

INSTALLATION MANUAL

Patent Pending

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V.2015.1



Product	Racking
Sub-product	Very Narrow Aisle Cantilever Rack

- Welded aisle guide rail and end-of-aisle guardrail to protect the rack bases from fork truck collisions in very narrow aisles.
- Security yellow painted guardrail for maximum visibility.
- On-site welding required. All welding must be done by a certified welder.

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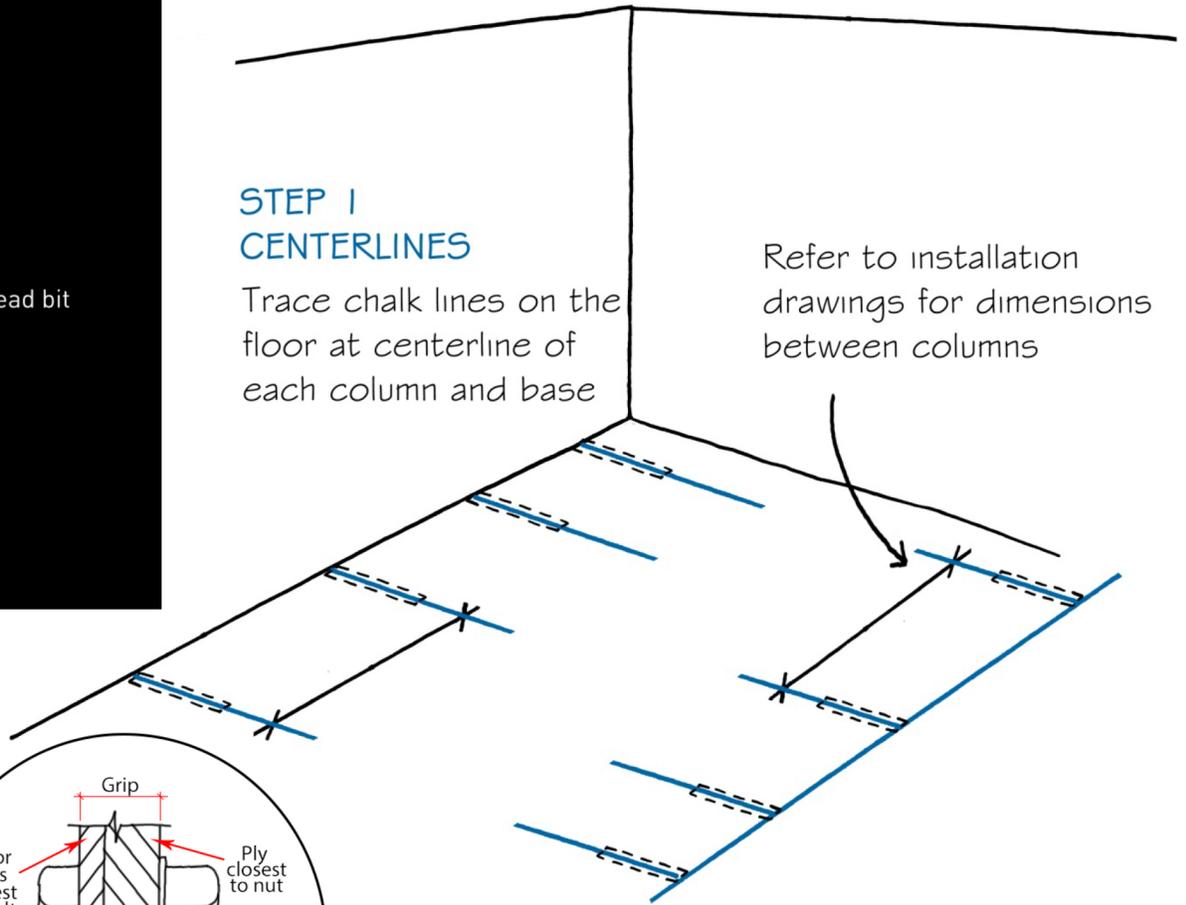
TOOLS

- 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

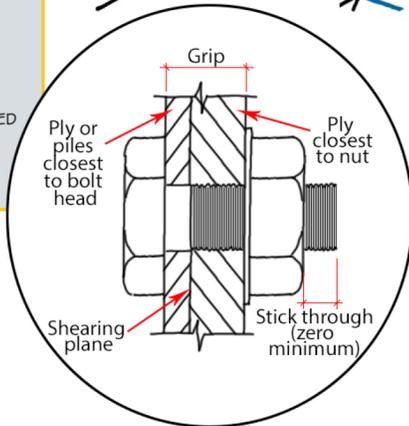


USE ASTM A325
STRUCTURAL BOLTS ONLY



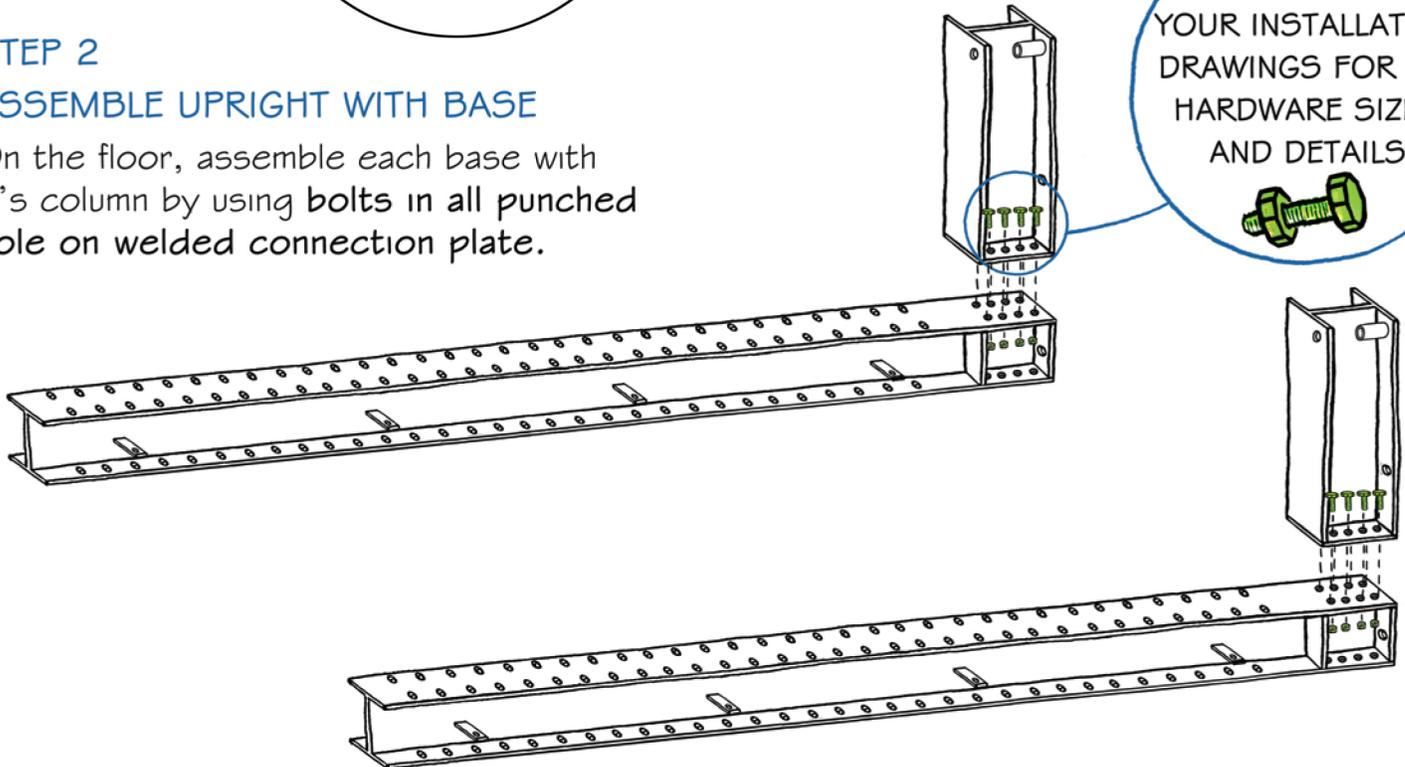
SUGGESTED TORQUE FOR REQUIRED
MINIMUM BOLT TENSION :
 ø3/4" Bolt : 275Ft.-Lbs
 ø5/8" Bolt : 155Ft.-Lbs
 ø1/2" Bolt : 79Ft.-Lbs

*** 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.

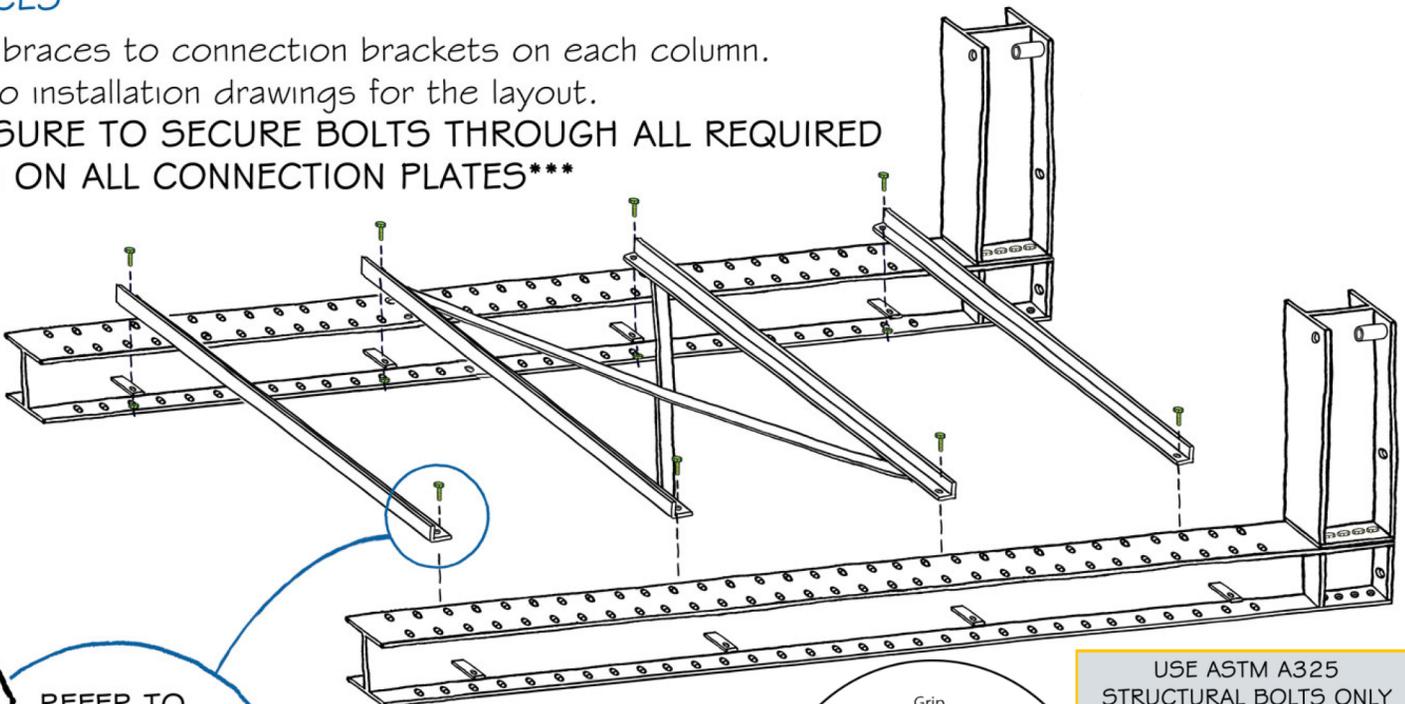


STEP 3

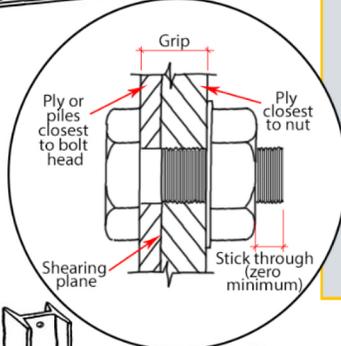
X-BRACES

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

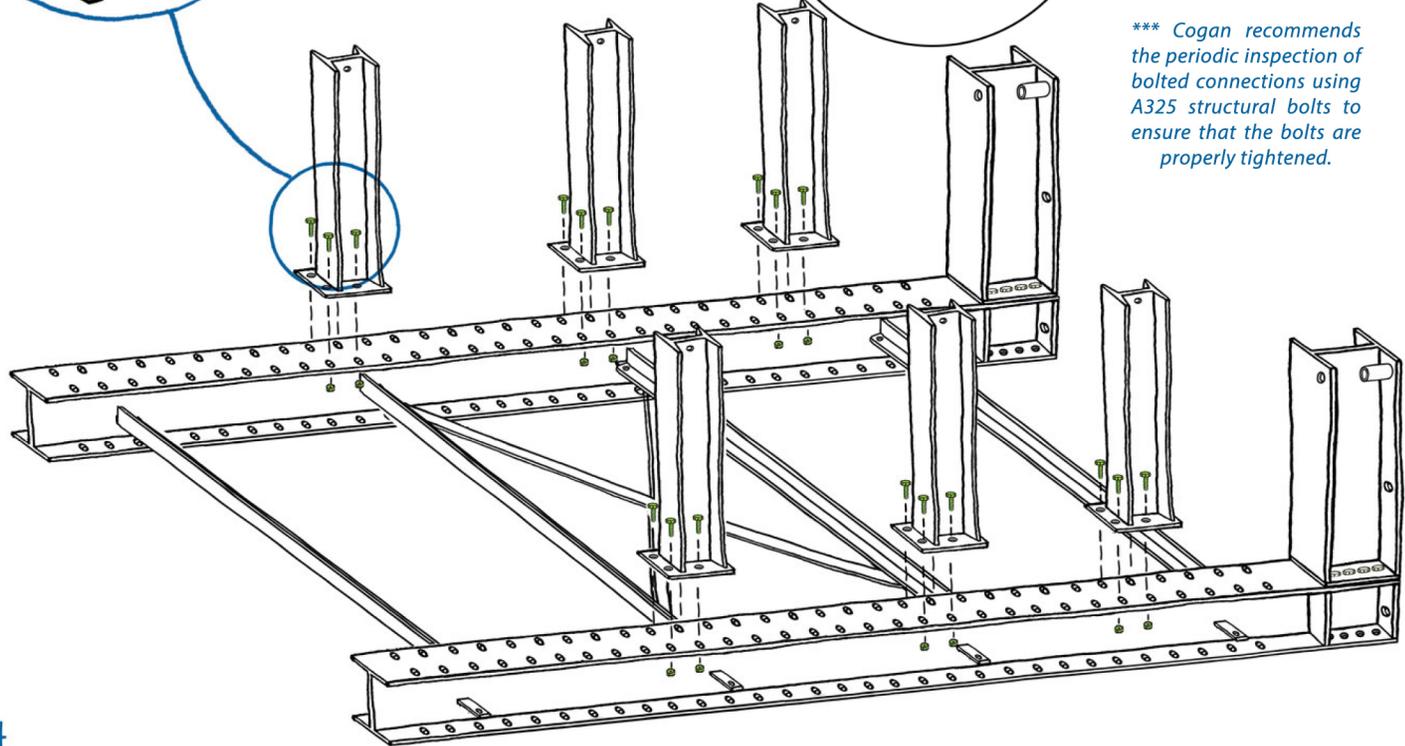


USE ASTM A325 STRUCTURAL BOLTS ONLY

SUGGESTED TORQUE FOR REQUIRED MINIMUM BOLT TENSION:

- ø3/4" Bolt : 275Ft.-Lbs
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STEP 4

ASSEMBLING ARMS TO COLUMN

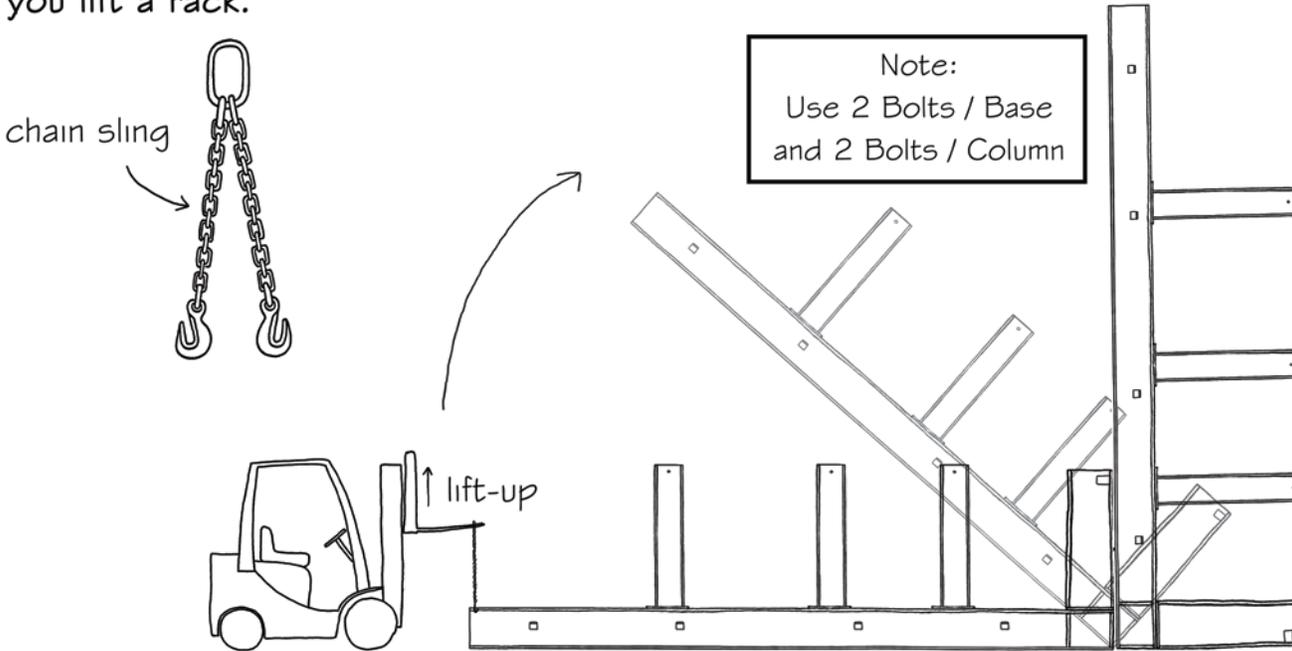
Refer to installation drawings for exact spacing of arms and quantity on each column.

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*****

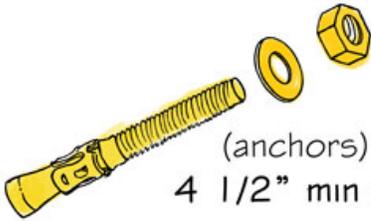
STEP 5

LIFTING-UP AND ANCHORING

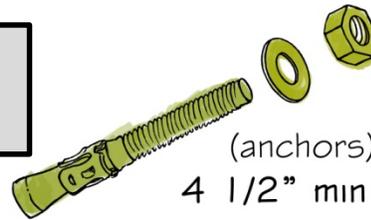
Safely attach a chain sling to your fork lift and to the top of the cantilever rack column. Lift-up slowly and **secure the racking system by anchoring it to the floor each time you lift a rack.**



Refer to installation plans for the exact anchor bolt required for your project.



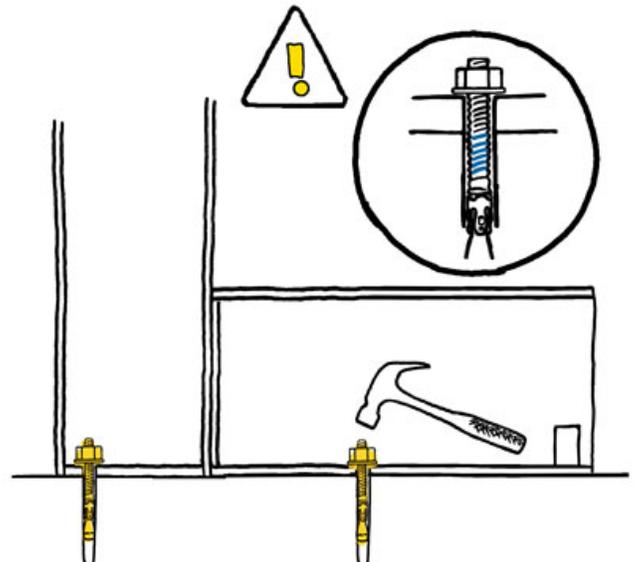
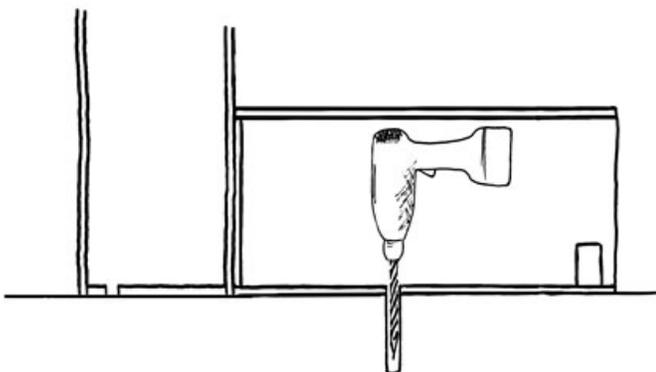
$\varnothing 5/8$ " x 6" min bolts
(anchors) are used for baseplates
4 1/2" min embedment is required



$\varnothing 3/4$ " x 6" 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

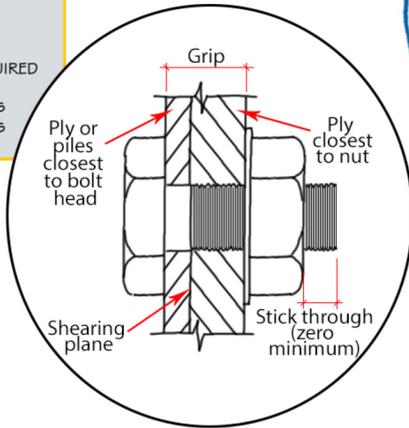
Once the uprights are safely anchored, bolt in the other arms and base at the back of the uprights the same way as in step 2 & 4.

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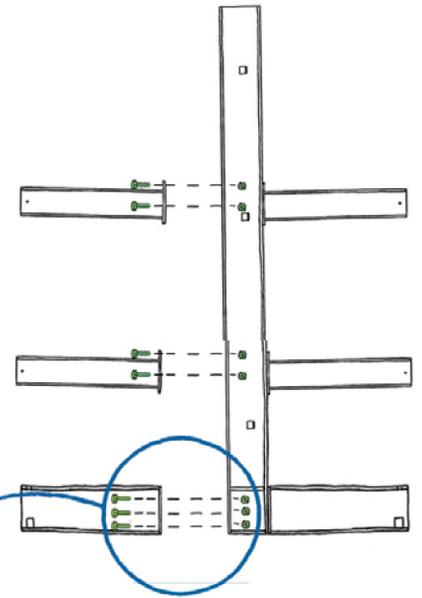


SUGGESTED TORQUE FOR REQUIRED
MINIMUM BOLT TENSION :
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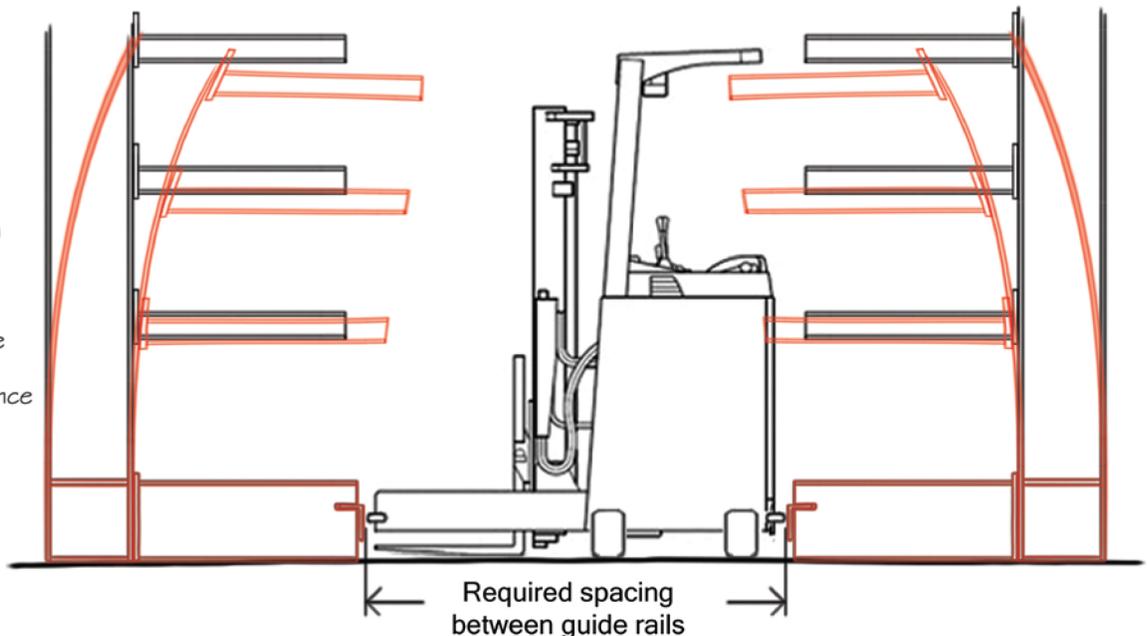
REFER TO
YOUR INSTALLATION
DRAWINGS FOR ALL
HARDWARE SIZES
AND DETAILS



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.

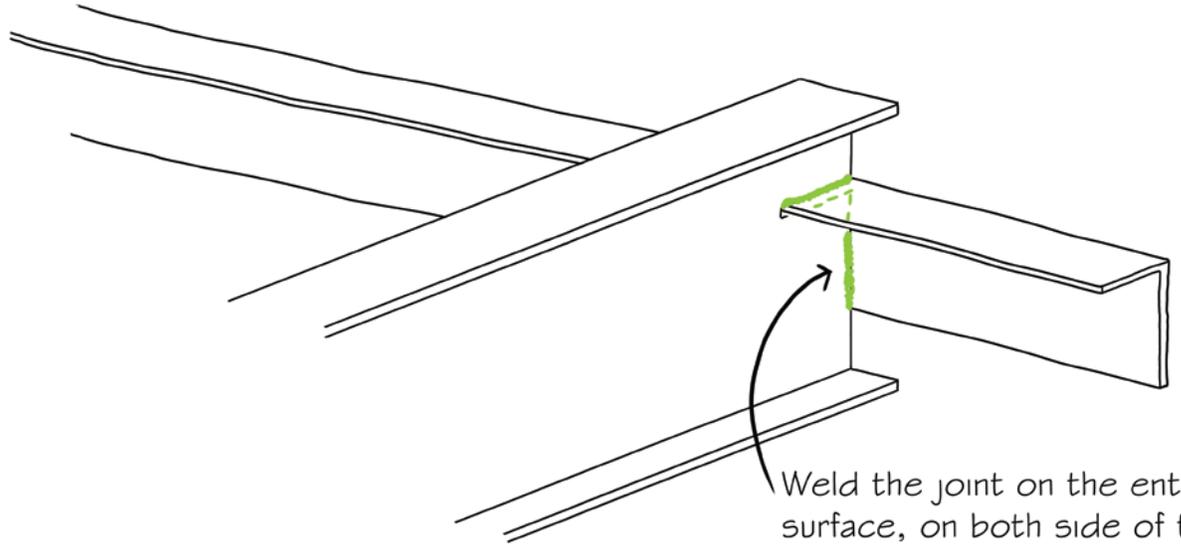


STEP 7

GUIDE RAIL INSTALLATION TYPE 1 - WELDED TO RACK BASE

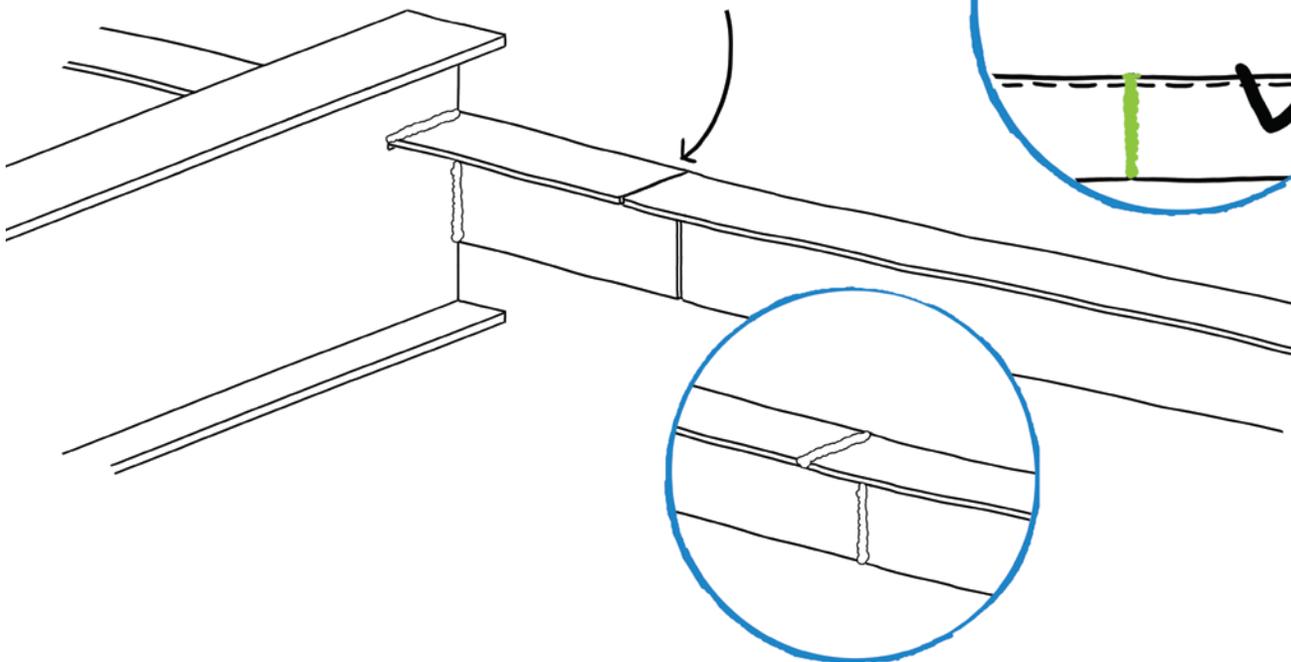
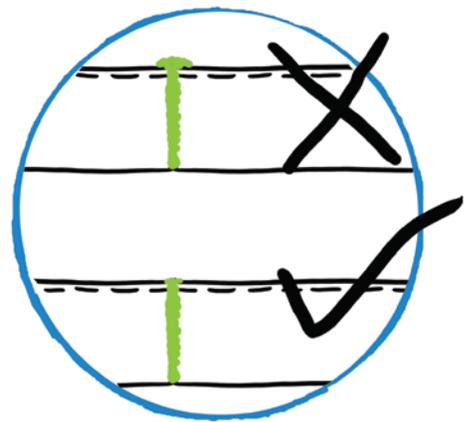
Start the installation on one end of the rack aisle by inserting one guide rail into the base. One length of guide rail should be inserted in multiple cantilever rack bases.

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 base.

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.



STEP 8

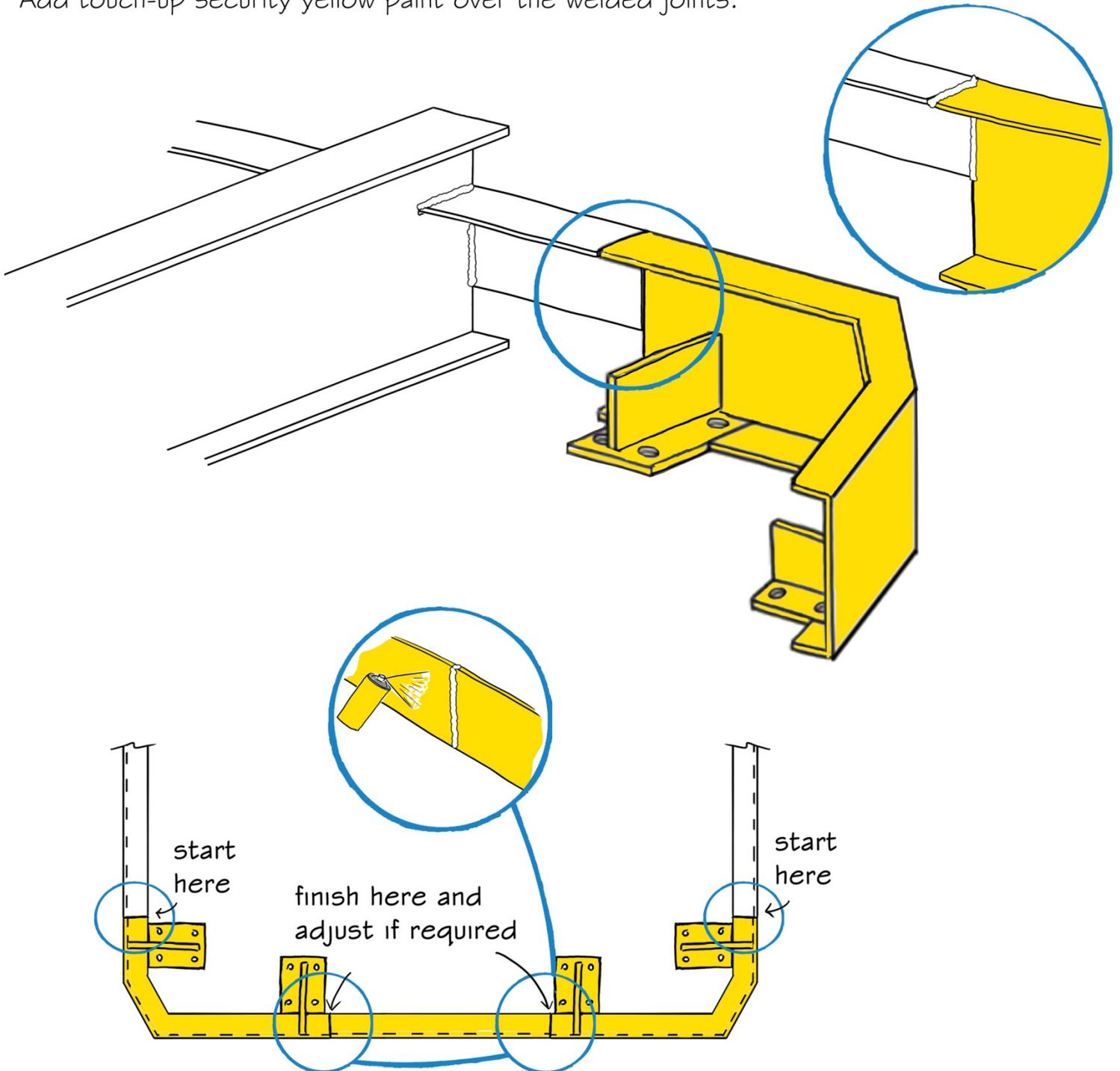
GUARDRAIL - HEAVY-DUTY

End-of-aisle guardrails comes in 3 parts for on-site adjustability.

Start the installation by welding both corner pieces to the end of each guide rail, then anchor them to the ground. Anchor bolts dimensions are specified by customer.

Complete the installation of the end-of-aisle guardrail by welding both corner pieces of guardrail to the central guardrail piece. Adjust the length of the central piece if required.

Add touch-up security yellow paint over the welded joints.



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 SAFETY YELLOW POWDER-COATED FINISH.
- ALL NECESSARY ASSEMBLY FASTNERS SHALL BE PROVIDED. ANCHORS ARE ONLY PROVIDED BY COGAN AS AN OPTION.
- ALL PARTS HAVE GREY POWDER-COATED FINISH EXCEPT FOR GUIDE RAIL AND GUARDRAIL.