it to the point where the lower marker ring is level with top of the adjacent belt.**
 - 6. Read off the force value indicated by the top edge of the upper marker ring.**
 - 7. Compare this force to the value shown in the table below.**



Belt Section	SPZ		SPA		SPB		SPC		Z	A	B	C
	56 to 95	100 to 140	90 to 132	140 to 220	140 to 224	236 to 315	224 to 355	375 to 560	56 to 100	80 to 140	125 to 200	200 to 400
Small Pulley Dia (mm)												
Newton (N)	10 to 15	15 to 20	20 to 27	28 to 35	35 to 50	50 to 65	60 to 90	90 to 120	5 to 7.5	10 to 15	20 to 30	40 to 60
Kilogram - force (kgf)	1.0 to 1.5	1.5 to 2.0	2.0 to 2.7	2.8 to 3.5	3.5 to 5.1	5.1 to 6.6	6.1 to 9.2	9.2 to 12.2	0.5 to 0.8	1.0 to 1.5	2.0 to 3.1	4.1 to 6.1



If the measured force falls within the values given, the drive will be satisfactory. A measured force below the lower value indicates under- tensioning.

A new drive should be tensioned to the higher value to allow for the normal drop in tension during the running-in period.

After the drive has been running for a few hours the tension should be checked and re-adjusted to higher the value.

Note: For single belt drives a straight edge should be placed across the two pulleys to act as a datum for measuring the amount of deflection.