The ONLY code compliant concrete-filled steel column!

Choose your column size and length.

Choose your cap plate.

Choose your base plate.

The ONLY code compliant concrete-filled steel column!

The leader in concrete-filled steel columns since 1929

ICC tested columns. Report number 94-53

www.DeanColumn.com

Shipping Address:
Dean Column Co., Inc.
210 Upham St.
Fitchburg, MA 01420
Phone: 800.442.3455
or 631.285.1822
www.DeanColumn.com

Mailing Address:
Dean Column Co., Inc.
PO Box 529
Bohemia, NY 11716

www.DeanColumn.com
What is the Lally Lock System?

Mix and Match plates for any installation!

The Lally Lock System is made up of three components:
The new Lally Lock column: This column has the same strength as our old style but has an embedded fastening unit in the top of the column. The embedded fastening unit is made up of a 6" anchoring bolt threaded into a 1 1/4" coupling nut, which is embedded in the concrete. A welded steel disc finishes the top of the column.
The Lally Lock cap plates: These plates are designed to accept a 1/2" bolt that is screwed into the coupling nut inside the embedded fastening unit.
The Lally Lock base plates: The adjustable base set allows for 3" adjustment and is fastened to the column with concrete screws. The base plates with the ring prevents lateral displacement. The Lally Lock base plate is connected to the column with a concrete screw.

Lally Lock System Advantages

- Code Compliant
- ICC tested
- Uplift protection
- Patent Pending
- Designed for New Construction and Remodeling
- Fits any 3 1/2" or 4" column
- Save time

Combination Examples:

- No More Cutting
  Our columns are made in 3" increments and the adjustable base set has a 3" adjustment.
- One Man Install
  Using our beam plate, you can hang the column with our exclusive key hole design.
- No More Welding
  The cap plate is connected to the column using our embedded fastening unit.
  The base plate is connected with concrete screws.

Plate Load Table

<table>
<thead>
<tr>
<th>Beam Plate</th>
<th>Douglas Fir (lbs.)</th>
<th>Spruce Pine Fir (lbs.)</th>
<th>LVL (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 1/8&quot; x 4&quot; x 1 1/2&quot; (2) 2x2-12</td>
<td>15,000</td>
<td>10,200</td>
<td>-</td>
</tr>
<tr>
<td>3 5/8&quot; x 8&quot; x 1 1/4&quot; (2) LVL</td>
<td>-</td>
<td>-</td>
<td>21,750</td>
</tr>
<tr>
<td>4 5/8&quot; x 8&quot; x 1 1/4&quot; (3) 2x2-12</td>
<td>22,500</td>
<td>15,300</td>
<td>-</td>
</tr>
<tr>
<td>5 3/8&quot; x 8&quot; x 1 1/4&quot; (3) LVL</td>
<td>-</td>
<td>-</td>
<td>32,250</td>
</tr>
<tr>
<td>6 1/8&quot; x 8&quot; x 1 1/4&quot; (4) 2x2-12</td>
<td>30,000</td>
<td>20,400</td>
<td>-</td>
</tr>
<tr>
<td>7 1/8&quot; x 8&quot; x 1 1/4&quot; (4) LVL</td>
<td>-</td>
<td>-</td>
<td>42,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Saddle Plate</th>
<th>12 gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 1/8&quot; x 4&quot; x 1 1/2&quot; (2) 2x2-12</td>
<td>21,563</td>
</tr>
<tr>
<td>3 5/8&quot; x 4&quot; x 1 1/2&quot; (2) LVL</td>
<td>-</td>
</tr>
<tr>
<td>4 5/8&quot; x 4&quot; x 1 1/2&quot; (3) 2x2-12</td>
<td>32,344</td>
</tr>
<tr>
<td>5 3/8&quot; x 4&quot; x 1 1/2&quot; (3) LVL</td>
<td>-</td>
</tr>
<tr>
<td>6 1/8&quot; x 4&quot; x 1 1/2&quot; (4) 2x2-12</td>
<td>43,125</td>
</tr>
<tr>
<td>7 1/8&quot; x 4&quot; x 1 1/2&quot; (4) LVL</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard Plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 3/8&quot; x 5 5/8&quot; x 1 1/8&quot; (3) 2x2-12 or (3) LVL</td>
</tr>
</tbody>
</table>

1. Compression perpendicular to grain is 625 psi Douglas Fir, 425 psi Spruce Pine Fir and 750 psi LVL.
2. All values are for both 3 1/2" and 4" columns.
**Cap Plates**

- **Lally Lock Cap**
  - Made from 1/4" low carbon steel. The plate has two keyholes and two 3/8" holes with a 19/32" counter sunk hole in the center of the plate to accept a 1/2" bolt. The plate can be used for a 3 1/2" or 4" column.
  - **Red fasteners are for LVL**
  - **Gray fasteners are for 2x's**

**Base Plates**

- **Lally Lock Beam Plate**
  - Made from 12 gauge low carbon steel with eight 3/16" holes. A specially designed hole and bolt to connect the plate to the column is located in the center of the plate. Painted black.

**Adjustable Base Set**

- **3 1/2" column set includes:**
  - (1) Base plate: 4 7/8" x 4 7/8" x 3/8" plate with (4) 1/2" threaded holes and (2) 5/16" counter sunk holes for concrete screws.
  - (1) Bearing plate: 4 7/8" x 9" x 1/4" plate with (4) keyholes for concrete screws (2) 5/8" dimples and (2) 1/2" threaded holes.

- **4" column set includes:**
  - (1) Base plate: 5 3/8" x 5 3/8" x 3/8" plate with (4) 1/2" threaded holes and (2) 5/16" counter sunk holes for concrete screws.
  - (1) Bearing plate: 5 3/8" x 9 1/2" x 1/4" plate with (4) keyholes for concrete screws (2) 5/8" dimples and (2) 1/2" threaded holes.

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**End Plate**

Made from 1/4" low carbon steel with four exclusively designed keyholes. A 1" steel collar is welded to the plate to fit both 3 1/2" OD or 4" OD columns. Four concrete screws are included to fasten to your footing (5/16" hex drive or regular screw driver bit not included). This plate is designed for a base plate. The steel collar ensures against lateral displacement. For uplift protection the plate must be welded to the column. Painted black.

**Lally Lock Base Plate**

- Made from 5 3/8" x 5 3/8" x 1/8" low carbon steel. The plate has two 5/16" holes, four raised lugs to fit the column size, two 1/4" slotted holes, four 3/8" oval holes, one 1/4" counter sink hole and one phillips head concrete screw (phillips head bit not included). Available to fit both 3 1/2" OD or 4" OD columns. Unpainted.

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**Beam Plate with ring**

- Theses plates need to be welded to comply with code.

**Saddle Plate with ring**

- Theses plates need to be welded to comply with code.
Deadweight loads.

Kips: A unit of weight (equal to 1,000 pounds) that is used to express deadweight loads.

Live Load: A Dynamic load (such as traffic) that is applied to a structure suddenly or that is accompanied by vibration, oscillation, or other conditions that affects its intensity.

Dead Load: A static load due to the weight of the structure.

Live Load: A Dynamic load due to the weight of the structure.

Ultimate Load: The specific load that a structure, member or part must withstand without failure.

Safe Load: A load determined by using a safety factor.

Safety Factor: A factor that engineers use to allow for the failure stress or error in the strength, rigidity, deformation and endurance of a structure or its component part to compensate for irregularities in structural materials and workmanship, uncertainties involved in mathematical analysis and stress distribution, service deterioration and other unevaluated conditions.

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Columns

Dean lightweight concrete-filled columns are made from 16 gauge tubular steel and are available in either 3 1/2" or 4" outside diameter. An embedded fastening unit which includes, a 6" anchoring bolt threaded into a 1 1/4" coupling nut and steel disc with a 9/16" hole, is welded to the inside of the steel tube. The columns are available in lengths from 6 feet to 14 feet. Longer or shorter lengths are available upon request. The steel tubing is manufactured from low carbon steel complying with the requirements of ASTM A513 with a yield strength of 32,000 psi and ultimate strength of 45,000 psi. The tube is filled with concrete having as minimum 28 day compressive strength of 3,000 psi. The columns are then painted with one coat of gray primer.

Column Load Table

<table>
<thead>
<tr>
<th></th>
<th>3 1/2&quot; Safe Load</th>
<th>4&quot; Safe Load</th>
<th>3 1/2&quot; Ultimate Load</th>
<th>4&quot; Ultimate Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-0</td>
<td>16,500#</td>
<td>21,300#</td>
<td>31.0 kips</td>
<td>40.0 kips</td>
</tr>
<tr>
<td>6-6</td>
<td>15,850#</td>
<td>20,650#</td>
<td>29.8 kips</td>
<td>38.8 kips</td>
</tr>
<tr>
<td>7-0</td>
<td>15,200#</td>
<td>20,000#</td>
<td>28.7 kips</td>
<td>37.7 kips</td>
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<tr>
<td>7-3</td>
<td>14,900#</td>
<td>19,675#</td>
<td>28.1 kips</td>
<td>37.0 kips</td>
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<td>N/A</td>
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<td>7-6</td>
<td>14,600#</td>
<td>19,350#</td>
<td>27.5 kips</td>
<td>36.4 kips</td>
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<tr>
<td>7-9</td>
<td>14,300#</td>
<td>19,025#</td>
<td>26.9 kips</td>
<td>35.8 kips</td>
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<tr>
<td>8-0</td>
<td>14,000#</td>
<td>18,700#</td>
<td>26.3 kips</td>
<td>35.2 kips</td>
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<tr>
<td>8-3</td>
<td>13,650#</td>
<td>18,350#</td>
<td>25.6 kips</td>
<td>34.5 kips</td>
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<td>17,650#</td>
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<td>33.2 kips</td>
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<tr>
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<td>17,300#</td>
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<tr>
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<td>16,925#</td>
<td>23.1 kips</td>
<td>31.9 kips</td>
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<tr>
<td>9-6</td>
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<td>16,550#</td>
<td>22.5 kips</td>
<td>31.2 kips</td>
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<tr>
<td>9-9</td>
<td>11,625#</td>
<td>16,225#</td>
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<td>30.5 kips</td>
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<tr>
<td>10-0</td>
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<td>15,800#</td>
<td>21.3 kips</td>
<td>29.8 kips</td>
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<tr>
<td>11-0</td>
<td>10,000#</td>
<td>14,400#</td>
<td>18.7 kips</td>
<td>27.1 kips</td>
</tr>
<tr>
<td>12-0</td>
<td>8,700#</td>
<td>12,900#</td>
<td>16.4 kips</td>
<td>24.3 kips</td>
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<tr>
<td>14-0</td>
<td>N/A</td>
<td>10,200#</td>
<td>N/A</td>
<td>19.2 kips</td>
</tr>
</tbody>
</table>

Ultimate Load: The specific load that a structure, member or part must withstand without failure.

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International Residential Code (IRC)

R502.9 Fastening

Floor framing shall be nailed in accordance with Table R602.3(1). Where posts and beam or girder construction is used to support floor framing, positive connections shall be provided to ensure against uplift and lateral displacement.

R407.3 Structural Requirements

The columns shall be restrained to prevent lateral displacement at the bottom end. Wood columns shall not be less in nominal size than 4 inches by 4 inches (120 mm by 102 mm) and steel columns shall not be less than 3-inch-diameter (76 mm) standard pipe or approved equivalent.

R802.11.1 Uplift Resistance

A continuous load path shall be designed to transmit the uplift forces from the rafter or truss ties to the foundation.