Knee and Vee Braces

The following examples illustrate typical installations for Knee and Vee Brace applications. Knee Bracing is generally used with single arm construction, having one end attached to the side of the pole, and the other end to the top or bottom face of the single crossarm.

Vee Bracing, by comparison, is generally used with double arm construction, with one end attached to the side of the pole, and the other end to the side of a spacer fitting. Because of the variance in slope of the brace mounting plane on the spacer fitting body, care must be exercised when selecting the end fitting angle for the spacer fitting end.

Knee and Vee Braces may be ordered by the catalog number developed from codes on page B2.2.2, or by brace type and series along with complete descriptive data. A catalog number indicates "each" units, meaning a single piece of wood with end fittings.

Knee and vee braces may also be installed under the arm, as the need dictates. Please contact the BROOKS Engineering Department for assistance in determining which application best meets your design criteria.
Knee and Vee Brace Ordering Codes

For 414, 415, 416, 429 and 430 Knee Brace Series
For 417, 418, 419, 425, 426 and 450 Vee Brace Series

Ordering Information:

- Brace Series
- Angle End Fitting - Angle (Table 1), Hole Size (Table 2)
- Straight End Fitting - Hole Size (Table 2)
- Number of Feet
- Number of Inches
- Number of \( \frac{1}{8} \) Fractions
- MHC Length (Feet, Inches, Eighths)

### Table 1

<table>
<thead>
<tr>
<th>Bend Code</th>
<th>Degree</th>
</tr>
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<tbody>
<tr>
<td>C</td>
<td>30°</td>
</tr>
<tr>
<td>F</td>
<td>37(\frac{1}{2})°</td>
</tr>
<tr>
<td>J</td>
<td>45°</td>
</tr>
<tr>
<td>L</td>
<td>50°</td>
</tr>
<tr>
<td>M</td>
<td>52(\frac{1}{2})°</td>
</tr>
</tbody>
</table>

**Additional angles are available**

### Table 2

<table>
<thead>
<tr>
<th>Hole Code</th>
<th>Size</th>
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<tbody>
<tr>
<td>5</td>
<td>(\frac{11}{16})&quot;</td>
</tr>
<tr>
<td>6</td>
<td>(\frac{13}{16})&quot;</td>
</tr>
<tr>
<td>7</td>
<td>(\frac{15}{16})&quot;</td>
</tr>
<tr>
<td>8</td>
<td>1(\frac{1}{16})&quot;</td>
</tr>
</tbody>
</table>

Ordering Example: 415-F6M6-07014 = 1 Knee Brace, \(3\frac{3}{4}\)" x \(4\frac{3}{4}\)" wood, angle fitting 37\(\frac{1}{2}\)° (degree) with \(\frac{13}{16}\)" hole, and 52\(\frac{1}{2}\)° (degree) with \(\frac{13}{16}\)" hole, MHC = 7'-1\(\frac{1}{2}\)". Approximate shipping weight = 43 lbs. per piece.

Ordering Example: 419-J6J7-1006 = 1 Vee Brace, \(3\frac{3}{4}\)" x \(5\frac{3}{4}\)" wood, angle fitting 45° (degree) with \(\frac{15}{16}\)" hole, and 45° (degree) with \(\frac{13}{16}\)" hole, MHC = 10'-6". Approximate shipping weight = 65 lbs. per piece.

BROOKS has a wide variety of additional brace sizes to meet your specific requirements that are not illustrated in this general catalog. For assistance in identifying the brace best suited to your applications, contact BROOKS Engineering Department.
**414 Series Knee Braces**

**417 Series Vee Braces**

Wood Section - $2\frac{3}{4}" \times 3\frac{1}{2}"$. Standard Holes - $\frac{13}{16}"$. $\frac{11}{16}"$ holes are also available for this series.

To estimate shipping weight per piece, multiply MHC in feet equivalent by 2.5, then add 13 pounds.

![414 Series Knee Brace Diagram](attachment:image1.png)

**415 Series Knee Braces**

**418 Series Vee Braces**

Wood Section - $3\frac{3}{8}" \times 4\frac{7}{8}"$. Standard Holes - $\frac{15}{16}"$. $\frac{13}{16}"$ holes are also available for this series.

To estimate shipping weight per piece, multiply MHC in feet equivalent by 3.8, then add 16 pounds.

![415 Series Knee Brace Diagram](attachment:image2.png)
416 Series Knee Braces

20,000 Lbs. Ultimate Tensile Capacity

419 Series Vee Braces

20,000 Lbs. Ultimate Tensile Capacity

Wood Section - 3 3/8" x 5 5/8". Standard Holes - 15/16". 13/16" holes are also available for this series.

To estimate shipping weight per piece, multiply MHC in feet equivalent by 4.7, then add 16 pounds.

416 Series Knee Brace

See Table 1 on Page B3.2.1

419 Series Vee Brace

See Table 1 on Page B3.2.1

450 Series Vee Braces

30,000 Lbs. Ultimate Tensile Capacity

Wood Section - 3 5/8" x 7 1/2". Standard Holes - 15/16". 1 1/16" holes are also available for this series.

To estimate shipping weight per piece, multiply MHC in feet equivalent by 7.0, then add 39 pounds.

450 Series Vee Brace

See Table 1 on Page B3.2.1
429 Series Knee Braces
35,000 Lbs. Ultimate Tensile Capacity

425 Series Vee Braces
35,000 Lbs. Ultimate Tensile Capacity

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

To estimate shipping weight per piece, multiply MHC in feet equivalent by 4.1, then add 42 pounds.

425 Series Vee Brace

430 Series Knee Braces
35,000 Lbs. Ultimate Tensile Capacity

426 Series Vee Braces
35,000 Lbs. Ultimate Tensile Capacity

Wood Section - 3 1/2" x 5 1/2".  Standard Holes - 15/16".  1 1/16" holes are also available for this series.

To estimate shipping weight per piece, multiply MHC in feet equivalent by 5.0, then add 42 pounds.

426 Series Vee Brace