

SHELF LOADING CAPACITIES

The published load carrying capacities of various shelving manufacturers can vary greatly depending on the configuration of the shelf and the testing method used to determine the capacity.

Lyon Metal Products is a charter Member of the Shelving Manufacturers Association (SMA). Our testing capacities and procedures are based on the ANSI MH28.1-1982 "Specification for the Design, Testing, Utilization and Application of Industrial Grade Steel Shelving" which was sponsored by the SMA.

SHELF LOADING CAPACITIES FOR 800 SERIES SHELVING

SIZE W X D INCHES	22 GA. BOX MEDIUM BOX W		20 GA. HEAVY DUTY BOX W		18 GA. X-HEAVY DUTY BOX W		18 GA. TRADITIONAL FLANGED	
	CAT. NO.	CAPACITY	CAT. NO.	CAPACITY	CAT. NO.	CAPACITY	CAT. NO.	CAPACITY
30 X 30	N/A	N/A	8593H	800	N/A	N/A	N/A	N/A
36 X 12	8560M	600	8560H	800	8560X	1150	8560	700
36 X 15	8584M	600	8584H	825	8584X	1200	8584	725
36 X 18	8561M	600	8561H	90	8561X	1300	8561	750
36 X 24	8562M	600	8562H	800	8562X	1150	8562	800
36 X 30		**	8585H	740	8585X	950	8585	850
36 X 36		**	8586H	640	8586X	850	8586	650
42 X 12		**	8565H	650	8565X	830	8565	600
42 X 15		**	8587H	650	8587X	880	8587	500
42 X 18		**	8566H	720	8566X	900	8566	475
42 X 24		**	8567H	700	8567X	880	8567	450
42 X 30		**	8588H	650	8588X	850	8588	500
42 X 36		**	8589H	625	8589X	820	8589	400
48 X 12		**	8300H	600	8300X	600	8300	325
48 X 15		**	8590H	600	8590X	650	8590	350
48 X 18		**	8301H	600	8301X	700	8301	325
48 X 24		**	8302H	560	8302X	750	8302	300
48 X 30		**	8591H	540	8591X	730	8591	300
48 X 36		**	8592H	480	8592X	640	8592	300

** Please consult your factory representative. Lyon generally does not recommend 22 gauge shelving on industrial requirements larger than 36" x 24"

Caution! Concentrated (point) loads or impact (dropped) loads could fail shelves even though impact load may be considerably less than the allowable evenly distributed load shown.

Post Capacity Calculations:

To determine post loading capabilities, you must know: (1) the number of loaded shelves, (2) the load on each shelf and (3) the shelf spacing.

Single Level:

1. Determine the total loaded capacity of the shelving section. For example, if there are 8 shelves with each shelf carrying 700 lbs., the total load is 5,600 lbs.
2. For basic 8000 series "T" post shelving use the rule of thumb capacity of 8,000 pounds per section maximum.

Hi-Rise:

1. Determine the total loaded capacity of the shelving section. (The section is defined as the entire, full height, elevation) For example, if there are 25 shelves with each shelf carrying 600 lbs., the total load is 15,000 lbs.
2. Contact engineering for post capacity information to determine which post will be required for your application.

Multi-Level:

1. Determine the total loaded capacity of the shelving section. (The section is defined as the entire, full height, elevation) For example, if there are 15 shelves with each shelf carrying 750 lbs., the total load is 11,250 lbs.
2. Determine the additional load carried in the aisle:
 - A. Multiply the width of the shelving by the width of the aisle. For example, if the width of the shelving is 3' and the width of the aisle is 3', there are a total of 9 square feet.
 - B. Multiply the total square feet by the rated capacity of the aisle (the standard capacity used by Lyon is 150 p.s.f.). In the example above, the calculation would be $3 \times 3 \times 150 = 1,350$ lbs.
3. Add the results of step 1 and step 2B to determine the total load on the post.
4. Contact engineering for post capacity information to determine which post will be required for your application.

This information is provided to allow you to make basic calculations as to which post is suitable for your particular application. If the High Strength post is required, you must submit an SPI to determine proper pricing. ***If any seismic requirements (zones 1 through 4) are to be met, you MUST contact Aurora Engineering***

If you have any questions or are unsure about a particular requirement, contact Aurora Engineering.