Tension Braces

BROOKS Tension Braces are typically used to support the outside phase positions on H-frame structures carrying heavy loads associated with bundled conductors on long vertical spans. These braces use pinned-end clevis type fittings which can efficiently transfer the high tensile loads into adjacent structure components without developing connection fatigue problems which can occur with other semi-fixed connections.

BROOKS Tension Braces may be combined with compatible sized turnbuckles to develop an adjustable length brace. BROOKS can supply the turnbuckles along with your Tension Brace order. Tension Braces may be ordered by the catalog number developed from the codes shown below, or by brace series along with complete descriptive data. A catalog number indicated “each” units, meaning a single piece of wood assembled to end fittings.

Contact the BROOKS Engineering Department for assistance in determining the application to best meet your design criteria.
Tension Brace Ordering Code

For 424, 431 & 436 Series Braces

Ordering Information:

- Brace Series
- 1st End Fitting, Mounting Bolt Size (Table 1)
- 2nd End Fitting, Mounting Bolt Size (Table 1)
- Number of Feet
- Number of Inches
- Number of $\frac{1}{8}$" Fractions
- MHC Length (Feet, Inches, Eighths)

Ordering Example: 424-88-1210 = 1 Tension Brace, 3$\frac{3}{4}$" x 4$\frac{1}{2}$" wood, 1" mounting bolts at each end, MHC = 12'-10". Approximate shipping weight = 104 lbs. per piece.

Ordering Example: 436-77-09032 = 1 Tension Brace, 3$\frac{3}{4}$" x 4$\frac{3}{4}$" wood, $\frac{7}{8}$" mounting bolts at each end, MHC = 9'-1$\frac{1}{4}$". Approximate shipping weight = 62 lbs. per piece.

Table 1

<table>
<thead>
<tr>
<th>Bolt Code</th>
<th>Size</th>
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<tbody>
<tr>
<td>6</td>
<td>$\frac{3}{4}$&quot; x 2$\frac{1}{2}$&quot;</td>
</tr>
<tr>
<td>7</td>
<td>$\frac{7}{8}$&quot; x 3&quot;</td>
</tr>
<tr>
<td>8</td>
<td>1&quot; x 3$\frac{1}{2}$&quot;</td>
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431 Series Tension Braces
25,000 Lbs. Ultimate Tensile Capacity
Wood Section - $2\frac{3}{4}\" \times 3\frac{3}{4}\"$. Standard Holes - $\frac{13}{16}\"$.

The 431 Series Tension Brace is furnished standard with (2) $\frac{3}{4}\" \times 2\frac{3}{4}\"$ machine bolts with nuts and locknuts factory assembled.

To estimate shipping weight per piece, multiply MHC in feet equivalent by 2.5, then add 20 pounds.

\[\text{MHC} \times 2.5 + 20\]

436 Series Tension Braces
30,000 Lbs. Ultimate Tensile Capacity
Wood Section - $3\frac{5}{8}\" \times 4\frac{3}{8}\"$. Standard Holes - $\frac{15}{16}\"$.

The 436 Series Tension Brace is furnished standard with (2) $\frac{7}{8}\" \times 3\"$ machine bolts with nuts and locknuts factory assembled.

To estimate shipping weight per piece, multiply MHC in feet equivalent by 3.8, then add 27 pounds.

\[\text{MHC} \times 3.8 + 27\]
424 Series Tension Braces

35,000 Lbs. Ultimate Tensile Capacity (7/8” Bolts)
40,000 Lbs. Ultimate Tensile Capacity (1” Bolts)

Wood Section - 3 1/2” x 4 1/2”.  Standard Holes - 15/16”.  1 1/8” holes are also available for this series.

The 424 Series Tension Brace is furnished standard with (2) 7/8” x 3” machine bolts with nuts and locknuts factory assembled.  1” connection bolts are furnished for this series, when specified with the ordering code noted on page B3.3.1.

To estimate shipping weight per piece, multiply MHC in feet equivalent by 4.1, then add 51 pounds.