

TENSION EQUIPMENT SPECIFICATION

(Please return to or fax to DFE)

COMPANY _____ PREPARED BY _____

ADDRESS _____ TELEPHONE _____

CITY _____ STATE _____ ZIP _____ DATE _____

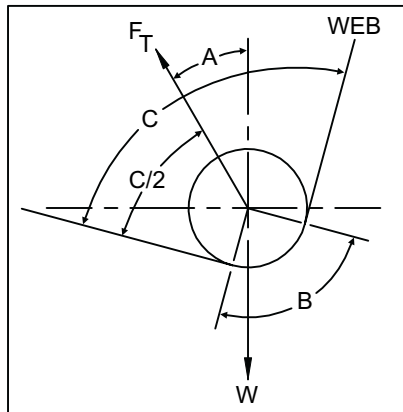
TRANSDUCER SPECIFICATION (use the UPB or TR Transducer Specifications for sizing UPB or Tension Roll® transducers)

A. INSTRUCTIONS. The load rating of the transducers is determined by the weight of the idler roll, wrap angle on the roll, tension in the web and the direction of the resultant force due to web tension. The drawings below illustrate different combinations of those factors. Record information requested below in terms B - E. Then use the formula below the appropriate drawing to determine load rating, or call Dover Flexo Electronics and we will determine rating for you.

B. TYPE OF WRAP. Cross out boxes that do not apply.

WRAP 1

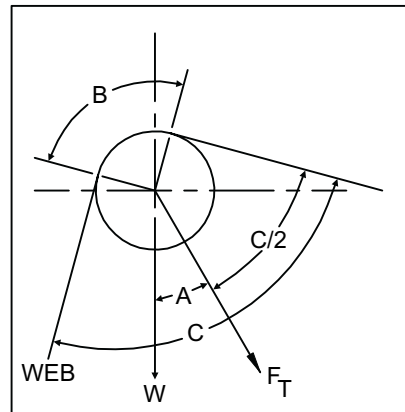
Tension Force F_T , **above** horizontal



$$\text{LOAD RATING} = \frac{4T \sin\left(\frac{B}{2}\right) - W \cos(A)}{2}$$

WRAP 2

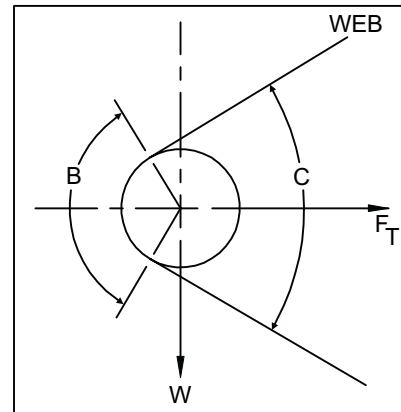
Tension Force F_T , **below** horizontal



$$\text{LOAD RATING} = \frac{4T \sin\left(\frac{B}{2}\right) + W \cos(A)}{2}$$

WRAP 3

Tension Force F_T **is** horizontal



$$\text{LOAD RATING} = \frac{4T \sin\left(\frac{B}{2}\right)}{2}$$

NOTE: the resultant force F_T , points in the same direction as the arrow on the transducer.

C. ANGLES AND IDLER WEIGHT

Record information in boxes. If you do not know wrap angle, be sure to give Angle "C".

W = idler roll weight pounds

B = wrap angle degrees

F_T = force on idler roll due to web tension. F_T is in the same direction as the arrow on the transducer.

A = angle between F_T and vertical axis degrees

C = angle between entering and exiting web degrees

TABLE 1

| Angle (Degrees) | SINE | COSINE |
|-----------------|-------|--------|
| 0 | .000 | 1.000 |
| 5 | .087 | .996 |
| 10 | .174 | .985 |
| 15 | .259 | .966 |
| 20 | .342 | .940 |
| 25 | .423 | .906 |
| 30 | .500 | .866 |
| 35 | .574 | .819 |
| 40 | .643 | .766 |
| 45 | .707 | .707 |
| 50 | .766 | .643 |
| 55 | .819 | .574 |
| 60 | .866 | .500 |
| 65 | .906 | .423 |
| 70 | .940 | .342 |
| 75 | .966 | .259 |
| 80 | .985 | .174 |
| 85 | .996 | .087 |
| 90 | 1.000 | .000 |

D. WEB CHARACTERISTICS

- Total Estimated Operating Tension, Max. _____ Min. _____ pounds (if known)
- Type of Web Material _____ • Width: Max. _____ Min. _____ inches
- Basis Weight or Thickness _____ • Max. Web Speed _____ FPM

NOTE: If more than one material is used, give information for the two requiring the most and least tension.

E. TRANSDUCER CHARACTERISTICS ⁽¹⁾

(use TR or UPB specification sheets for those transducers)

- Type: C RS RFA LT NW (Specify roll width _____)
- Bore Size ⁽²⁾ _____ inches • Mounting Style S FL PB TF * PFL * (*Model C only)
- Load Rating * _____ pounds. (DFE will calculate if you wish) • Connector Position ⁽³⁾ 3 6 9 12 o'clock
* multiply formula results by 2 for RFA and LT transducers (arrow on transducer points to 6 o'clock)

CONTROLLER SPECIFICATION

- Is the equipment for: Unwind Intermediate Rewind • Tension Meter Scale: 0 to 1, 5, 10, 25, 50, 100, 250, 500, 1000 (Circle One)
- Full Roll Dia. _____ • Core Dia. _____ • Roll Wt. _____ pounds
- Machine Type (Printing Press, Laminator, Coater, etc.) _____
- Describe Drive, Brake, or Clutch to be controlled (include model number and maker if possible) _____
_____ • DFE to supply brake/clutch? Yes No
- Controller Model number _____ standard enclosure Panel only double enclosure
- Interconnection Cable Length (double enclosure system only) _____ ft. • Type: ⁽⁵⁾ C-C C-N N-N
- Options _____

INDICATOR SPECIFICATION

- Tension Meter Scale: 0 to 1, 5, 10, 25, 50, 100, 250, 500, 1000 (Circle One)
- Indicator Model number _____ standard enclosure Panel only double enclosure
- Options _____

TRANSDUCER CABLE SPECIFICATION

- Length ⁽⁴⁾ _____ ft. and _____ ft. • Type: ⁽⁵⁾ C-C C-N N-N

 THE TENSION CONTROL SPECIALISTS
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NOTES: (1) Refer to UPB or TR data sheet or specification for sizing procedure
(2) Standard Model C bore sizes are: Size 0 = 7/8 inch, Size 2 = 1 1/4"
(3) 6 o'clock position is standard on Styles S and FL, rear is standard on PB. No optional positions on TF.
(4) Standard cable pair consists of one 15 ft. and one 20 ft. cable.
(5) C-C = connectors on both ends, N-C = connector one end, and N-N = no connectors