Barrette Structural Distribution Inc. manufactures TRIFORCE®, an engineered floor joist that features a triangulated configuration for strength with an open-web that provides easy installation of mechanical, plumbing and electrical. TRIFORCE® made-to-stock open joist is constructed entirely of wood and assembled using finger-joint technology.

TRIFORCE® open joist is trimmable up to 2 feet at one end to accommodate dimension changes and out-of-square foundations. Individually tested and produced in a state-of-the-art robotic manufacturing facility, TRIFORCE® open joist has surpassed industry standards by establishing a new level of excellence in the engineering of floor systems, while optimizing the use of lumber in its components. The TRIFORCE® open joist provides... Peace of mind underfoot!™

See the TRIFORCE® evaluation report at: www.iapmoes.org/EvaluationReports
Mid Span Strongback Bridging

Strongbacks contribute to floor system performance but are not required by ICC IRC/IBC code.

Maximum Allowable Live Loads for Residential Application

<table>
<thead>
<tr>
<th>Depth</th>
<th>9 1/2&quot;</th>
<th>11 7/8&quot;</th>
<th>14&quot;</th>
<th>16&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot;</td>
<td>15 psf</td>
<td>15 psf</td>
<td>15 psf</td>
<td>15 psf</td>
</tr>
<tr>
<td>2&quot;</td>
<td>15 psf</td>
<td>15 psf</td>
<td>15 psf</td>
<td>15 psf</td>
</tr>
<tr>
<td>3&quot;</td>
<td>15 psf</td>
<td>15 psf</td>
<td>15 psf</td>
<td>15 psf</td>
</tr>
<tr>
<td>4&quot;</td>
<td>15 psf</td>
<td>15 psf</td>
<td>15 psf</td>
<td>15 psf</td>
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</tbody>
</table>

Notes:
1. The indicated loads are based on simple span joist, measured center to center of bearings.
2. Minimum end bearing length is 1½".
3. Live Load deflection is limited to L/240.
4. The indicated load are based on the Allowable Stress Design method as per NDS, ICC IBC/IRC code.
5. The considered subfloor is a "20 oc APA rated panel" for joist's spacing of 12", 16" and 19.2".
6. The indicated spans are based on simple span joists.
7. Minimum end bearing length is 1½", bold spans require web stiffeners at OSB end panel.
8. The considered subfloor is a "20 oc APA rated panel" for joist's spacing of 12", 16" and 19.2".
9. The indicated loads are based on simple span joists.
10. Minimum end bearing length is 1½", bold spans require web stiffeners at OSB end panel.
11. Maximum loads are measured center to center of bearings.
12. Total Load deflection is limited to L/240.
13. The indicated spans are based on the Allowable Stress Design method as per NDS, ICC IBC/IRC code.
14. The indicated loads are based on the Allowable Stress Design method as per NDS, ICC IBC/IRC code.
15. The considered subfloor is a "20 oc APA rated panel" for joist's spacing of 12", 16" and 19.2".
16. The indicated loads are based on the Allowable Stress Design method as per NDS, ICC IBC/IRC code.
17. Refer to appropriate sections of the Specifier Guide for installation guidelines and construction details.

Maximum Allowable Spans for Residential Application

Glued And Nailed, L/480

<table>
<thead>
<tr>
<th>Depth</th>
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<th>DL+15 psf</th>
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<tbody>
<tr>
<td>9 1/2&quot;</td>
<td>OJ314</td>
<td>16'-0&quot;</td>
<td>19'-2&quot;</td>
</tr>
<tr>
<td></td>
<td>OJ418</td>
<td>18'-0&quot;</td>
<td>20'-0&quot;</td>
</tr>
<tr>
<td>11 7/8&quot;</td>
<td>OJ334</td>
<td>16'-0&quot;</td>
<td>19'-2&quot;</td>
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<tr>
<td></td>
<td>OJ435</td>
<td>18'-0&quot;</td>
<td>20'-0&quot;</td>
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<td>14&quot;</td>
<td>OJ335</td>
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<td>19'-2&quot;</td>
</tr>
<tr>
<td></td>
<td>OJ435</td>
<td>18'-0&quot;</td>
<td>20'-0&quot;</td>
</tr>
<tr>
<td>15&quot;</td>
<td>OJ335</td>
<td>16'-0&quot;</td>
<td>19'-2&quot;</td>
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<tr>
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<td>OJ435</td>
<td>18'-0&quot;</td>
<td>20'-0&quot;</td>
</tr>
</tbody>
</table>

Notes:
1. The indicated spans are based on simple span joists.
2. Minimum end bearing length is 1½", bold spans require web stiffeners at OSB end panel.
3. Maximum spans are measured centerline to centerline of bearing and are based on uniformly loaded joists.
4. Total Load deflection is limited to L/240.
5. Live Load deflection is limited to L/480.
6. The indicated spans are based on the Allowable Stress Design method as per NDS, ICC IBC/IRC code.
7. The considered subfloor is a "20 oc APA rated panel" for joist's spacing of 12", 16" and 19.2".
8. Maximum loads are measured centerline to centerline of bearing and are based on uniformly loaded joists.
9. Total Load deflection is limited to L/240.
10. The indicated spans are based on the Allowable Stress Design method as per NDS, ICC IBC/IRC code.
11. The considered subfloor is a "20 oc APA rated panel" for joist's spacing of 12", 16" and 19.2".
12. The indicated loads are based on the Allowable Stress Design method as per NDS, ICC IBC/IRC code.
13. Refer to appropriate sections of the Specifier Guide for installation guidelines and construction details.
Typical Details

**Detail 6M**
Knee Wall

- Knee wall
- Knee wall bracing: min. 7/16" Plywood or OSB excepted where indicated otherwise by the project designer.

**Detail 3P1**
End to End Joist

- Foundation, bearing wall or beam
- Blocking not required between joists for detached one- and two-family dwellings, assigned to Seismic Design Category A, B or C or located where the mapped $S_f<0.4g$

**Detail 3P1B**
End to End Joist with Bearing Wall Above

- Typical Blocking
- Foundation, bearing wall or beam

**Detail 8P**
Cantilevered Joist

- Rim Board
- Typical Blocking
- Foundation or Bearing wall or Beam
- The joists must have the bottom flange retained by 1x3 SPF#3/ Stud or resilient channels at 16" c/c

**Detail 13M**
Cantilever Perpendicular to Open Joist

- Wood piece for levelling
- Support fixed to knee wall
- Foundation or Bearing wall or Beam
- *Blocking not illustrated at bearing.

**Detail 6R1B**
Rim Board and Blocking at Exterior Wall

- Foundation or Bearing wall or Beam
- Joist blocking for lateral wall bracing if required by local building code

**Detail 4**
Wood Beam Connections with Hanger

- Hanger*
- Wood beam
- * top mount or face mount hangers

**Detail 10**
Reinforcement for a Concentrated Side Load

- Reinforcements: need to be analyzed in Analyzer software to have all material requirements (sizes, quantities, etc.)

**Detail 11**
Reinforcement for a Concentrated Top Load

- Reinforcements: need to be analyzed in Analyzer software to have all material requirements (sizes, quantities, etc.)

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Evaluation Reports

- ICC
- ES
- UES
- Intertek

Fire-Resistant Assemblies
Spec ID #35685
Available Joist Sizes

TRIFORCE® open joist is produced in several depths and lengths to fulfill floor framing needs. Lengths are offered in two foot increments due to their 24" trimmability.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Series</th>
<th>Weight lbs/ft</th>
<th>Stock Lengths (feet)</th>
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</thead>
<tbody>
<tr>
<td>9 ½&quot;</td>
<td>OJ314</td>
<td>2.70</td>
<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
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<tr>
<td></td>
<td>OJ418</td>
<td>3.35</td>
<td>$ $ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
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<tr>
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<tr>
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<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
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<tr>
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<tr>
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</tr>
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</table>

✔ = In stock
$ = Limited inventory. Please contact your representative to determine quantities.

Mechanical Clearances

Maximum Size of Pipes, Ducts and Cable Trays Through Diagonal Web Members

<table>
<thead>
<tr>
<th>Depth</th>
<th>Round D</th>
<th>Square W x H</th>
<th>Rectangular W x L</th>
</tr>
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<tbody>
<tr>
<td>9½&quot;</td>
<td>5&quot;</td>
<td>4&quot; x 6&quot;</td>
<td>3&quot; x 9&quot;</td>
</tr>
<tr>
<td>11¾&quot;</td>
<td>7¼&quot;</td>
<td>5½&quot; x 5½&quot;</td>
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<tr>
<td>14&quot;</td>
<td>8¾&quot;</td>
<td>6½&quot; x 6½&quot;</td>
<td>3&quot; x 14&quot;, 6&quot; x 8&quot;</td>
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<tr>
<td>16&quot;</td>
<td>9½&quot;</td>
<td>7½&quot; x 7½&quot;</td>
<td>3&quot; x 15&quot;</td>
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</table>