# DESIGN GUIDE

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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" | 3 770 lbs | 6 590 lbs | 8 900 lbs | 13 820 lbs | 20 160 lbs | 23 460 lbs |
| 18" | 2 480 lbs | 4 360 lbs | 5 900 lbs | 9 180 lbs | 13 410 lbs | 15 600 lbs |
| 24" | 1 820 lbs | 3 230 lbs | 4 390 lbs | 6 850 lbs | 10 020 lbs | 11 670 lbs |
| 30" | 1 420 lbs | 2 550 lbs | 3 480 lbs | 5 440 lbs | 7 980 lbs | 9 300 lbs |
| 36" | 1 150 lbs | 2 090 lbs | 2 860 lbs | 4 500 lbs | 6 610 lbs | 7 710 lbs |
| 42" | 950 lbs | 1 750 lbs | 2 420 lbs | 3 820 lbs | 5 630 lbs | 6 570 lbs |
| 48" | 790 lbs | 1 500 lbs | 2 080 lbs | 3 310 lbs | 4 890 lbs | 5 620 lbs |
| 54" | 670 lbs | 1 290 lbs | 1 810 lbs | 2 900 lbs | 4 310 lbs | 5 040 lbs |
| 60" | 560 lbs | 1 130 lbs | 1 590 lbs | 2 570 lbs | 3 840 lbs | 4 500 lbs |
| 66" | 460 lbs | 980 lbs | 1 400 lbs | 2 290 lbs | 3 450 lbs | 4 040 lbs |
| 72" | 390 lbs | 860 lbs | 1 240 lbs | 2 060 lbs | 3 120 lbs | 3 670 lbs |
| 78" | 320 lbs | 750 lbs | 1 110 lbs | 1 860 lbs | 2 840 lbs | 3 350 lbs |
| 84" | 250 lbs | 660 lbs | 990 lbs | 1 690 lbs | 2 600 lbs | 3 070 lbs |
| 90" | 200 lbs | 570 lbs | 880 lbs | 1 540 lbs | 2 380 lbs | 2 820 lbs |
| 96" | 140 lbs | 500 lbs | 790 lbs | 1 400 lbs | 2 200 lbs | 2 610 lbs |

** The indicated maximum loads should be used as guidelines as they have been determined for a specific indoor rack configuration. Actual maximum loads may vary slightly based on actual rack configuration.*

| | |
|---|---|
| Product | Racking |
| Sub-product | Capacity and layout guide |

- Modular components provide adaptability and productivity.

- Determine the length, depth, height and weight of the product being stored.

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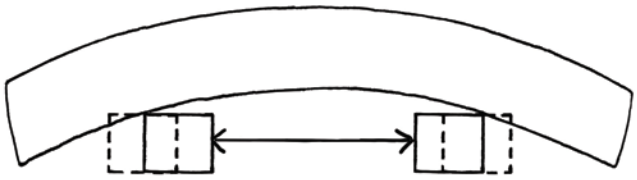
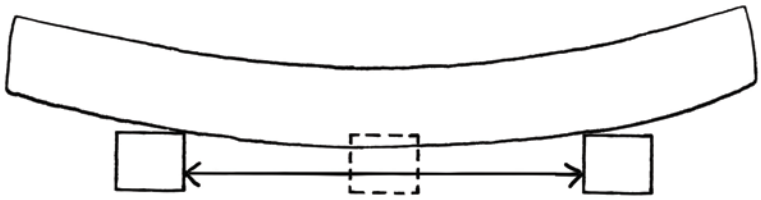
- The spacing and quantity of arms has to be chosen to prevent load deflection.

  Calculate and determine the spacing between each arm and quantity required by using wood blocks to simulate the arms.



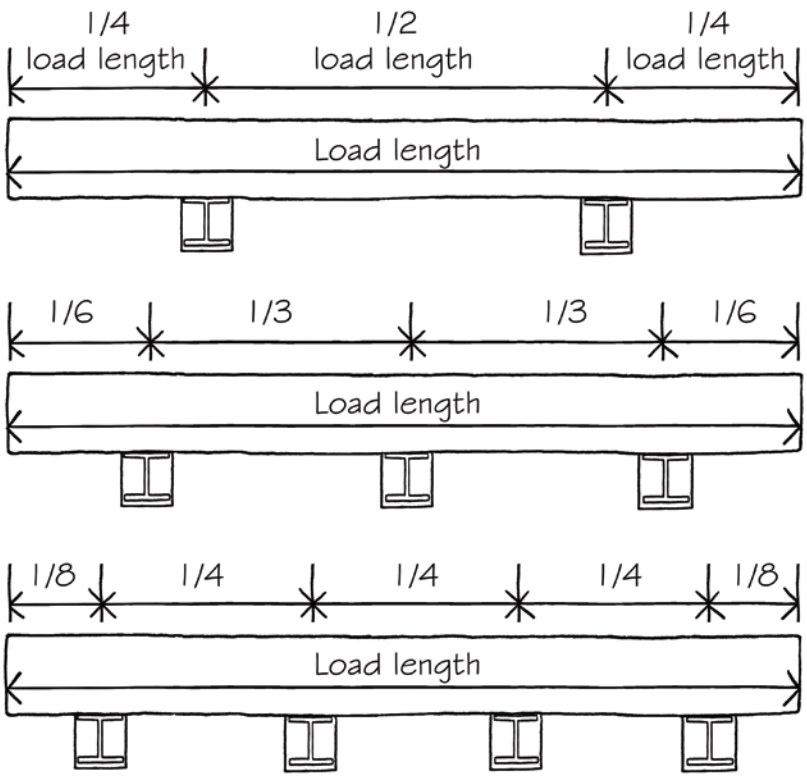
Should be 1/2 the load length

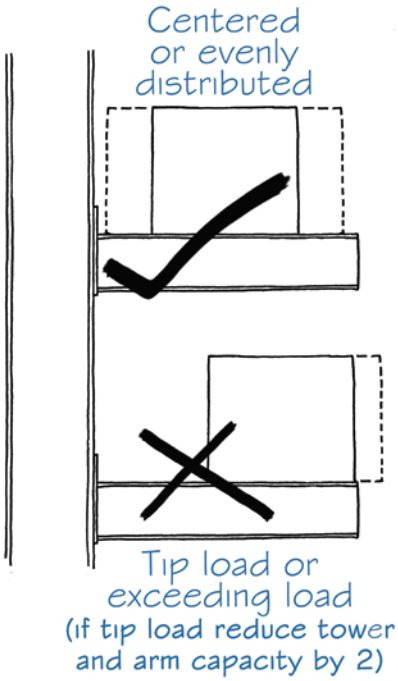
- If you notice deflection with 2 supports, try adding more support until deflection is eliminated

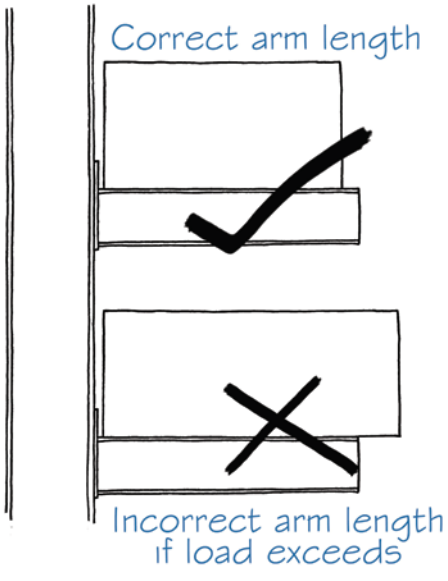


Needs an additional center support

- DIVIDE EQUALLY LOAD WEIGHT USING THESE FORMULAS
- THE LOAD SHOULD ALSO OVERHANG THE END ARMS BY HALF THE DISTANCE IN BETWEEN UPRIGHTS TO ENSURE EQUAL AMOUNT OF THE LOAD'S WEIGHT.



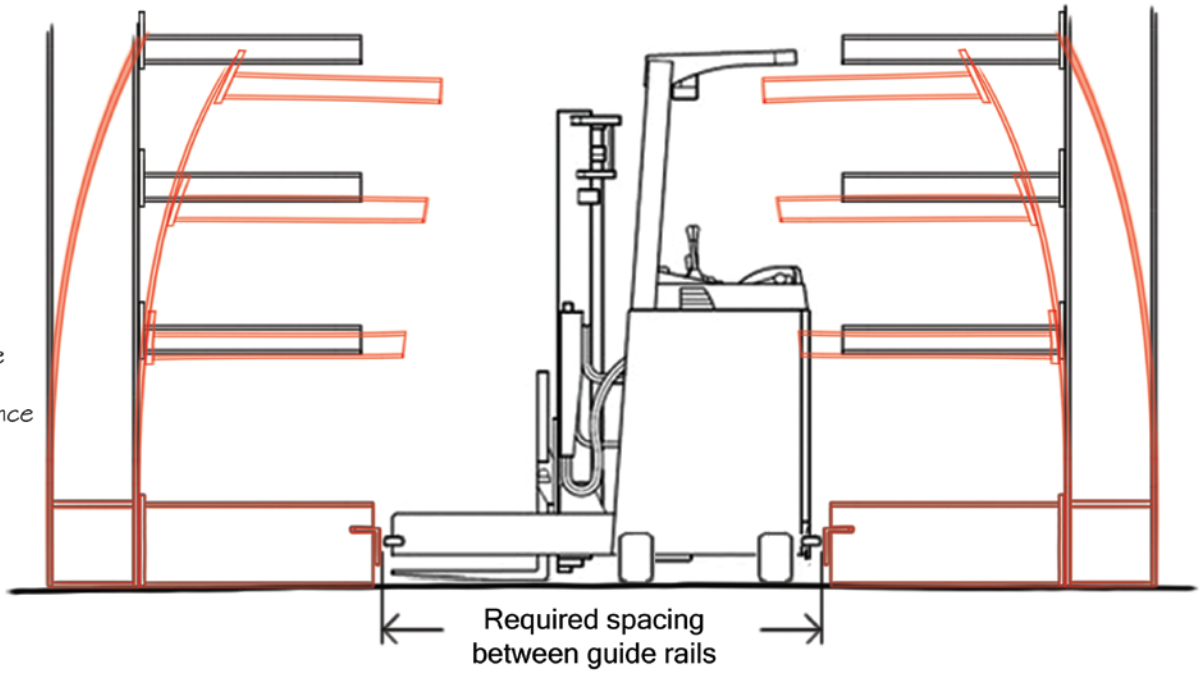



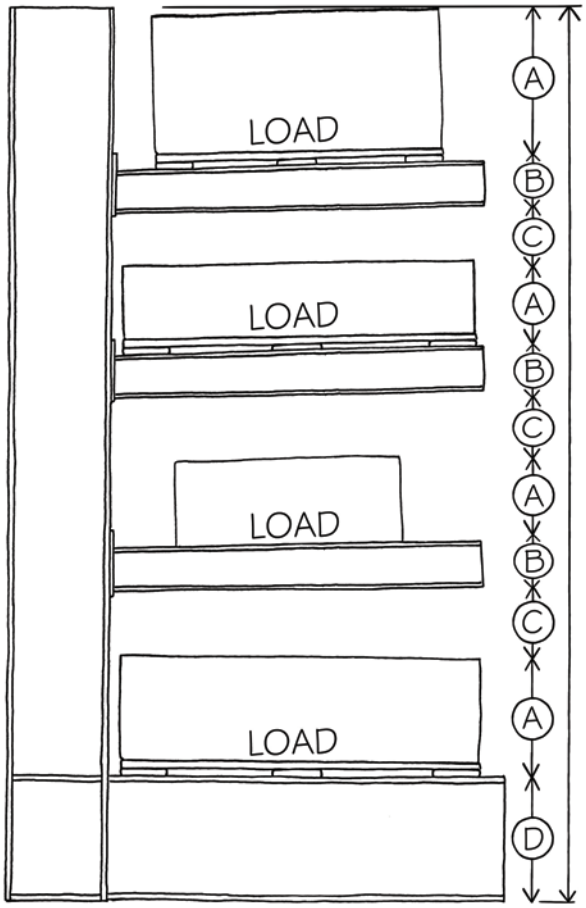




- DETERMINE ARMS LENGTH SO THAT THE LOAD DEPTH NEVER EXCEEDS THE ARMS.
- THE LOAD SHOULD ALWAYS BE EVENLY DISTRIBUTED FROM FRONT TO BACK OF ARM. IF THIS RULE IS NOT RESPECTED, ARM CAPACITIES WILL BE REDUCED

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.



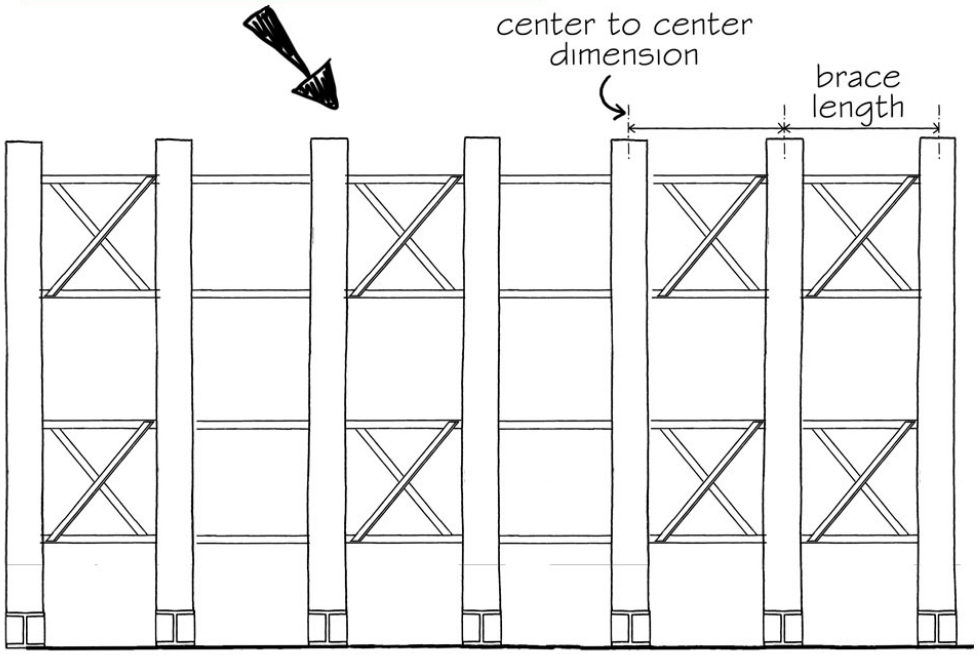




(A) total height of loads
+
(B) total thickness of all arms
+
clearance of 6" (C) between top of each load and the arm above
+
(D) base height

## UPRIGHT HEIGHT

- CONSIDER THE CEILING HEIGHT, FORKLIFT REACH, SPRINKLER SYSTEM AND ALL LOCAL BUILDING CODES THAT CAN EFFECT THE HEIGHT OF RACKING.

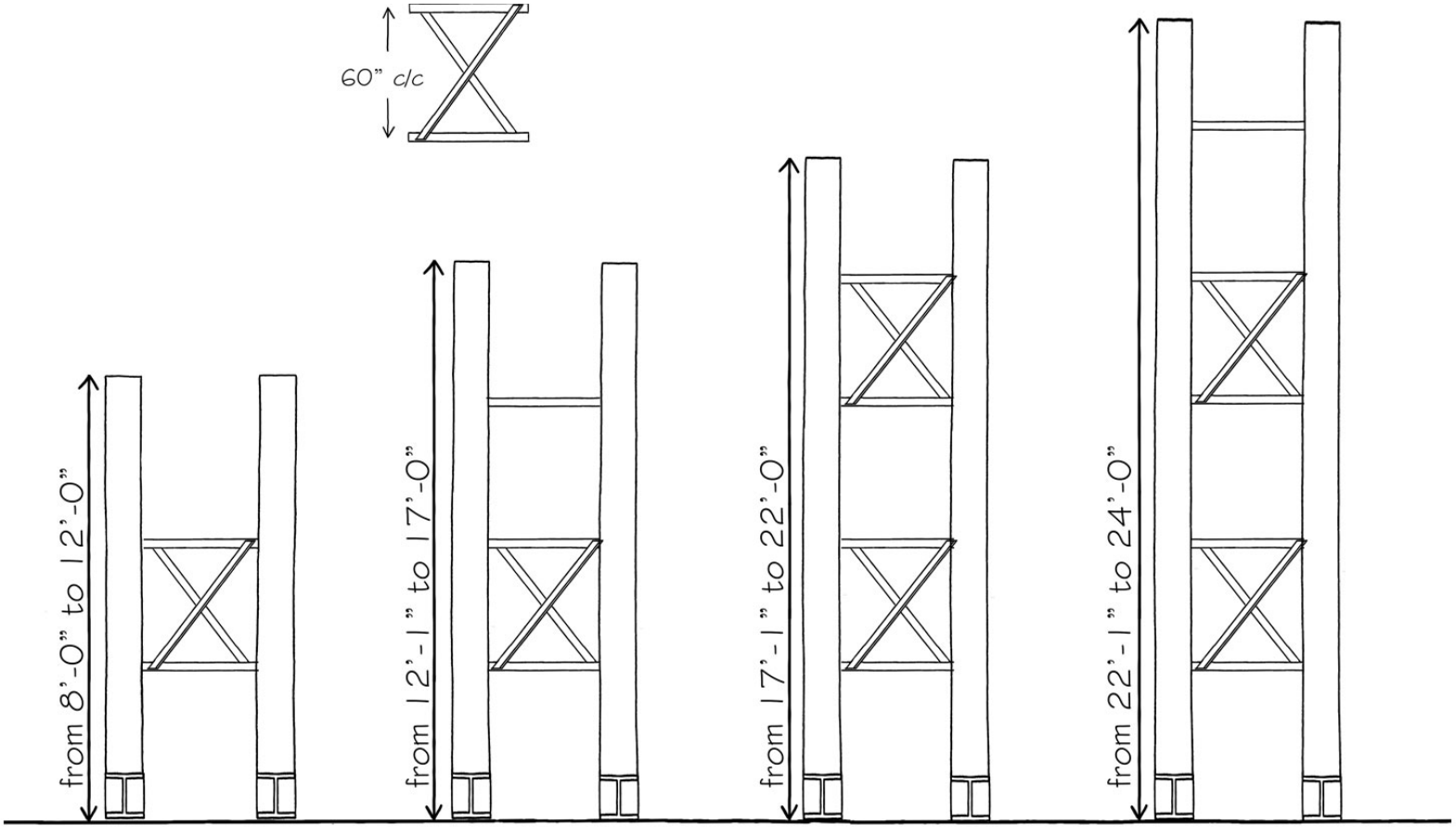
ALTERNATE X-BRACES AND HORIZONTAL BRACES BUT ALWAYS START AND END A CANTILEVER RACK ROW WITH X-BRACES
(AS SHOWN BELOW)

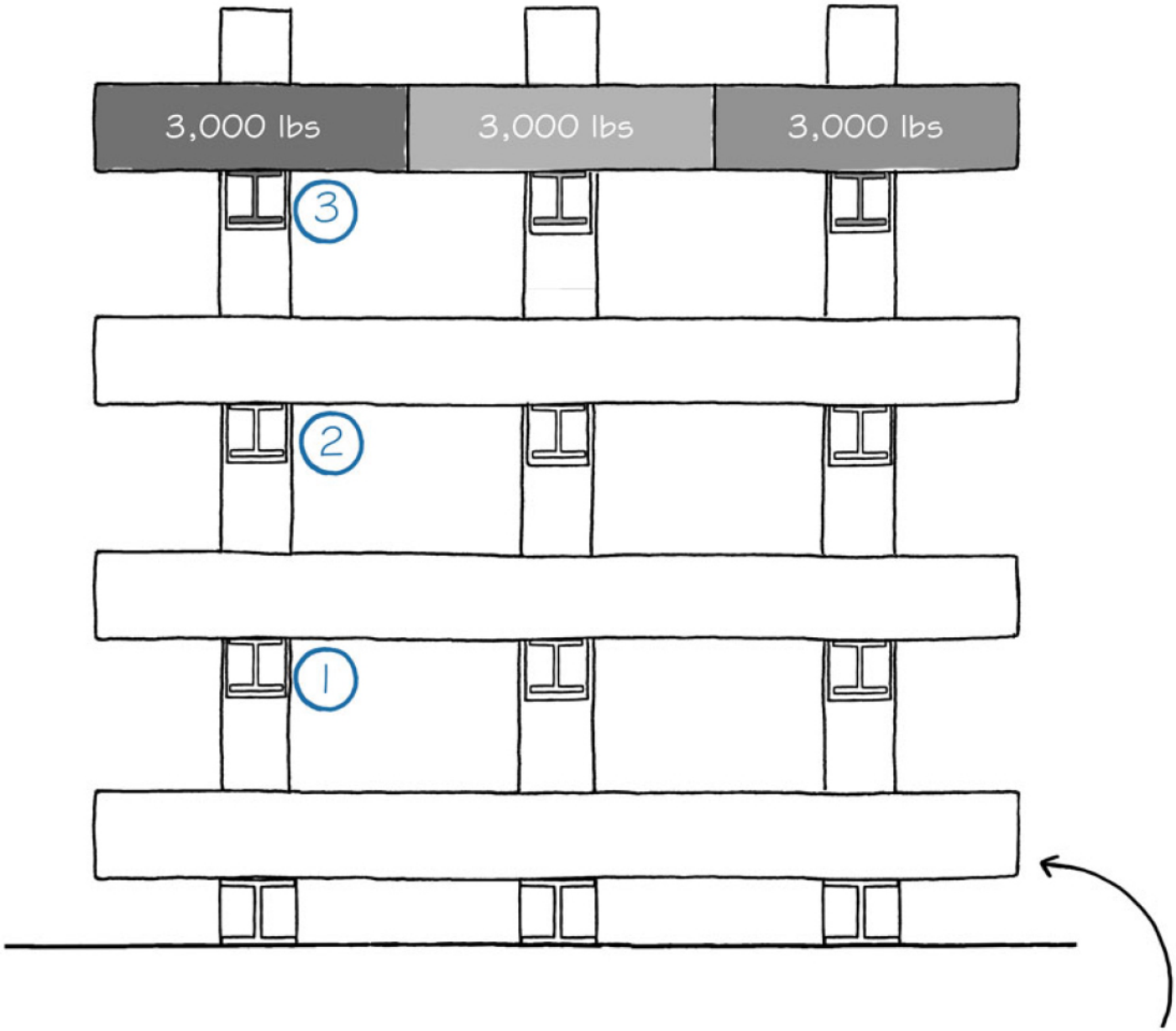



## BRACES

- VARIOUS PATTERNS AND PLACEMENT OF BRACES ARE AVAILABLE DEPENDING ON THE HEIGHT OF THE UPRIGHTS. REFER TO THE NEXT PAGE FOR THE APPROPRIATE LAYOUT
- ALWAYS BEGIN AND END A CANTILEVER RACK ROW BY USING X-BRACES
- **NEVER END A ROW WITH ONLY HORIZONTAL BRACES**






**ARM CAPACITY**

- DIVIDE THE LOAD BY THE NUMBER OF ARM THAT IT'S SUPPORTED BY.

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- IF THE LOAD IS 9,000 LBS AND IT'S SUPPORTED BY 3 ARMS, THEN EACH ARM NEEDS TO HAVE A MINIMUM CAPACITY OF 3,000 LBS.

**UPRIGHT CAPACITY**

- MULTIPLY THE ARM CAPACITY BY THE NUMBER OF ARM ON EACH UPRIGHT.

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- IF LOAD CAPACITY ON EACH ARM IS 3,000 LBS AND THERE ARE 3 ARMS ON EACH UPRIGHT, THEN THE MINIMUM UPRIGHT CAPACITY IS 9,000 LBS.

**NOTE**

- THE LOAD STORED ON THE BASE OF UPRIGHT ISN'T CONSIDERED IN THE TOTAL UPRIGHT CAPACITY.
- HEAVIEST LOAD ARE RECOMMENDED TO BE PLACED ON BASE OR LOWER ARMS.