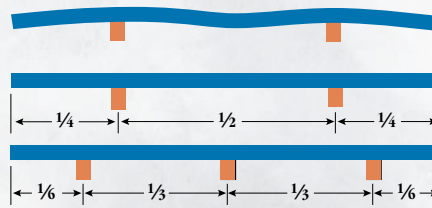


How to design your cantilever rack system

1. Determine the number and spacing of support arms.

- 1a.** Use enough arms under a load to prevent deflection of the load. Deflection causes undesirable side pressure on the arms. Using wood blocks on the floor under the load, test your load for deflection on a two-support system.



1a

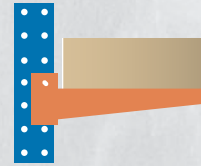
1b

1c

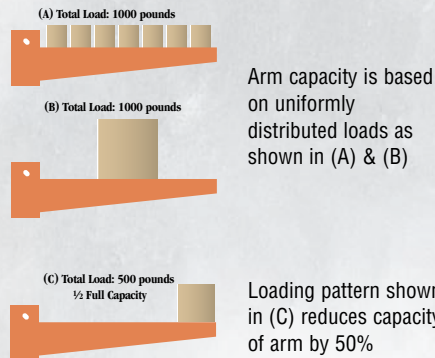
- 1b.** If you do not detect any deflection, you may use two support arms. The arm capacity required will be half the load weight, and the upright centerline will be 1/2 of the load length.

- 1c.** If you notice deflection with two supports, try three supports. If this system works, arm capacity will be 1/3 of the load weight, and the upright centerlines will be 1/3 of load length. If three supports are still not enough, add supports as necessary until deflection is eliminated.

Note: Product should overhang the end of the rack by 1/2 of the upright centerline distance. Loading without overhang is incorrect.



2a



2. Determine arm length. Arm length should equal load depth. **2a is correct, 2b is incorrect.**

3. Determine upright height.

Start with base height:

- + number of storage levels x load height
- + handling clearance [4" to 6"] x number of levels
- + number of arm levels x arm thickness
- = upright height.

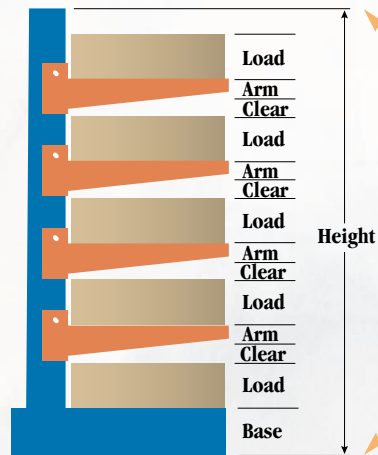
Note: Contact Steel King for current arm and base dimensions.

Note: Check limitations at your plant such as ceiling clearance or fork lift height.

Note: Top arm level must be below the top of the column.



2b



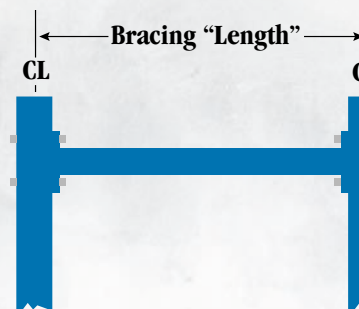
3.

4. Determine capacities required.

- Arms: Load weight ÷ number of arms per level = arm capacity. (Assuming each arm supports an equal amount of the load)
- Uprights: Number of arms per side x load per arm.

Note: Load on base is not included in capacity.

5. "Bracing lengths" refer to the horizontal centerline distance from column to column, as in the diagram. See Step 1 for the proper number of braces per type of load.



5

Bracing is sold in pieces, not sets. Contact Steel King for current bracing information.



STEEL KING