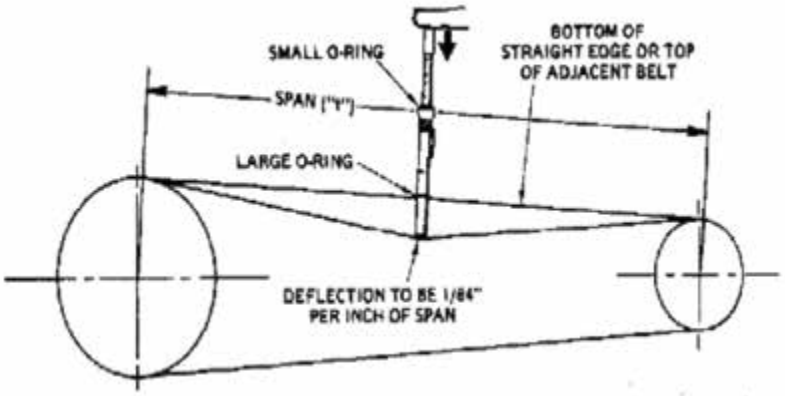
Belt Tension Tester

Proper belt tension is essential for optimum power transmission and vital to the life of the belt. To ensure optimum V-belt drive operation it is recommended to check the tension of the belts by measuring the deflection force value with the help of a tension tester.

Belt tension in most drives can be checked with adequate reliability by using the PIX tension tester.

Tension Measurement Procedure

Measure the span length of the belt in mm.
Tie a string on the two pulleys along witht the length of the belt and mark the centre of the span on the belt.
Calculate 1.5% of the span ("x") for belt length less than 1000mm and 1% of the span for belt length more than 1000mm. Adjust the lower side of the bottom ring on the tension tester to coincide with "x" on the mm scale then adjust the lower side of the top ring to 0.00 N.
Place tension tester at the centre of the span of the belt. Apply force with the help of the tension tester perpendicular to the span until the lower surfce of the bottom ring touches the string.
Take the deflection force value (N) by the lower side of the top ring.
Compare the deflection force value (N) with the values show on the next page - the deflection force should be between the minimum and maxium vales given.
Deflection force less than the minimum recommended value indicates an under tensioned drive.
Deflection force greater than the maximum recommended value indicates an over tensioned drive.



Important Notes

For new belts, deflection force value (N) should be kept at the maximum.
Maximum deflection force value (N) is recommended for pulsating & shock loads.
It is recommended to re-check the tension on new belts after approx. 24 hours of running and if necessary, adjust accordingly.