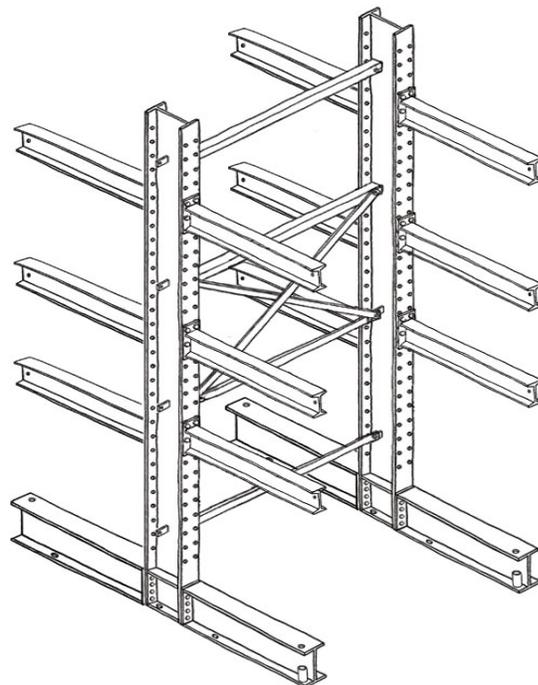


INSTALLATION MANUAL

Patent Pending

For the most current release of this manual,
please visit our website at cogan.com

V.2015.1



MAXIMUM ARM CAPACITY TABLE

ARM LENGTH	Available for Column Type 1 & 2					Column Type 2
	3" MD	4" MD	4" HD	5" HD	5.5" HD	6" XHD
12"	3 810 lbs	6 630 lbs	8 940 lbs	13 860 lbs	20 200 lbs	23 500 lbs
18"	2 540 lbs	4 420 lbs	5 960 lbs	9 240 lbs	13 470 lbs	15 660 lbs
24"	1 900 lbs	3 310 lbs	4 470 lbs	6 930 lbs	10 100 lbs	11 750 lbs
30"	1 520 lbs	2 650 lbs	3 580 lbs	5 540 lbs	8 080 lbs	9 400 lbs
36"	1 270 lbs	2 210 lbs	2 980 lbs	4 620 lbs	6 730 lbs	7 830 lbs
42"	1 090 lbs	1 890 lbs	2 560 lbs	3 960 lbs	5 770 lbs	6 710 lbs
48"	950 lbs	1 660 lbs	2 240 lbs	3 470 lbs	5 050 lbs	5 780 lbs
54"	850 lbs	1 470 lbs	1 990 lbs	3 080 lbs	4 490 lbs	5 220 lbs
60"	760 lbs	1 330 lbs	1 790 lbs	2 770 lbs	4 040 lbs	4 700 lbs
66"	680 lbs	1 200 lbs	1 620 lbs	2 510 lbs	3 670 lbs	4 260 lbs
72"	630 lbs	1 100 lbs	1 480 lbs	2 300 lbs	3 360 lbs	3 910 lbs
78"	580 lbs	1 010 lbs	1 370 lbs	2 120 lbs	3 100 lbs	3 610 lbs
84"	530 lbs	940 lbs	1 270 lbs	1 970 lbs	2 880 lbs	3 350 lbs
90"	500 lbs	870 lbs	1 180 lbs	1 840 lbs	2 680 lbs	3 120 lbs
96"	460 lbs	820 lbs	1 110 lbs	1 720 lbs	2 520 lbs	2 930 lbs

Product	Racking
Sub-product	Cantilever Rack LD Column

- Free-standing structural steel multi-level storage of medium-duty loads
- Structural arms are vertically adjustable on 3" or 4" centers on the uprights
- Single or double sided columns.



A Tradition of Quality Since 1901

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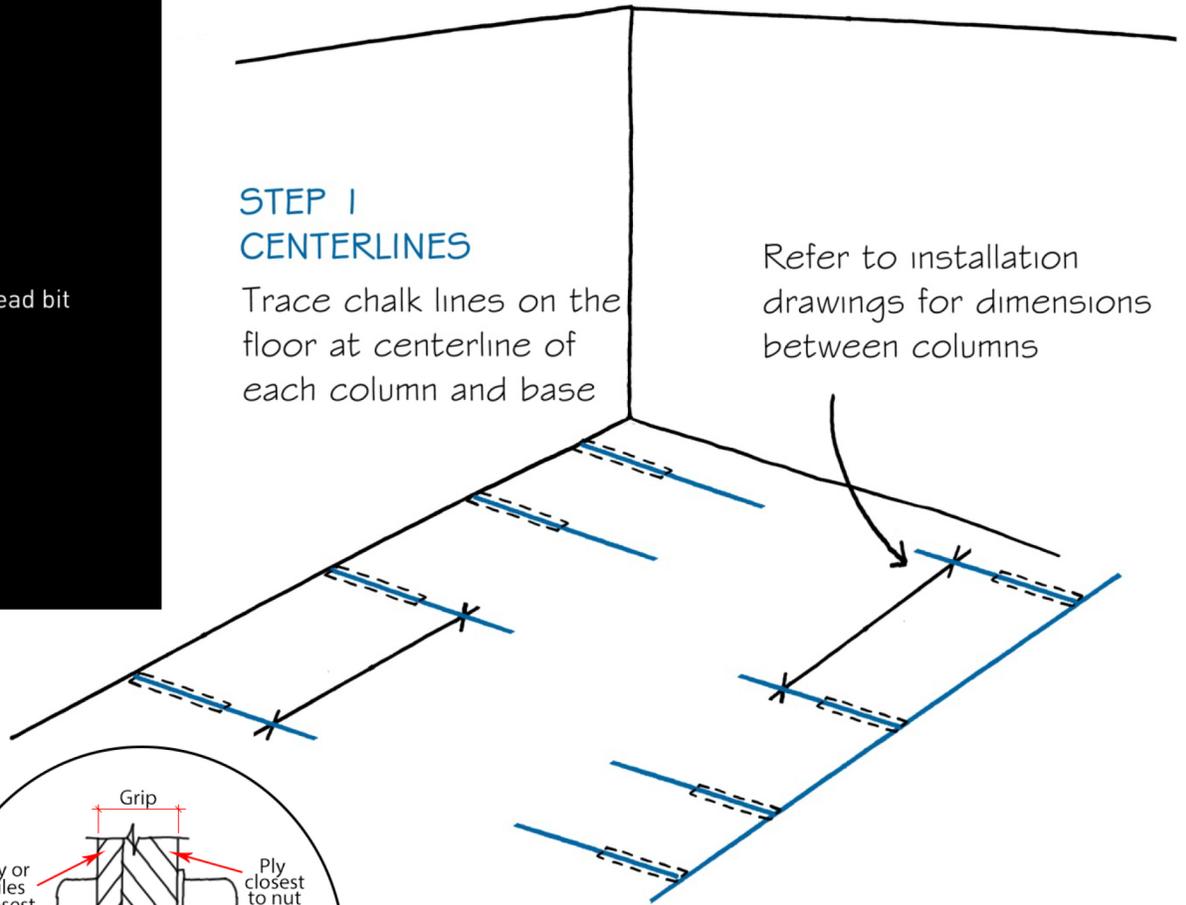
TOOLS

- Measuring tape
- Chalk line
- Hammer
- 4ft Level
- 3/4" Reversible drill with hex head bit
- Safety glasses
- Forklift truck
- Chain sling

STEP 1 CENTERLINES

Trace chalk lines on the floor at centerline of each column and base

Refer to installation drawings for dimensions between columns



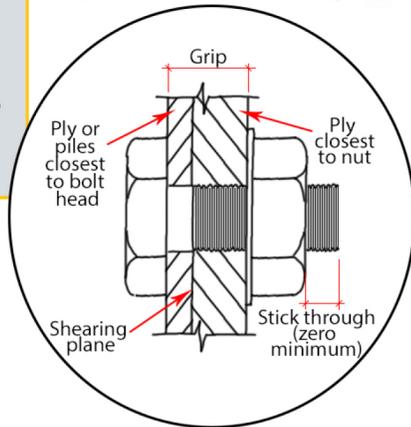
USE ASTM A325
STRUCTURAL BOLTS ONLY



SUGGESTED TORQUE FOR REQUIRED MINIMUM BOLT TENSION :

- ø3/4" Bolt : 275Ft.-Lbs
- ø5/8" Bolt : 155Ft.-Lbs
- ø1/2" Bolt : 79Ft.-Lbs

*** Cogan recommends the periodic inspection of bolted connections using A325 structural bolts to ensure that the bolts are properly tightened.

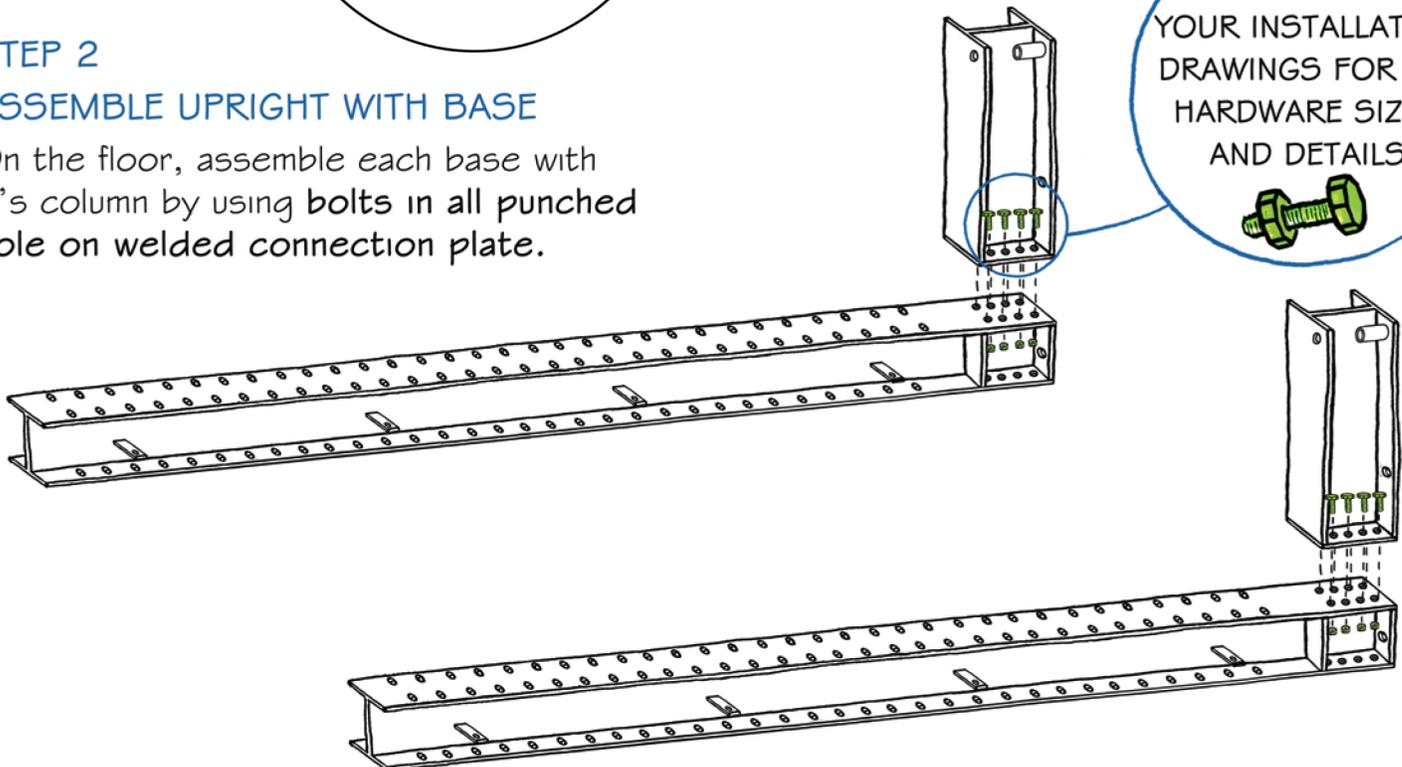


STEP 2 ASSEMBLE UPRIGHT WITH BASE

On the floor, assemble each base with it's column by using bolts in all punched hole on welded connection plate.



REFER TO YOUR INSTALLATION DRAWINGS FOR ALL HARDWARE SIZES AND DETAILS

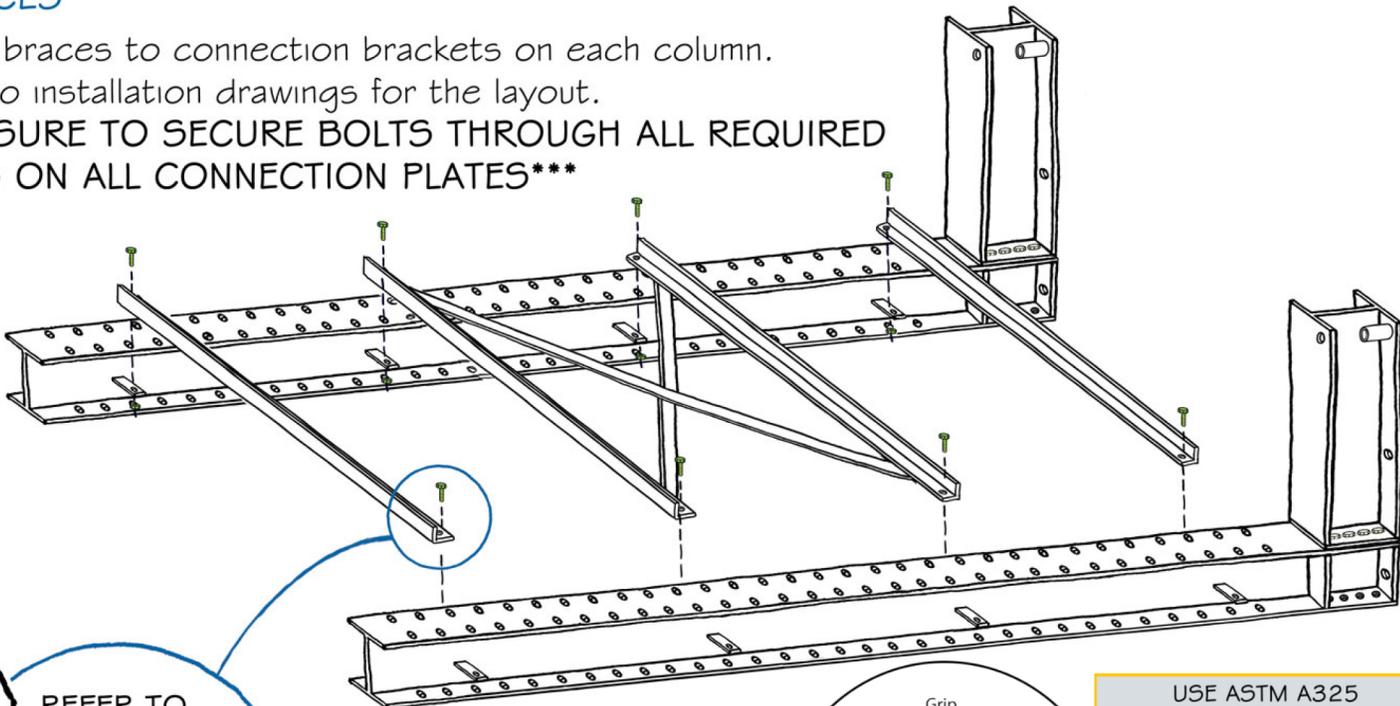


STEP 3

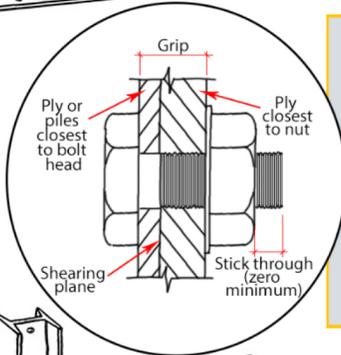
X-BRACES

Attach braces to connection brackets on each column.
Refer to installation drawings for the layout.

*****BE SURE TO SECURE BOLTS THROUGH ALL REQUIRED HOLES ON ALL CONNECTION PLATES*****



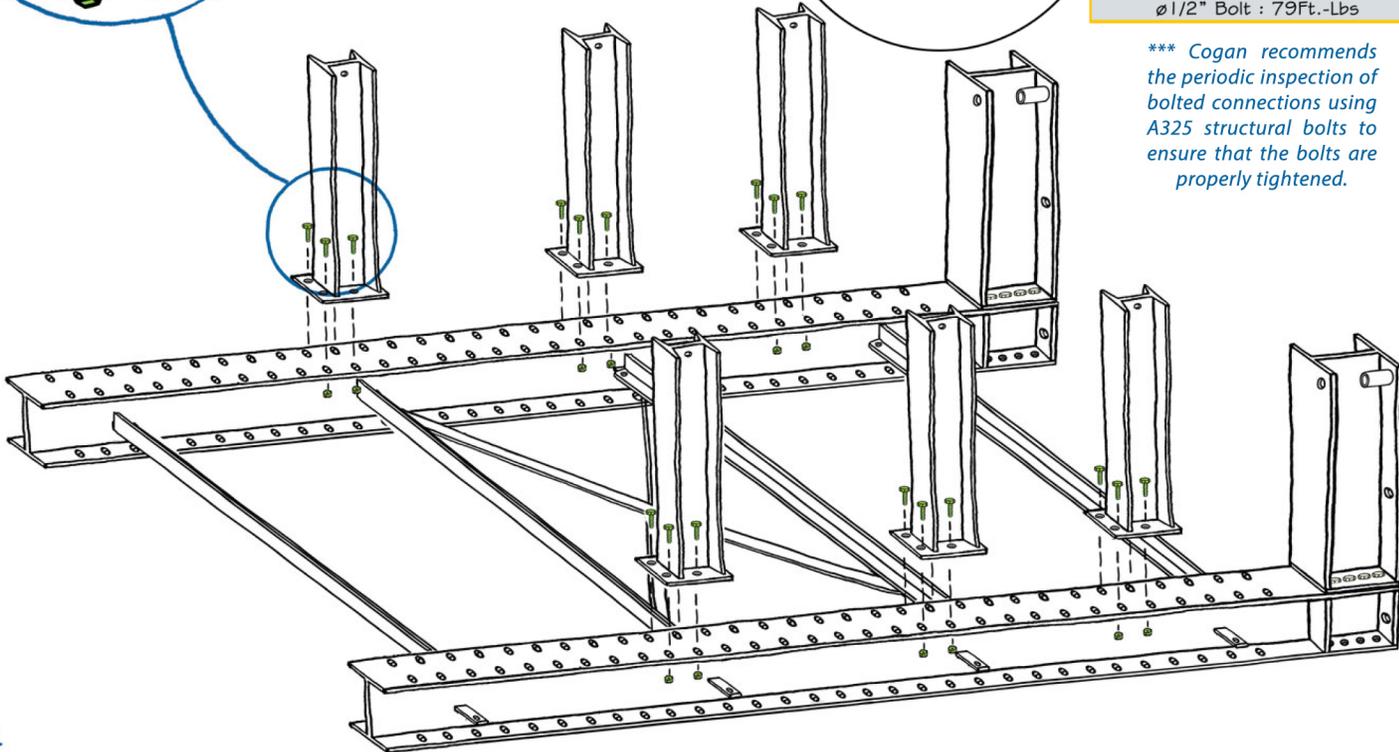
REFER TO
YOUR INSTALLATION
DRAWINGS FOR ALL
HARDWARE SIZES
AND DETAILS



USE ASTM A325
STRUCTURAL BOLTS ONLY

SUGGESTED TORQUE FOR REQUIRED
MINIMUM BOLT TENSION :
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**** Cogan recommends the periodic inspection of bolted connections using A325 structural bolts to ensure that the bolts are properly tightened.*



STEP 4

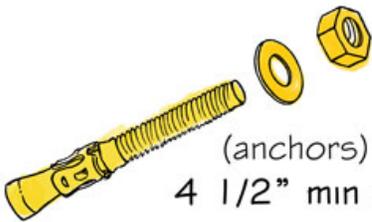
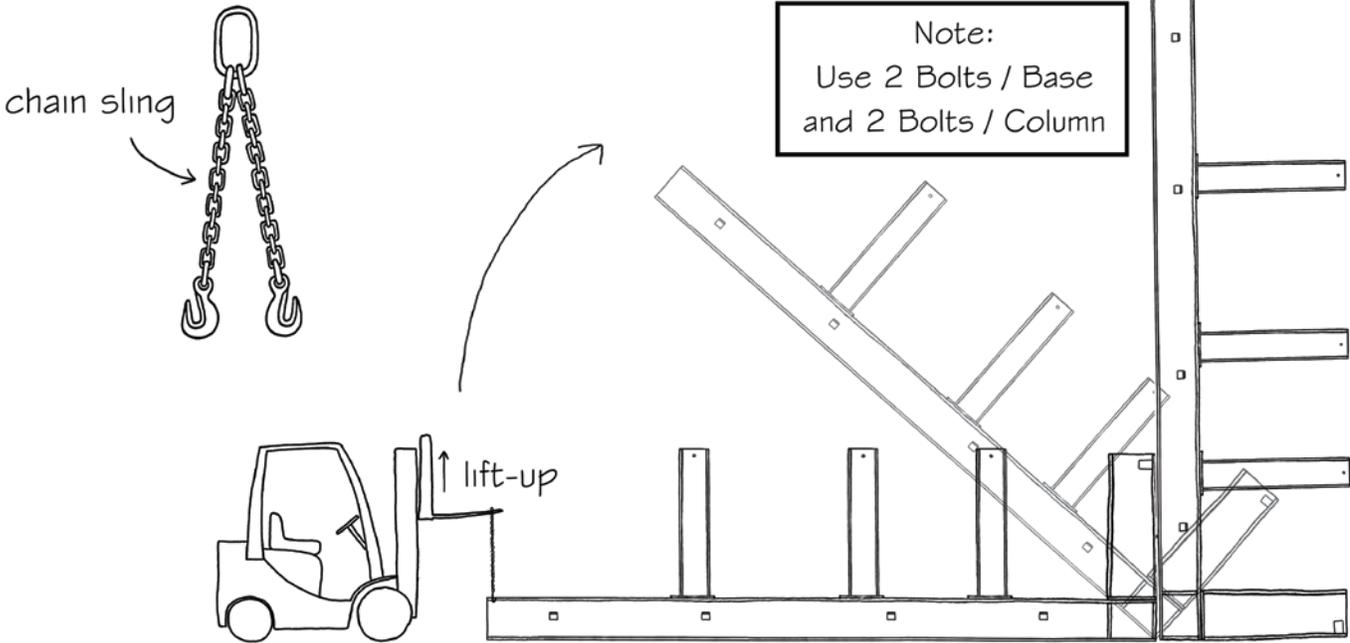
ASSEMBLING ARMS TO COLUMN

Refer to installation drawings for exact spacing of arms and quantity on each column.
Be sure to install the proper arms at the required height on each column. *****BE SURE TO SECURE BOLTS THROUGH ALL REQUIRED HOLES ON ALL CONNECTION PLATES*****

STEP 5

LIFTING-UP AND ANCHORING

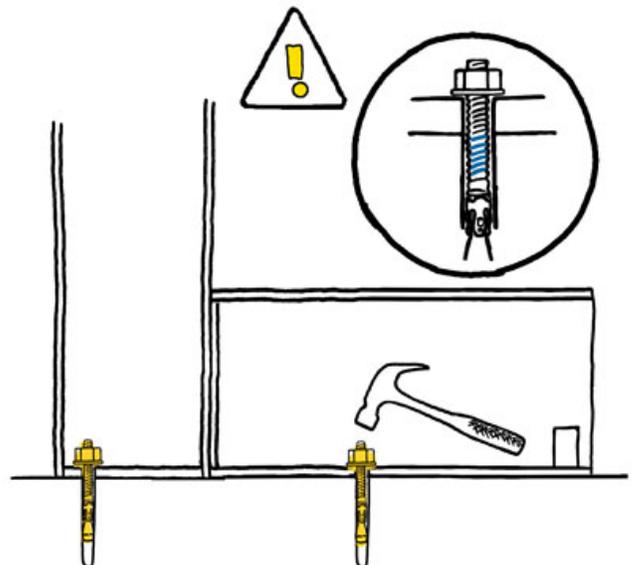
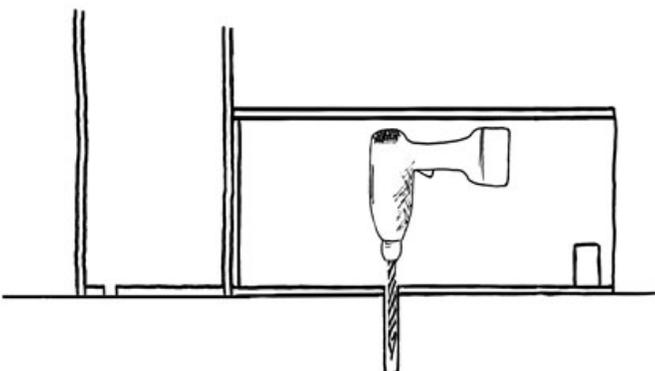
Safely attach a chain sling to your fork lift and to the top of the cantilever rack column. Lift-up slowly and **secure the racking system by anchoring it to the floor each time you lift a rack.**



$\phi 5/8$ "x6" min bolts
(anchors) are used for baseplates
4 1/2" min embedment is required

Hammer drill a hole the same nominal diameter and at least as deep as the length of anchors. For smaller bases, holes on top are punched to help drilling and anchoring properly

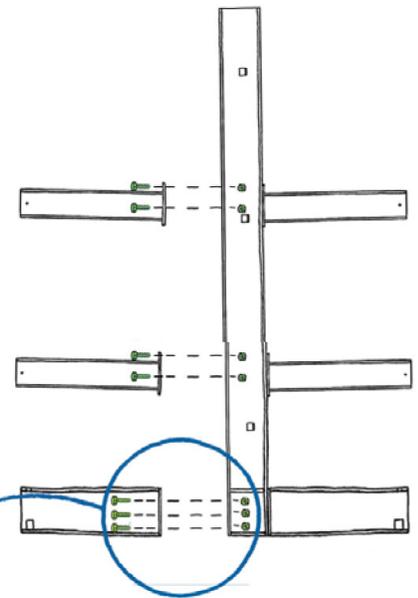
Drive the Hilti bolt in the hole so that at least **6 threads** are below the top surface of fixture. Then tighten to the recommended torque value to achieve proper anchor setting



IF INCLUDED IN YOUR INSTALLATION DRAWINGS, FOLLOW THESE INSTRUCTIONS TO INSTALL THE BACK ARMS AND BASES TO THE UPRIGHTS.

STEP 6
DOUBLE SIDED ARMS AND BASE

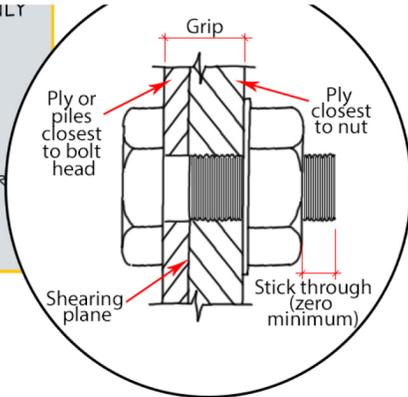
Once the uprights are safely anchored, bolt in the other arms and base at the back of the uprights the same way as in step 2 & 4.



U
STRUCTURAL BOLTS ONLY

SUGGESTED TORQUE FOR REQUIRED MINIMUM BOLT TENSION:

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- ø1/2" Bolt : 79Ft.-Lbs



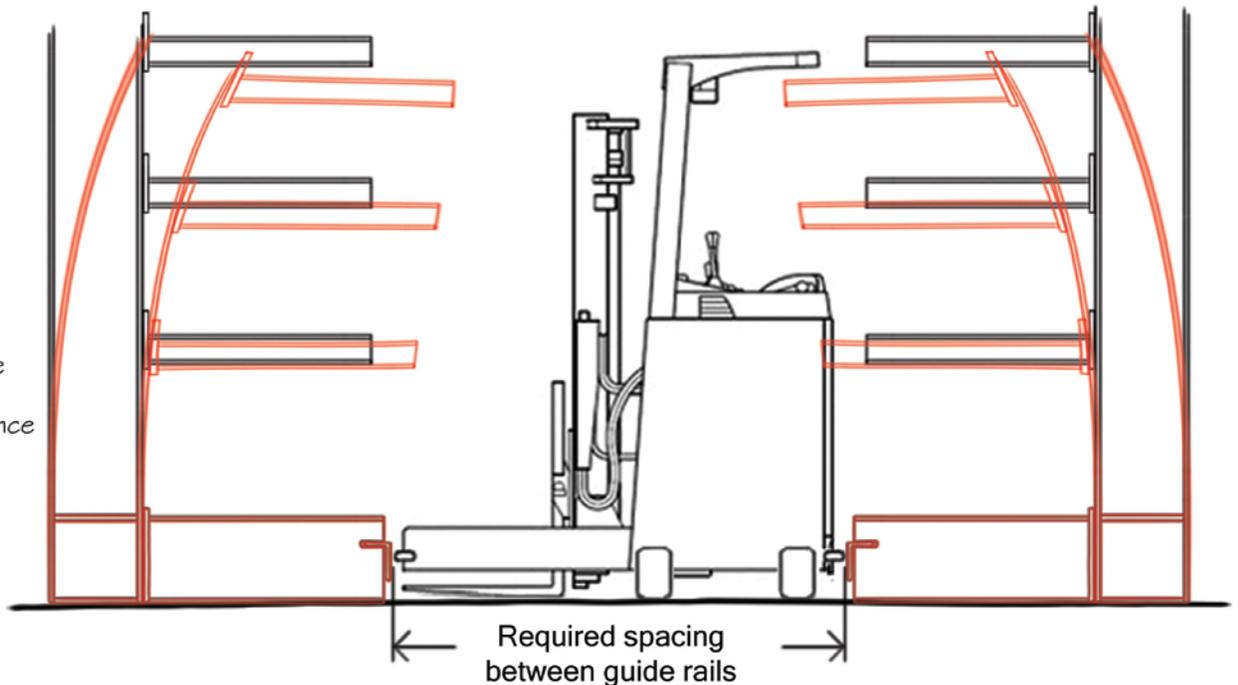
REFER TO YOUR INSTALLATION DRAWINGS FOR ALL HARDWARE SIZES AND DETAILS

*** Cogan recommends the periodic inspection of bolted connections using A325 structural bolts to ensure that the bolts are properly tightened.



Measure the spacing between cantilever rack bases and refer to your installation plans to determine the required spacing between the guide rails.

IMPORTANT:
Due to potential deflection caused by loads that are applied on to the structural arms. It is recommended to have structural arms slightly shorter than the distance between guide rails. This will prevent any interference with the fork lift space.

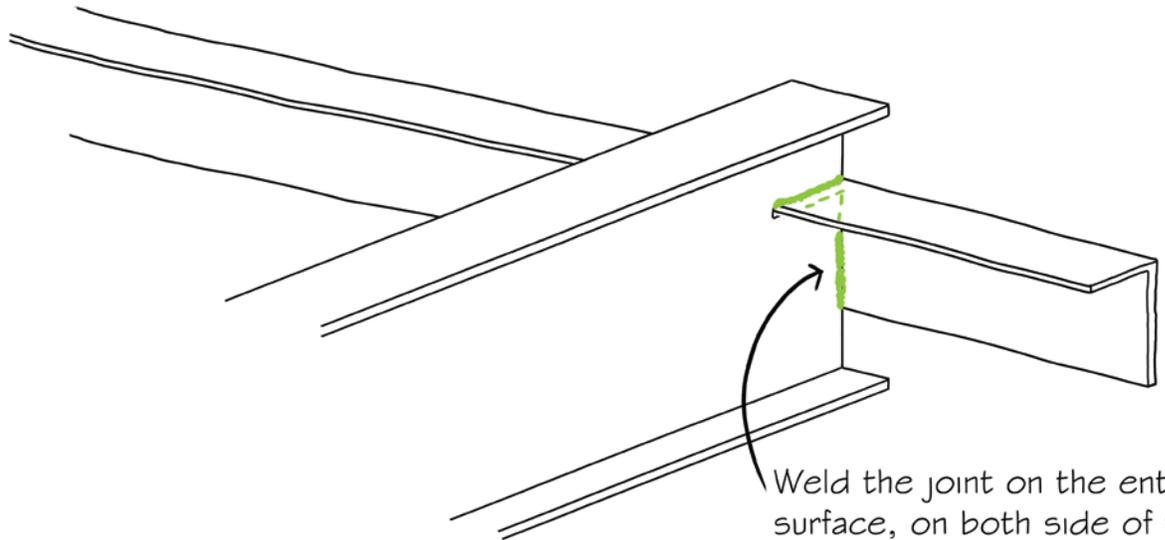


STEP 7

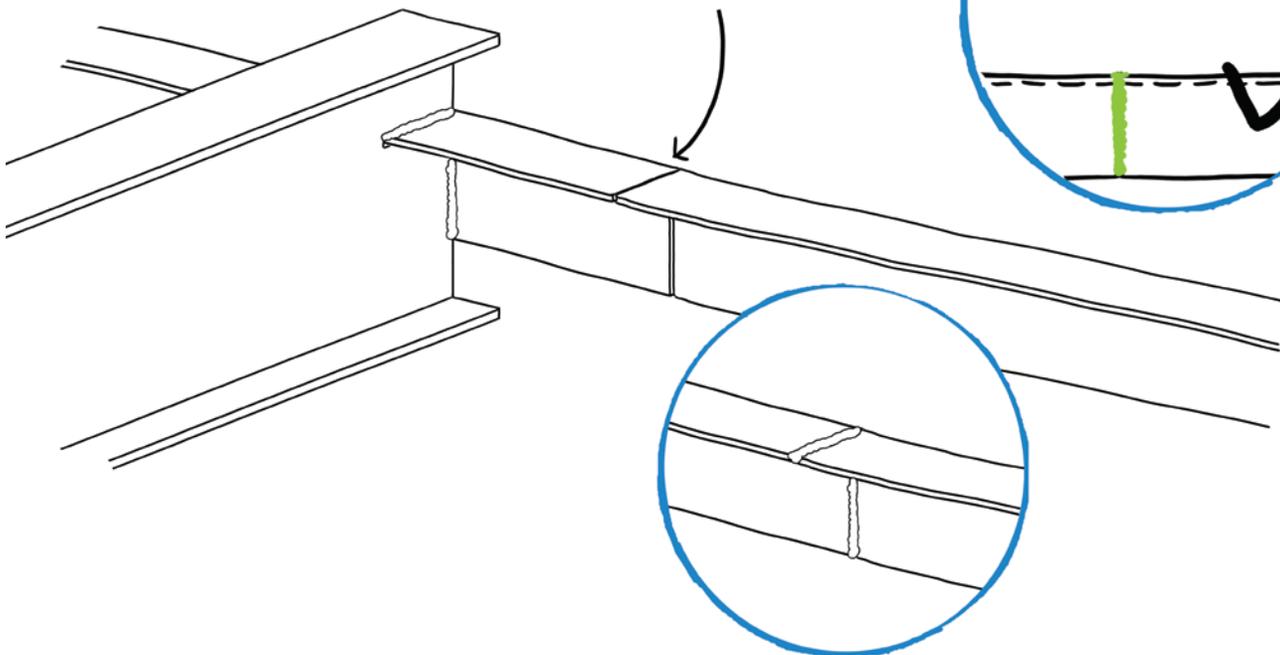
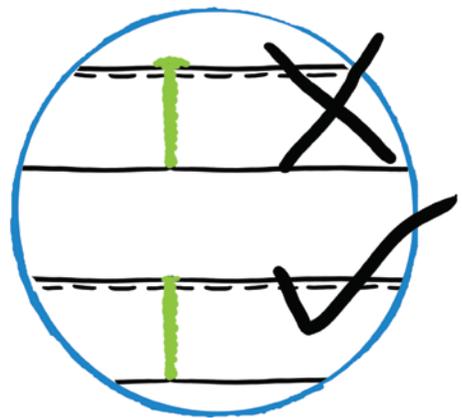
GUIDE RAIL INSTALLATION TYPE I - WELDED TO RACK BASE

Start the installation on one end of the rack aisle by inserting one guide rail into the base. One length of guide rail should be inserted in multiple cantilever rack bases.

Weld the entire joint of the guide rail to the cantilever rack base. Make sure to weld on both sides of the base to ensure full contact for a maximum strength and rigidity. Weld all joints to cantilever base before installing the next guide rail.



Weld the joint on the entire surface, on both side of the guide rail. Make sure the surface facing the aisle stays flat and smooth.



MATERIAL

- **COLUMNS ARE MADE OF STRUCTURAL STEEL, I-BEAM SHAPED; PRE-PUNCHED ON EITHER 3" or 4" CENTERS TO BOLT THE ARMS (REFER TO INSTALLATION PLANS FOR DETAILS). BASE PLATE IS WELDED ON THE BOTTOM OF EACH COLUMN TO BE ANCHORED TO THE FLOOR.**
- **BASES ARE MADE OF STRUCTURAL STEEL, I-BEAM SHAPED, NOTCHED TO RECEIVE THE GUIDE RAIL, WITH WELDED CONNECTION PLATE TO BE BOLTED TO COLUMN.**
- **ARMS ARE MADE OF STRUCTURAL STEEL, I-BEAM SHAPED, WITH WELDED CONNECTION PLATE TO BE BOLTED TO COLUMN.**
- **BRACES ARE MADE OF STRUCTURAL STEEL, PLATE AND L-SHAPED, TO BE BOLTED TO COLUMN.**
- **METAL SHIMS FOR ARM ADJUSTMENT ARE MADE OF 3/4" X 4" STEEL.**
- **GUIDE RAILS ARE MADE OF UNPAINTED STRUCTURAL STEEL. GUARDRAILS ARE MADE OF STRUCTURAL STEEL WITH SECURITY YELLOW POWDER-COATED FINISH.**
- **ALL NECESSARY ASSEMBLY FASTNERS SHALL BE PROVIDED. ANCHORS ARE ONLY PROVIDED BY COGAN AS AN OPTION.**
- **ALL PARTS HAVE A COGAN GREY POWDER-COATED FINISH EXCEPT FOR GUIDE RAIL AND GUARDRAIL.**