GLOBAL INDUSTRIAL™

Global Industrial Made In USA Cantilever Rack Guide

Arm Series	Item #				Length (in)	Capacity (lb)	Compatible Uprights				
	Straight	Inclined	Straight w/ Lip	Inclined W/ Lip			1000 series	2000 series	3000 series	4000 series	5000 series
1000	793768	793784	793774	793790	12	1000	✓				
1000	793770	793776	793786	793792	18	750	✓				
1000	793772	793778	793788	793794	24	600	✓				
1000	793769	793773	793777	793793	30	500	✓				
1000	793771	793775	793779	793795	36	400	✓				
1000	795617	795619	795618	795620	48	300	✓				
2000	B1966694	B1966709	B1966695	-	12	2000		✓			
2000	B1966696	B1966710	B1966697	-	18	1500		✓			
2000	795644	-	795656	-	24	2400		✓			
2000	795643	795652	795655	795664	24	1200		✓			
2000	B1966698	B1966711	B1966699	-	30	1000		✓			
2000	B1966714	-	B1966715	-	30	2000		✓			
2000	795647	-	795659	-	36	2400		✓			
2000	795646	-	795658	-	36	1500		✓			
2000	795645	795653	795657	795665	36	800		✓			
2000	B1966700	B1966713	B1966712	-	42	700		✓			
2000	B1966716	-	B1966717	-	42	1400		✓			
2000	B1966729	-	B1966726	-	42	2400		✓			
2000	795649	-	795661	-	48	1000		✓			
2000	795648	795654	795660	795667	48	600		✓			
2000	795651	-	795663	-	48	2000		✓			
2000	795650	-	795662	-	48	1500		✓			
3000, 4000, 5000	482402	482420	482502	-	12	3000			✓	✓	✓
3000, 4000, 5000	482404	482422	482504	-	18	2500			✓	✓	✓
3000, 4000, 5000	482406	482424	482506	-	24	2000			✓	✓	✓
3000, 4000, 5000	482408	482438	482508	-	30	1500			✓	✓	✓
3000, 4000, 5000	482446	-	482546	-	36	2175			✓	✓	✓
3000, 4000, 5000	482410	482440	482510	-	36	1200			✓	✓	✓
3000, 4000, 5000	482431	-	482531	-	36	3400			✓	✓	✓
3000, 4000, 5000	482450	-	482550	-	42	1865			✓	✓	✓
3000, 4000, 5000	482433	-	482533	-	42	2900			✓	✓	✓
3000, 4000, 5000	482448	482442	482548	-	42	1100			✓	✓	✓
3000, 4000, 5000	795845	-	795855	-	48	4000			✓	✓	✓
3000, 4000, 5000	795844	-	795854	-	48	3000			✓	✓	✓
3000, 4000, 5000	482454	-	482554	-	48	2000			✓	✓	✓
3000, 4000, 5000	482414	482444	482514	-	48	1000			✓	✓	✓
3000, 4000, 5000	482452	-	482552	-	48	1630			✓	✓	✓
3000, 4000, 5000	482436	-	482536	-	48	2500			✓	✓	✓
3000, 4000, 5000	B1966778	-	B1966779	-	54	800			✓	✓	✓
3000, 4000, 5000	795846	-	795856	-	60	1300			✓	✓	✓
3000, 4000, 5000	795848	-	795858	-	60	2000			✓	✓	✓
3000, 4000, 5000	B1966792	-	B1966793	-	60	600			✓	✓	✓
3000, 4000, 5000	795847	-	795857	-	60	1650			✓	✓	✓

DESIGNING A CANTILEVER RACK SYSTEM

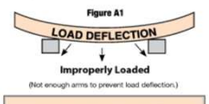
The key to a successful cantilever rack system is the answer to one question: **What is the product (load) being stored?** The answer must include the **length**, **depth**, **height** and **weight** of the product. Once this data is ascertained it becomes a simple matter to determine the required arms, uprights and braces.

A. DETERMINE THE NUMBER AND SPACING OF ARMS

The load must be supported by enough arms to prevent load deflection. Deflection may cause damage to the load being stored as well as the arms (figure A1). To detect deflection, place the load over two wooden blocks (to represent cantilever arms) as shown in figure A2. If deflection is not present it is acceptable to use a two arm system as long as this does not create an overload condition. If the load shows deflection use three blocks as shown in figure A3 or four blocks as in figure A4.

IMPORTANT: The load should overhang the end arms by one-half the distance from upright centerline to upright centerline. Failure to observe this measure may cause an overload condition on the arms.

Figure A1



Improperly Loaded

(Not enough arms to prevent load deflection.)

Adhering to these guidelines will ensure that each arm supports an equal amount of the load's weight.

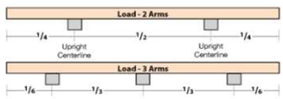


Figure A2

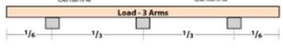


Figure A3

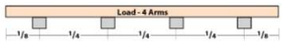


Figure A4

B. DETERMINE THE LENGTH OF THE ARMS

The depth of the load should never exceed the length of the arm. A 48" wide bundle of plywood requires a 48" long arm, bundles of steel 24" wide require a 24" arm and so on. Rated arm capacities may be seriously diminished if proper loading techniques are not observed. Figures B1, B2 and B3 illustrate correct and incorrect arm loading.

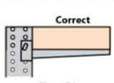


Figure B1

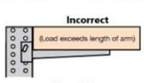


Figure B2

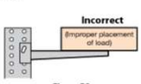


Figure B3

NOTE: All arm capacities are based on an evenly distributed load as in figures B4 and B5 below.

Evenly Distributed Load (front to back) Full rated arm capacity

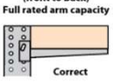


Figure B4

Centered Load Full rated arm capacity

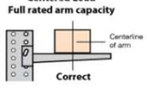


Figure B5

Tip Loading Arm capacity may be reduced by up to 50%

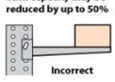


Figure B6

C. DETERMINE THE HEIGHT OF THE UPRIGHT

When determining the height of the upright it is important to consider the ceiling height, forklift reach, sprinkler systems and other factors, such as local building codes that might affect the overall height.

IMPORTANT: The load placed on the base does not diminish the rated capacity of the upright. Thus, the heaviest loads should be placed on the base.

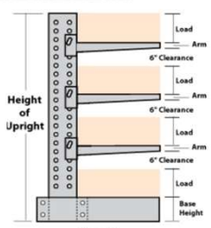


Figure C1

D. DETERMINE ARM AND UPRIGHT CAPACITIES

As previously discussed, each arm supports an equal amount of the load's weight. By determining the number of arms per level and dividing it into the weight per level, the required arm capacity can be determined (see example at right).

To determine the required capacity of each upright, multiply the number of arms per side by the load on each arm. In figure D1, each arm holds 2500 lbs. Twelve arms per side times 2500 lbs. per arm equals 30,000 lbs., which when divided by three uprights, results in a required minimum capacity of 10,000 lbs. per upright.

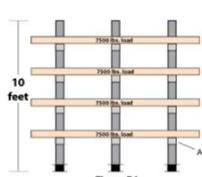


Figure D1

Example: 7500 lbs. per level divided by three arms = 2500 lbs. required capacity per arm.

NOTE: Total arm capacity must never exceed total upright capacity.