

OTHER PRODUCTS

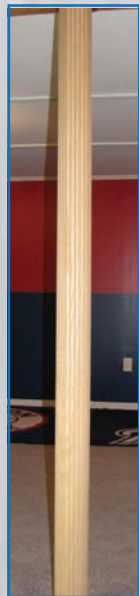


Dean Column
E-Z column Cutter

Before



After



Wrap-A-Round

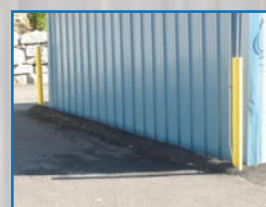
6" OD Column

• 1/4" Ball End Bits for Adjustable Base Set



Wrap-A-Round
Cap and Base

OTHER USES



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

Lally Lock System™

Patent Pending

EASY

1-2-3

INSTALL

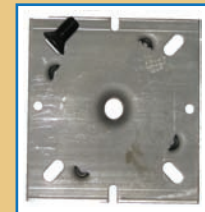
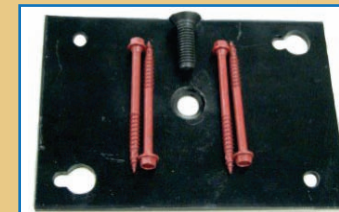
Choose your column size and length.

1



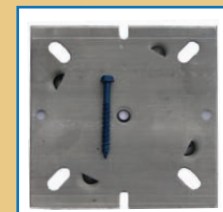
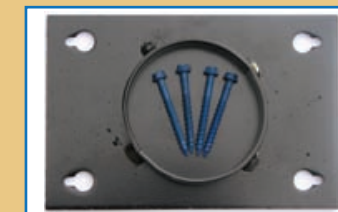
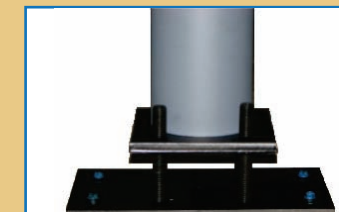
Choose your cap plate.

2



Choose your base plate.

3



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

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
- 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.

Combination Examples:

- No welding for the cap plate
- No welding needing for base plate
- Column can be adjusted 3"
- Fastest and easiest installation
- No cutting needed
- No shimming needed
- Self Leveling
- Cap plate wraps around the beam
- One person install

BEST					
					
Lally Lock Cap w/Lally Lock Base	Lally Lock Cap w/adjustable Base	Lally Lock Beam Plate w/adjustable Base	Beam Plate Base Plate W/Ring	Saddle Plate Lally Lock Base	Saddle Plate W/Adjustable Base
✓	✓	✓	✓	✓	✓
✓	✓	✓		✓	✓
	✓	✓			✓
		✓			
	✓	✓			✓
	✓	✓			✓
	✓	✓			✓
					✓
✓	✓	✓	✓	✓	✓

Plate Load Table

	Douglas Fir (lbs.)	Spruce Pine Fir (lbs.)	LVL (lbs.)
Beam Plate			
3 1/8" x 8" x 1/4" (2) 2x2-12	15,000	10,200	----
3 5/8" x 8" x 1/4" (2) LVL	----	----	21,750
4 5/8" x 8" x 1/4" (3) 2x2-12	22,500	15,300	----
5 3/8" x 8" x 1/4" (3) LVL	----	----	32,250
6 1/8" x 8" x 1/4" (4) 2x2-12	30,000	20,400	----
7 1/8" x 8" x 1/4" (4) LVL	----	----	42,000
<hr/>			
Saddle Plate 12 gauge			
3 1/8" x 4" x 11 1/2" (2) 2x2-12	21,563	14,663	----
3 5/8" x 4" x 11 1/2" (2) LVL	----	----	25,875
4 5/8" x 4" x 11 1/2" (3) 2x2-12	32,344	21,994	----
5 3/8" x 4" x 11 1/2" (3) LVL	----	----	45,281
6 1/8" x 4" x 11 1/2" (4) 2x2-12	43,125	29,325	----
7 1/8" x 4" x 11 1/2" (4) LVL	----	----	60,375
<hr/>			
Standard Plate			
5 3/8" x 5 3/8" x 1/8" (3) 2x2-12 or (3) LVL	14,063	9,563	19,688
<hr/>			
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.			

2

Cap Plates

Lally Lock Cap



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 9/16" counter sink hole and one 1/2" hex head screw (5/16" hex head bit not included). Available to fit both 3 1/2" OD or 4" OD columns. Unpainted.

Lally Lock Beam Plate



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



- Available sizes -----
- 3 1/8" x 8" x 1/4" for 2 2x's • 3 5/8" x 8" x 1/4" for 2 LVL
 - 4 5/8" x 8" x 1/4" for 3 2x's • 5 3/8" x 8" x 1/4" for 3 LVL
 - 6 1/8" x 8" x 1/4" for 4 2x's • 7 1/8" x 8" x 1/4" for 4 LVL

Lally Lock Saddle 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.



- Available sizes -----
- 3 1/8" x 4" x 11 1/2" for (2) 2x's • 5 3/8" x 4" x 11 1/2" for (3) LVL
 - 3 5/8" x 4" x 11 1/2" for (2) LVL • 6 1/8" x 4" x 11 1/2" for (4) 2x's
 - 4 5/8" x 4" x 11 1/2" for (3) 2x's • 7 1/8" x 4" x 11 1/2" for (4) LVL

Additional Caps

Beam Plate with ring



Theses plates need to be welded to comply with code.

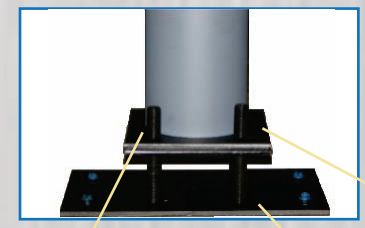
Saddle Plate with ring



3

Base Plates

Adjustable Base Set



Adjustment Screws Bearing Plate Base Plate

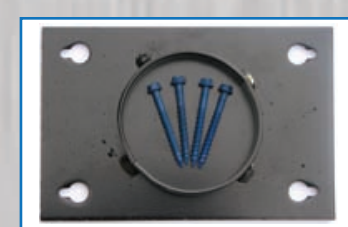
Holds 55,000 pounds
3" adjustment
Self leveling
2 threaded holes in the bearing plate allow the plate to be connected to the base plate.

Both sets include:
(4) 1/2" x 3 1/2" adjustment screws (hardened steel)
(2) Phillips head concrete screws.
(4) Hex head concrete screws.
All Plates Painted Black

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.

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.

- Available sizes -----
- 3 1/8" x 8" x 1/4" • 3 5/8" x 8" x 1/4"
 - 4 5/8" x 8" x 1/4" • 5 3/8" x 8" x 1/4"
 - 6 1/8" x 8" x 1/4" • 7 1/8" x 8" x 1/4"

Lally Lock Base Plate



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.

Column Load Table

	Dean Column Safe Load		Dean Column Ultimate Load	
	3 1/2"	4"	3 1/2"	4"
6-0	16,500#	21,300#	31.0 kips	40.0 kips
6-6	15,850#	20,650#	29.8 kips	38.8 kips
7-0	15,200#	20,000#	28.7 kips	37.7 kips
7-3	14,900#	19,675#	28.1 kips	37.0 kips
7-4	N/A	19,567#	N/A	36.8 kips
7-6	14,600#	19,350#	27.5 kips	36.4 kips
7-9	14,300#	19,025#	26.9 kips	35.8 kips
8-0	14,000#	18,700#	26.3 kips	35.2 kips
8-3	13,650#	18,350#	25.6 kips	34.5 kips
8-6	13,300#	18,000#	25.0 kips	33.9 kips
8-9	12,950#	17,650#	24.4 kips	33.2 kips
9-0	12,600#	17,300#	23.8 kips	32.6 kips
9-3	12,275#	16,925#	23.1 kips	31.9 kips
9-6	11,950#	16,550#	22.5 kips	31.2 kips
9-9	11,625#	16,225#	21.9 kips	30.5 kips
10-0	11,300#	15,800#	21.3 kips	29.8 kips
11-0	10,000#	14,400#	18.7 kips	27.1 kips
12-0	8,700#	12,900#	16.4 kips	24.3 kips
14-0	N/A	10,200#	N/A	19.2 kips

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 stresses assumed to exist in a structure or a member. It provides a margin of error in the strength, rigidity, deformation and endurance of a structure or its component part to compensated for irregularities in structural materials and workmanship, uncertainties involved in mathematical analysis and stress distribution, service deterioration and other unevaluated conditions.

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

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.

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

1

Columns

ICC Tested Columns, Report Number 94-53

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.

Installation Instructions for the Lally Lock Beam Plate and Adjustable Base Set Combination

- Place your beam plate in the location where the column will be installed. Screw in two screws in the small portion of the keyholes, leaving a 1/16" gap between the plate and screw head.
- Slide plate off the two screws and screw the plate onto the embedded fastening unit in the column.
- Screw in the (4) 3 1/2" adjustment screws, 3/8" of an inch, into the base plate.
- Place the base plate on the end of the column, make sure the counter sunk holes are facing out. Align the beam and base plates so they are square. Using a 3/16" concrete drill bit, drill two holes 2 1/4" deep in the center of the two counter sunk holes on the bottom side of the base plate.
- Using the supplied Phillips head screws, fasten the screws into the two holes you just made.
- Use a pry bar or any lever, lift the column up to the beam where you fastened the two screws.
- Locate the screws in the large portion of the keyhole. Slide the column over, locking the plate into place. Tighten the two screws then fasten the last two screws in the round holes in the plate.
- Place the 1/4" bearing plate on the footing under the column. Loosely tighten the two adjustment screws into the 5/8" dimples. Use a level and plum the column.
- Once the column is plum, use a 3/16" concrete drill bit and drill (4) 2 1/4" deep holes in each of the small sections of the keyholes. Fasten with the (4) hex head screws.
- Firmly tighten the adjustment screws in the 5/8" dimples. Once those are tightened screw down until you feel them hit the footing. **Do not over tighten these screws.**
- Fill in the gap between the bottom of base plate and bearing plate. If you are using this for new construction, the 4" slab will fill the gap. If you are using this for a remodel, box out the plates and fill with grout. The concrete or grout must be at least 3,000 psi.

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.