

## Space Plus USA Cantilever Rack Installation Instructions

Space Plus USA recommends that this product be assembled only by qualified personnel, experienced in assembly of storage racks, and knowledgeable of all safety regulations and practices. These instructions are intended only for use by qualified individuals working with all proper safety equipment.

Storage racks are very heavy, and if not properly secured during installation and assembly could fall, causing injury or death as well as damage to equipment and property.

Space Plus USA's Racks must be assembled only by trained personnel, experienced in the correct assembly of racks, and should be familiar with the following instructions:

Our racks are intended to be installed indoors, do not install racks outdoors. Outdoor usage requires consideration of several factors like wind loads, snow loads, and many environmental conditions that are not normally considered in rack design.

### 1) Prior to the start of installation, the installer should

- 1.1 Make sure all members of the installation crew are trained about the installation procedures and any safety procedures necessary to establish a safe working environment.
- 1.2 Check to make sure that all materials have been received. Materials should be checked against the delivery tickets and or Bill of Lading.
- 1.3 Notify the shipper immediately if any shortages exist with respect to the delivery ticket. Inspect the materials and make sure there is no damage, in case there is damage, inform the shipper immediately of any product damage.
- 1.4 Organize all materials, so they can be quickly located.
- 1.5 Verify the proper location of the racks with the project manager, owner or site contact person.
- 1.6 Clear the area where the rack system will be located.
- 1.7 Check the area for all obstructions, such as lights, doorways, ducts, electrical panels, pipes, building columns etc. Any such obstructions should be flagged with tape and called to the attention of the site contact person, and plans should be made to avoid or remove the obstruction to ensure a clear area is ready for the installation of the storage racks. If it becomes necessary to modify the configuration of the racks in any way, prior approval must be obtained from the authorized person, and the changes must comply with Space Plus USA guidelines.
- 1.8 Check the floor specs. Space Plus USA racks are to be installed on a concrete floor. Since concrete floors vary greatly in design and load carrying capacity, Space Plus USA cannot guarantee that any concrete slab is adequate to support a specific rack installation. The characteristics of the slab should be obtained from the building engineer before the racks are

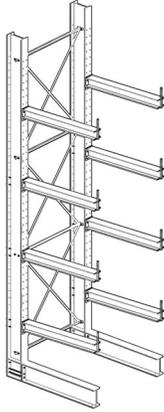
Space Plus USA

195 Abbott Lane Spartanburg, SC 29307

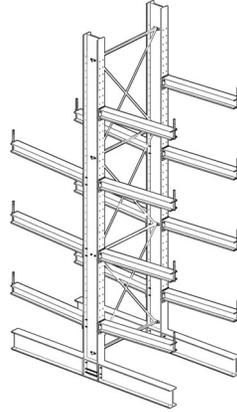
[www.spaceplususa.com](http://www.spaceplususa.com) (864) 580.6313



### 3) Installation of the Starter Bay.

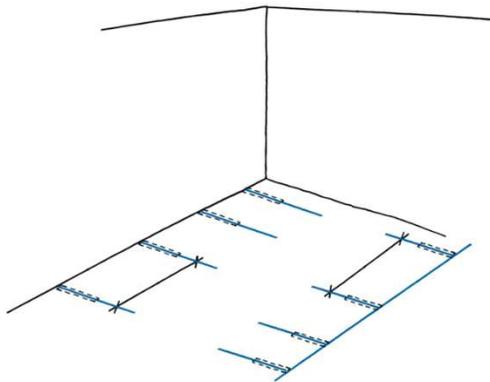


SINGLE SIDED  
STARTER UNIT



DOUBLE SIDED  
STARTER UNIT

- 3.1. Using the installation drawings as a guide, trace chalk reference lines on the floor for each column and base, ensuring the spacing between columns matches the distances specified in the installation drawings



- 3.2. Place the bases, arms, bracing, and columns to be assembled near the final location where they will be installed. Make sure to include dunnage, such as wooden blocks, rubber, or plastic, to protect the floor during this operation.
- 3.3. Assemble the bases with the columns using the 13-3/8" rod (M20X340) with washers and the 2-1/8 BOLT (M20X55) bolt with its nut, as shown in the following image.



**Only for double-sided cantilever systems:** place the second base before installing the bolts.

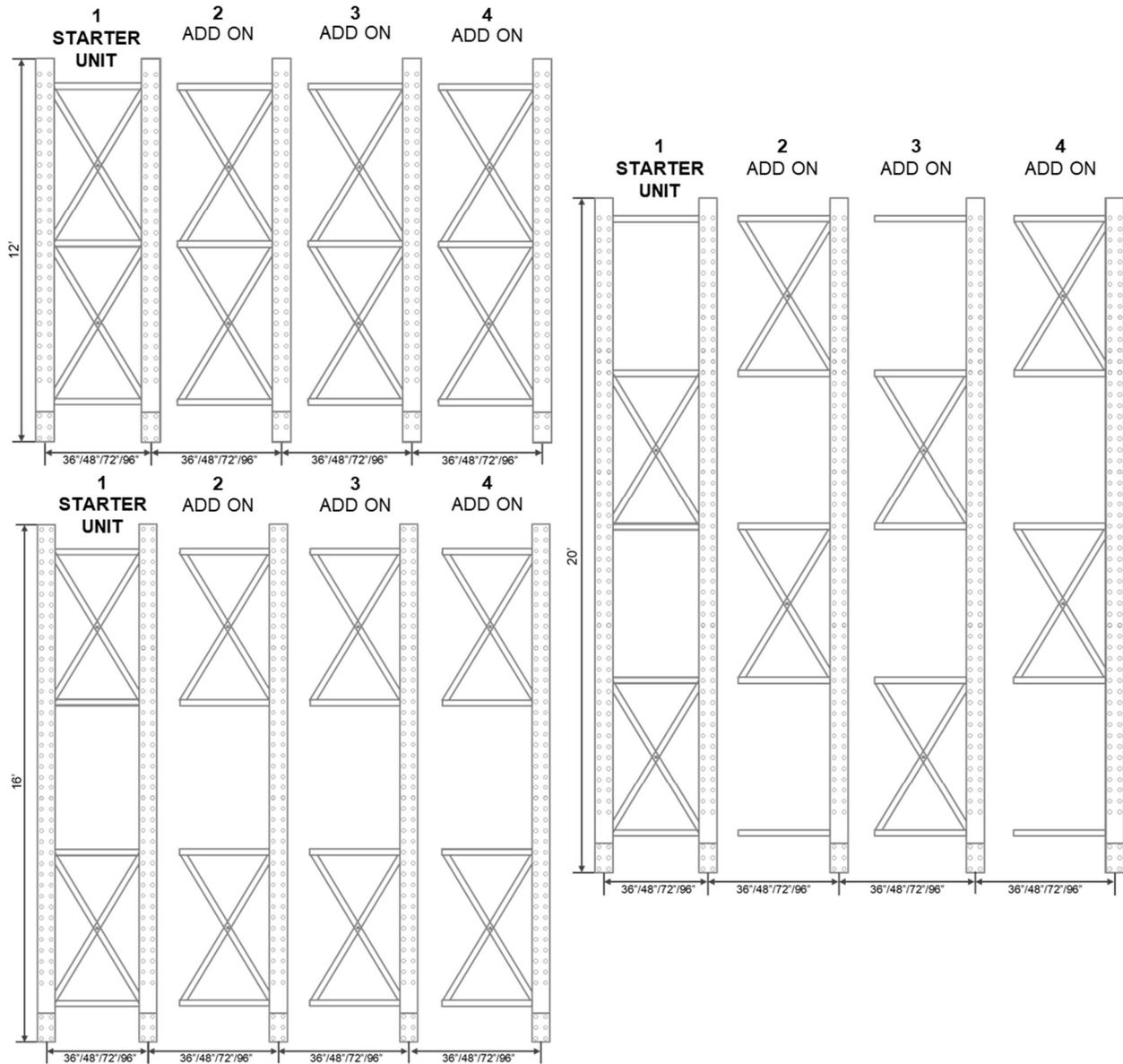


- 3.4. Using a forklift or two people (depending on the column height), to lift and position each preassembled column with bases in their final position. **It is crucial to handle this maneuver carefully to protect the floor.**
- 3.5. While keeping the columns in place with one person or a forklift per column, attach the support bracing from the starter bay to the columns using 1-3/16 bolts (M12X35) bolts and nuts. (Do not overtighten)



4.

Note: The configuration of diagonal and horizontal bracing varies depending on the column height; see the image provided below for details.

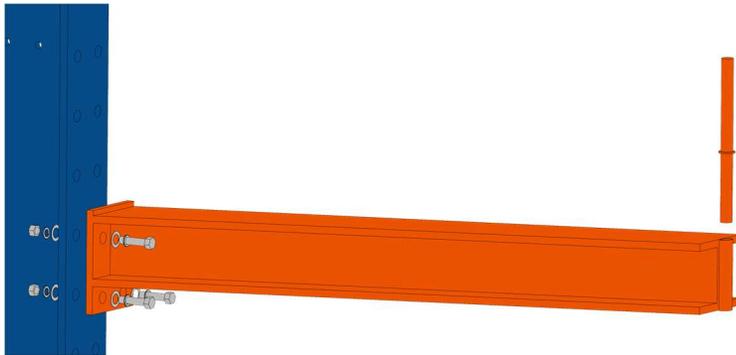


4.1. Once the braces are installed on the columns in the correct pattern, check the alignment of the columns and the spacing between them before completely tightening the bolts on the braces installed in the previous step

4.2. Mark the arm elevations on the columns. Ensure the marks are positioned below the top of the arm

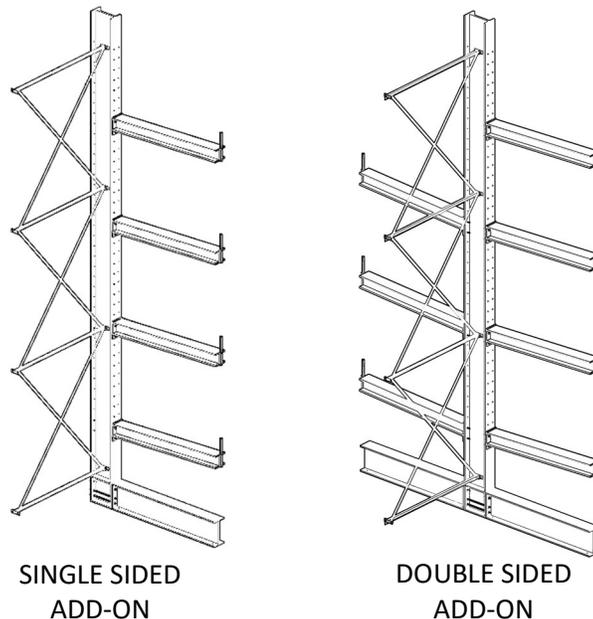
end plate to remain hidden once the arm is bolted in place.

- 4.3. Attach the arm to the column using the 2-1/8 bolts (M20X55) and nuts, ensuring that the bolt head and washer are positioned on the base side of the arm. If any small accessory (like pipe stop end) is to be installed on the arm, it must be attached before securing the arm to the column.

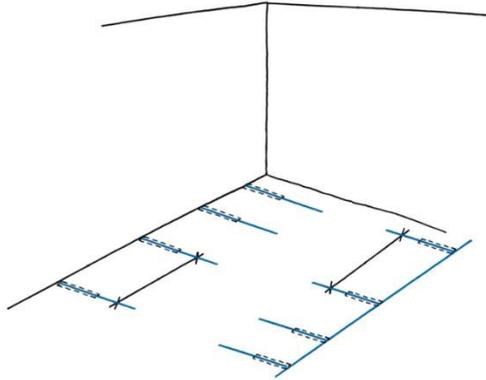


- 4.4. Using a drill, make holes in the floor, and then use a hammer to install the 5/8" x 5 1/2" (M12X110) anchor bolts.

#### 4) Installation of the Add-on Bay.



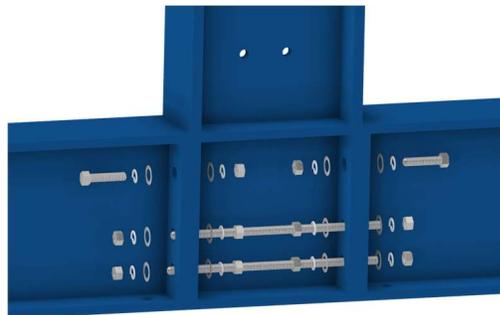
- 4.1. Using the reference chalk lines established in step 1.1, align each base and column of the add-on bay to be installed, and verify that all distances match those indicated in the installation drawings.



- 4.2. Assemble the bases with the columns of the add-on units, starting from the first starter unit in the row that was installed according to step 1, using the 13-3/8" rod (M20X340) with washers and the 2-1/8 BOLTS (M20X55) bolt with its nut, as shown in the following image.



**Only for double-sided cantilever systems:** place the second base before installing the bolts.

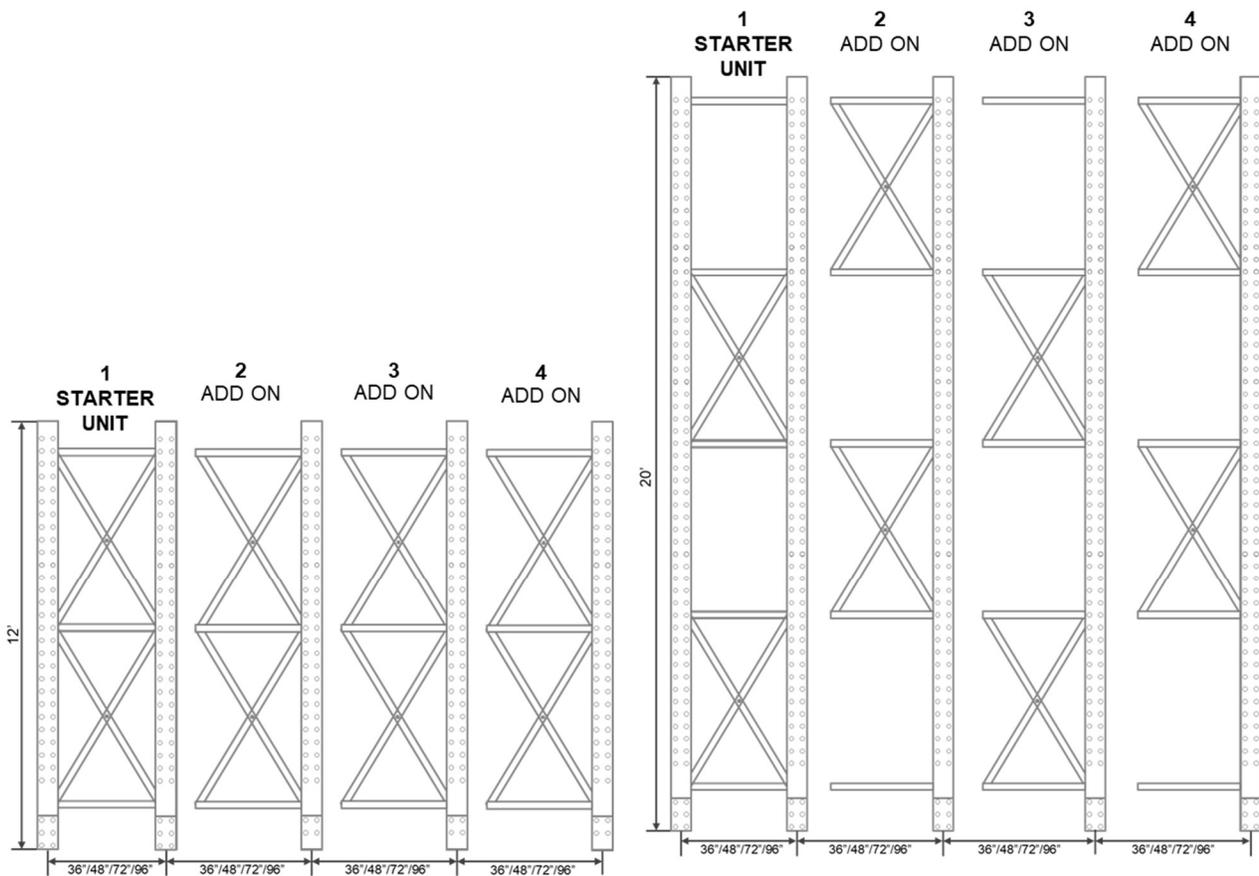


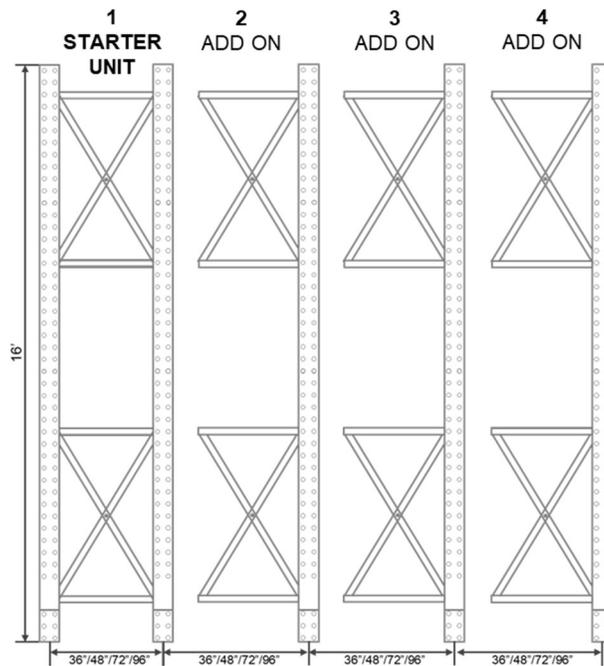
- 4.3. Using a forklift or two people (depending on the column height), to lift and position each preassembled column with bases in their final position. **It is crucial to handle this maneuver carefully to protect the floor.**

4.4. While keeping the column in place with one person or a forklift, attach the support bracing from the starter bay to the columns using 1-3/16 bolts (M12X35) bolts and nuts. (Do not overtighten)

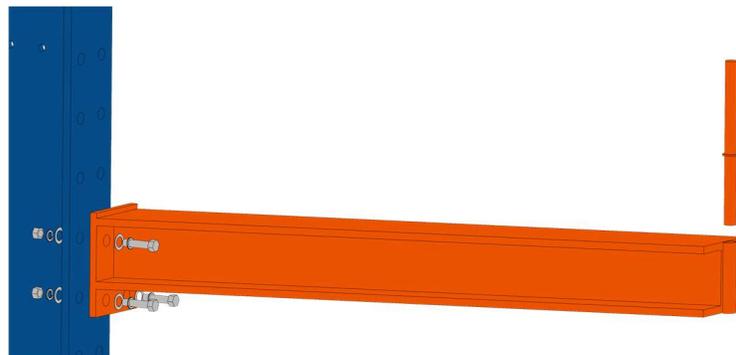


Note: The configuration of diagonal and horizontal bracing varies depending on the column height; see the image provided below for details.





- 4.5. Once the braces are installed on the columns in the correct pattern, check the alignment of the columns and the spacing between them before completely tightening the bolts on the braces installed in the previous step
- 4.6. Mark the arm elevations on the columns. Ensure the marks are positioned below the top of the arm end plate to remain hidden once the arm is bolted in place.
- 4.7. Attach the arm to the column using the 2-1/8 bolts (M20X55) and nuts, ensuring that the bolt head and washer are positioned on the base side of the arm. If any small accessory (like pipe stop end) is to be installed on the arm, it must be attached before securing the arm to the column



- 4.8. Using a drill, make the holes in the floor, and then use a hammer to install the 5/8" x 5 1/2" (M12X110) anchor bolts.

These installation instructions are guidelines for the proper installation of Space Plus USA Cantilever racks. The procedures herein described are intended to assist in the installation of Space Plus USA Cantilever rack. The methods described have been developed over a period of time and have been proven to be reasonably successful. They do not imply that other methods better suited to field conditions might not be equally effective. Space Plus USA suggests strict adherence to all standard safety practices and further suggests all methods be tested and tried before being put into operation.

These installation instructions are only for Space Plus USA standard Cantilever racking.

The proper installation of the racks is the responsibility of the purchaser and is not covered by any warranty of Space Plus USA.

The purchaser should not substitute any components with those of another manufacturer. Space Plus USA has no responsibility or warranty obligations regarding materials not manufactured by it that are used in connection with Space Plus USA Steel racks.

Space Plus USA further explicitly disclaims any responsibility for damage or injuries resulting from field interpretation or use of these suggestions.