

COMPTROL SERIES 20

SIZING & SELECTION

The total resultant load per cell (JT) is calculated by resolving web force vectors acting upon the Tensioncell, with respect to the Loading Line (OX). (JT) is the resultant of both tension plus tare loads per cell.

The intrinsic design of Comptrol Tensioncells allows the location of the resultant Load of Web Tension (H) on any angle with respect to the Load Line (OX). Note, however, that the Total Force vector (JT) must always be calculated on the line. (OX)

Any force vector falling on the line (OR) (through the pivot point of the C-Flexure) will produce no deflection, and thus no change in electrical output.

Changing the mounting angle of the Tensioncell changes the affects of the force vectors on the cell. The mounting angle selected for a specific application is selected to maximize the Tensioncell output signal.

The examples to the right show the Tensioncell used in the tension and compression modes. In both examples, the Tensioncell is mounted so that the resultant tare force vector (TW) is through the pivot. In these cases, the Tensioncell is measuring only the Resultant Load of Web Tension.

Comptrol Application Engineers will make all calculations and offer installation suggestions as part of our formal quotation. To help us provide these services, we request that you furnish us with complete information about your requirements. If possible include a drawing or sketch of your application, noting the preferred position of the electrical conduit box. The information listed below is the MINIMUM we require:

- Maximum Tension (A)
- Total Wrap Angle (B)
- Inclination of the Passline with respect to horizontal (C)
- Total Weight of the roll and bearings (TW)
- Shaft Diameter
- Rotating or Non-Rotating Shaft
- Measuring Roll Diameter (in inches)
- Maximum Machine Speed (FPM)

FREE APPLICATION REVIEW

