

# PRE-ENGINEERED PALLET RACKS

## PALLET RACK STARTER AND ADD-ON UNITS

To help take the hassle out of ordering Pallet Rack please select a starter or add-on unit.

Each unit is available as either 96" height or 144" height. 96" height units have two medium-duty beam levels. 144" height units have three medium-duty beam levels. Capacities vary based on beam width and largest beam spacing (see page 39). Units are available in 42" or 48" depth.

Level	Height	Depth	Width	Starter	Add-on	Decking
2	96"	42"	96"	97SFB096042096*	97AFB096042096*	Front-to-Back Supports
			108"	97SFB108042096*	97AFB108042096*	
			120"	97SFB120042096*	97AFB120042096*	
			144"	97SFB144042096*	97AFB144042096*	
		48"	96"	97SWD096042096*	97AWD096042096*	Wire Deck
			108"	97SWD108042096*	97AWD108042096*	
			120"	97SWD120042096*	97AWD120042096*	
			144"	97SWD144042096*	97AWD144042096*	
	96"	42"	96"	97SFB096048096*	97AFB096048096*	Front-to-Back Supports
			108"	97SFB108048096*	97AFB108048096*	
			120"	97SFB120048096*	97AFB120048096*	
			144"	97SFB144048096*	97AFB144048096*	
		48"	96"	97SWD096048096*	97AWD096048096*	Wire Deck
			108"	97SWD108048096*	97AWD108048096*	
			120"	97SWD120048096*	97AWD120048096*	
			144"	97SWD144048096*	97AWD144048096*	
3	144"	42"	96"	97SFB096042144*	97AFB096042144*	Front-to-Back Supports
			108"	97SFB108042144*	97AFB108042144*	
			120"	97SFB120042144*	97AFB120042144*	
			144"	97SFB144042144*	97AFB144042144*	
		48"	96"	97SWD096042144*	97AWD096042144*	Wire Deck
			108"	97SWD108042144*	97AWD108042144*	
			120"	97SWD120042144*	97AWD120042144*	
			144"	97SWD144042144*	97AWD144042144*	
	144"	42"	96"	97SFB096048144*	97AFB096048144*	Front-to-Back Supports
			108"	97SFB108048144*	97AFB108048144*	
			120"	97SFB120048144*	97AFB120048144*	
			144"	97SFB144048144*	97AFB144048144*	
		48"	96"	97SWD096048144*	97AWD096048144*	Wire Deck
			108"	97SWD108048144*	97AWD108048144*	
			120"	97SWD120048144*	97AWD120048144*	
			144"	97SWD144048144*	97AWD144048144*	

Starters include two uprights, Add-ons include one upright.

**Note: For "Big Foot Seismic" – Heavy-Duty Pallet Rack, please contact customer service at <https://aliamholdings.com/>**

# HOW TO ORDER PALLET RACKS

## Pallet Rack Safety Recommendations

Determine actual load requirements as accurately as possible and adhere to rated capacities shown in tables on the following pages. Additional precautions should be taken in applications where extraordinary rack abuse is anticipated. For example, when narrow aisles are used for high speed or high inventory turnover operations, Lyon recommends additional rack reinforcement. Impact supports and aisle guidance devices may be advisable – especially at aisle intersections and other vulnerable locations.

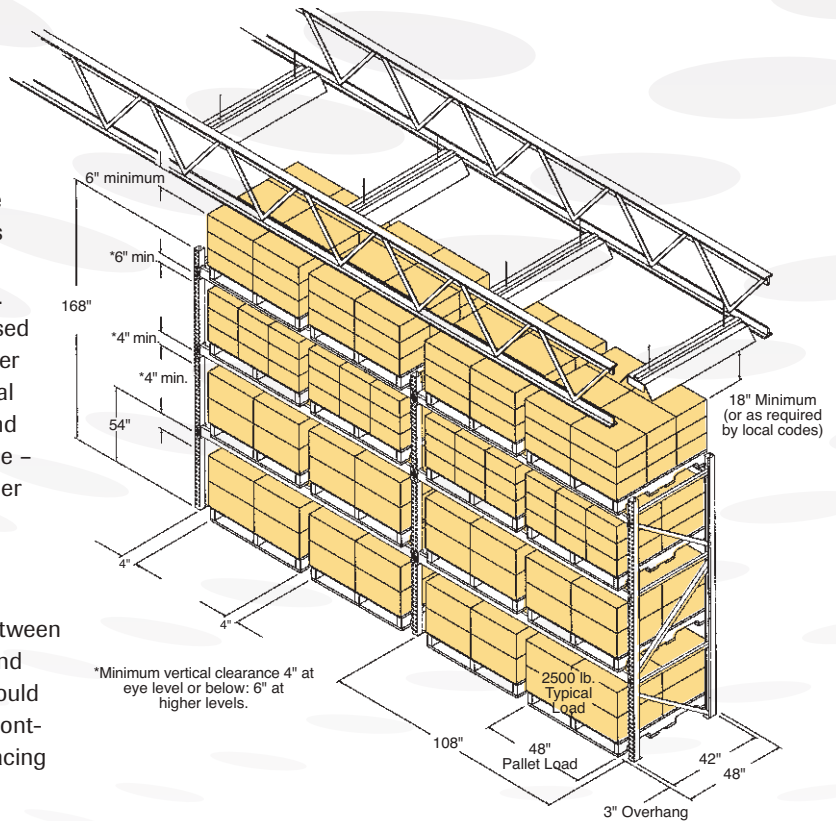
## Beam Length

Lyon recommends a clearance of 4" between palletized loads – and between loads and uprights. Beams over 120" in length should be tied together with the appropriate front-to-back support to maintain proper spacing at each storage level.

## Back-to-back Clearance

Clearance should be sufficient to accommodate minimum pallet overhang and tolerances – where pallet placement may vary. Additional clearances may be required to accommodate building structures or intermediate sprinkler systems (according to local codes).

*Note: For "Big Foot" – Heavy-Duty Pallet Rack, please contact customer service at <https://aliamholdings.com/>*

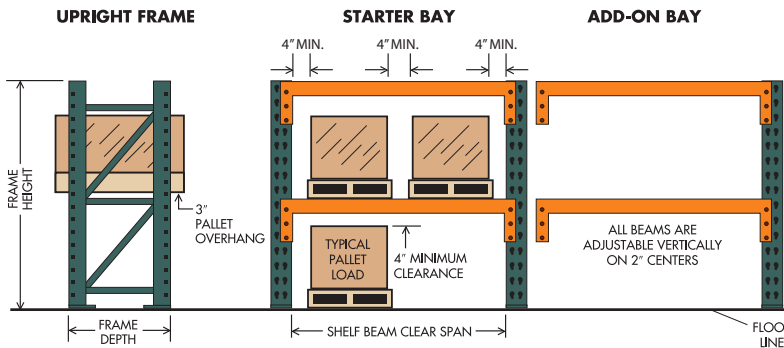


## Installation and Anchoring

To insure minimum stability standards, racks should be level, plumb and properly anchored.

## Seismic Zones

Since requirements vary so widely, we advise you to contact Lyon for assistance on rack projects in high risk seismic zones.



Depth should be 6" less than pallet.

For Example, a 48" deep pallet requires a rack with a 42" depth

Starter Bay consists of: two uprights and number of beams desired. (minimum 4)

Shown here is a typical GMA 48"d x 40"w pallet.

Add-On Bay consists of: One upright and number of beams desired. (minimum 4)

Lyon's teardrop design features a roll form welded upright and is totally interchangeable with all major teardrop-style products on the market today.

Tough, durable, and smooth finish features our baked-on powder epoxy finish which gives an appliance-like finish that is impact and corrosion resistant.

## Available in stock:

Lake Green – Upright Frames/ Accessories

Safety Orange – Beams

## Special Orders:

Additional capacities and dimensions are available upon request, contact Customer Service at <https://aliamholdings.com/>.

# HOW TO BUILD YOUR OWN - PALLET RACK

**Unique Design** - Roll formed upright provides greater strength-to-weight ratio. Minimum-sized slots mean more steel per upright. Upright's structures are 100% mig-welded with precision K-brace and heavy-duty cross channel reinforcement for increased strength, rigidity and resistance to abuse.

**Easy Adjustment** - Tapered keyhole slots on 2" centers, provide quick, easy vertical adjustment of beams. There are no "dead spots" or obstructions in upright posts to impede movement of beam along the entire height.

**Interchangeable** - Lyon pallet rack fits with other traditional teardrop designs. That means you can upgrade damaged, weak, or worn out uprights and beams with our versatile rack. No need to change your whole system.

## Upright Ordering Information

Choose uprights to suit your storage requirements:

- Medium-Duty - 3" x 2-1/4", 14 gauge
- Heavy-Duty - 3" x 3", 13 gauge

Two frames are required per bay, and any number may be joined together in continuous row applications

Available in Lake Green



## Step 1

### Select Upright Frames

Add the following figures:

Height of pallet loads (including pallet)

+ Height of shelf beam

+ 4" Min. vertical clearance for each pallet load

**Sum of above dimensions = rack height**

*For uppermost load level, location of shelf beam should be 6" less than fork truck's maximum lift height. Top of beams need to be at even increments.*

- Compute total frame capacity needed to satisfy your load requirements. *(Weight of heaviest pallet X number of pallets per level) X number of beam levels = total frame capacity*
- Determine "Largest Beam Spacing". Vertical distance between floor and first beam level or vertical distance between beam spacing; whichever is greater.
- Refer to the Upright Capacity Chart. Find the "Largest Beam Spacing" number that closest resembles the number determined in Step 2. Move down the table to the desired capacity required. This will identify if the upright is Medium or Heavy-Duty.
- Using the required depth and height of the upright for the corresponding type identified in Step 3, select the appropriate catalog number from the table.

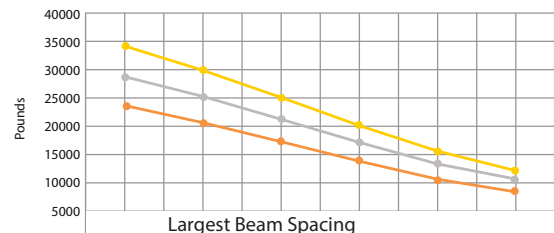
**Largest Beam Spacing has a significant impact on the capacity rating of an upright.**

Frame Height	Capacity per pair	36" Deep Cat. No.	42" Deep Cat. No.	48" Deep Cat. No.	Gauge
96"	20,600 lbs.	9736M096*	9742M096*	9748M096*	.075
120"	20,600 lbs.	9736M120*	9742M120*	9748M120*	.075
144"	20,600 lbs.	9736M144*	9742M144*	9748M144*	.075
192"	25,100 lbs.	-	9742H192*	9748H192*	.075
240"	29,800 lbs.	-	9742H240*	9748H240*	.085



*Uprights conform to the latest standards set by Rack Manufacturers' Institute LRF D Specifications.*

### Upright Capacity Chart



Gauge	36"	48"	60"	72"	84"	96"
Medium-Duty	23,500	20,600	17,200	13,700	10,600	8,400
Heavy-Duty	28,600	25,100	21,100	17,000	13,200	10,500
Heavy-Duty (.085)	34,100	29,800	25,000	20,000	15,400	12,200

— Medium-Duty — Heavy-Duty — Heavy-Duty (.085)

# HOW TO BUILD YOUR OWN - PALLET RACK

## Beam Ordering Information

- Roll-formed beams feature an integrated 1-5/8" step for decking and are totally enclosed for clean applications
- Heavy-duty rivet-type connectors engage upright wedge slots for increased holding power
- Beams are easy to install, take down and relocate
- Available in Safety Orange

### Three-Point Safety Catch –

Each beam has 3 rugged studs (4 on heavy-duty) that engage the tapered keyhole slots in the upright with a compression fit. Integral safety lock automatically locks into place when beam is properly seated.

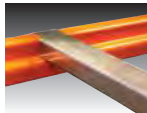


## Step 2

### Select Beams

1. Determine load weights per pair of beams.  
*(Two 2,500 lb. pallet loads = 5,000 lb. beam capacity).*
2. Determine length of beam required based on load width and minimum clearances.  
*(Minimum clearance between pallet and upright is 4", or for two 48" pallets, a total of 12". Use 108" beam). (See illustration on page 40)*
3. Refer to desired beam length and move across table to rated capacities.  
*(For 108" beam and 5,000 lb. load, select beam N108).*

Duty	Clear Span	Capacity per pair	Beam-Face Height	Cat. No.
Medium	96"	5,200 lbs.	4.1"	<b>SON96*</b>
	108"	6,320 lbs.	4.65"	<b>SON108*</b>
	120"	6,140 lbs.	5"	<b>SON120*</b>
	144"	6,790 lbs.	6"	<b>SON144*</b>
Heavy	96"	8,330 lbs.	5"	<b>SOS96*</b>
	108"	9,940 lbs.	6"	<b>SOS108*</b>
	120"	8,920 lbs.	6"	<b>SOS120*</b>
	144"	9,370 lbs.	6.5"	<b>SOS144*</b>



Beams 120" long and greater should be tied together with at least one front-to-back support except when solid decking panels are used.

Beams conform to the standards set by the latest Rack Manufacturers' Institute LRFD Specifications.

## Step 3

### Select Decking

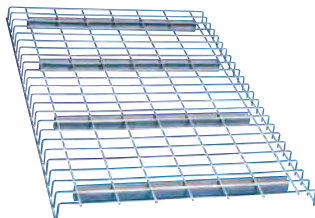


#### Solid Decking Panels

Heavy, 14 gauge panels feature three 3" x 1-5/8" x 14 gauge hat channels welded to the underside for maximum strength and durability. Panels drop into place to provide a solid deck surface.

#### Solid Decking Panels

W x D	Capacity Per Piece	Cat. No.
48" x 36"	8,247 lbs.	<b>SODP4836*</b>
60" x 36"	8,247 lbs.	<b>SODP6036*</b>
48" x 42"	6,057 lbs.	<b>SODP4842*</b>
60" x 42"	6,057 lbs.	<b>SODP6042*</b>
48" x 48"	5,198 lbs.	<b>SODP4848*</b>
60" x 48"	5,198 lbs.	<b>SODP6048*</b>



#### Wire Decking

Heavy-duty waterfall decking features a 2-1/2" x 4" 6 gauge wire mesh with 14 gauge steel channels for safe, durable storage and ease of installation. Meets all fire and safety regulations. Available in Frost Gray.

#### Wire Decking

W x D	# Channels	Capacity Per Piece	Cat. No.
46" x 36"	3	2,750 lbs.	<b>FFWD4636H*</b>
52" x 36"		2,500 lbs.	<b>FFWD5236H*</b>
58" x 36"		2,500 lbs.	<b>FFWD5836H*</b>
46" x 42"	4	3,500 lbs.	<b>FFWD4642H*</b>
46" x 42"	3	2,000 lbs.	<b>FFWD4642L*</b>
52" x 42"	4	3,500 lbs.	<b>FFWD5242H*</b>
52" x 42"	3	2,500 lbs.	<b>FFWD5242L*</b>
58" x 42"		3,000 lbs.	<b>FFWD5842L*</b>
46" x 48"	4	3,000 lbs.	<b>FFWD4648H*</b>
46" x 48"	3	2,500 lbs.	<b>FFWD4648L*</b>
52" x 48"		2,800 lbs.	<b>FFWD5248L*</b>
58" x 48"		3,000 lbs.	<b>FFWD5848L*</b>

Wire decking sizes necessary to fit Lyon pallet rack	Beam Width	Wire Decking Sizes
	96"	(2) 46"W
	108"	(2) 52"W
	120"	(2) 58"W
	144"	(3) 46"W

# HOW TO BUILD YOUR OWN - PALLET RACK

## Step 4 Select Accessories

### A Front-to-Back Support

Reduces the likelihood of inaccurately placed pallets falling through.

### B Plywood Support Channel

To support plywood or other decking material, or as front-to-back member between beams.

### C Skid Support

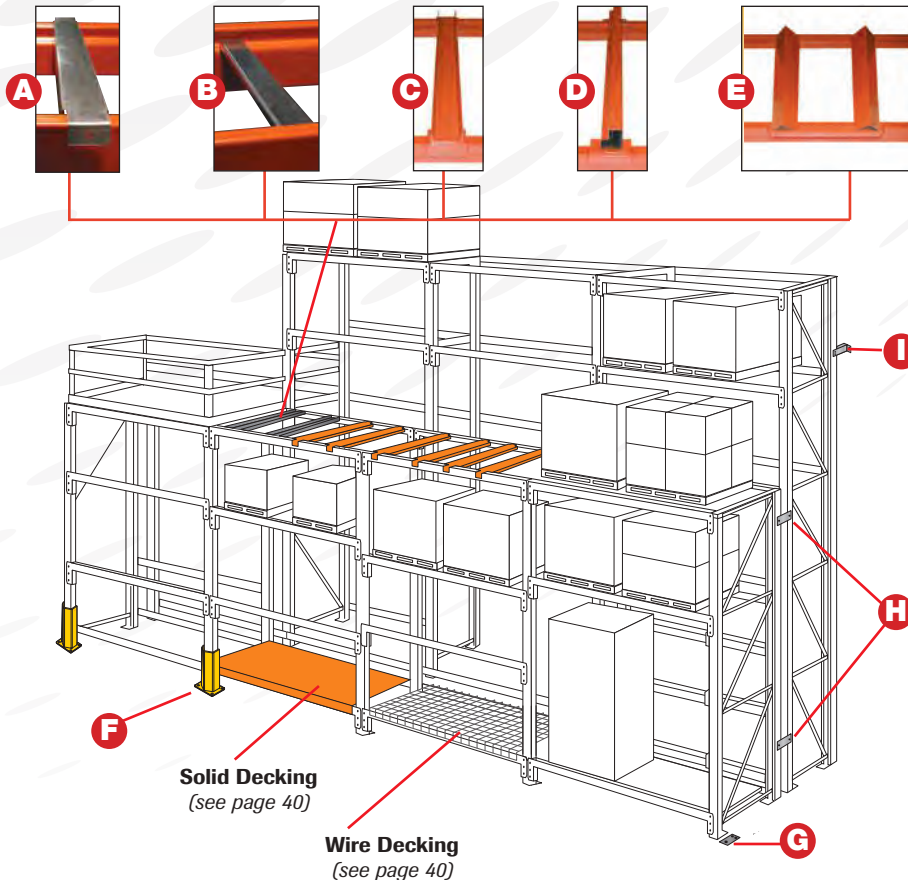
Provides secure, easily adjustable base for skid runners.

### D Fork Entry Bar

Solid base and proper fork clearance for non-palletized loads.

### E Drum Cradle

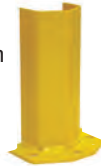
For safe storage of cylindrical items. Welded unit fits securely on beams.



Dimension	Capacity	Cat. No.
<b>Front-to-Back Support</b>		
36" Deep	1,840 lbs.	<b>GVFBSUP36*</b>
42" Deep	1,540 lbs.	<b>GVFBSUP42*</b>
48" Deep	1,320 lbs.	<b>GVFBSUP48*</b>
<b>Plywood Support Channel</b>		
36" Deep	730 lbs.	<b>GVPWSUP36*</b>
42" Deep	610 lbs.	<b>GVPWSUP42*</b>
48" Deep	530 lbs.	<b>GVPWSUP48*</b>
<b>Skid Support</b>		
36" Deep	650 lbs.	<b>SOSKSUP36*</b>
42" Deep	550 lbs.	<b>SOSKSUP42*</b>
48" Deep	475 lbs.	<b>SOSKSUP48*</b>
<b>Fork Entry Bar</b>		
36" Deep	7000 lbs.	<b>SOFEBAR36*</b>
42" Deep	6000 lbs.	<b>SOFEBAR42*</b>
48" Deep	5000 lbs.	<b>SOFEBAR48*</b>
<b>Drum Cradle</b>		
36" Deep	2170 lbs.	<b>SODRCD36</b>
42" Deep	1860 lbs.	<b>SODRCD42</b>

### F Pallet Rack Guard

Provides extra protection against abuse. Bolt on to floor only. Finish is Safety Yellow.



**No. SYIMSUP12\*** - 12" high  
**No. SYIMSUP24\*** - 24" high  
**No. SYIMSUP36\*** - 36" high  
**No. SYIMSUP48\*** - 48" high

### Upright Anchor

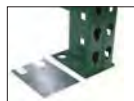
Optional wedge-type anchor can be used to secure column posts. 1/2" dia. x 3-3/4" long.



**No. NF25163\***

### G Shim Plate

Nests under footplate. Unpainted.



**No. NFFLSH34\***

### H, I Row Spacers & Wall Ties

Row spacer provides a stabilizing connection for back-to-back rows of racks; wall ties provide stability and consistent spacing from the wall. Galvanized construction resists rust and corrosion. Two spacers recommended for each pair of uprights. Bolts included.

	Dimension	Cat. No.
<b>Back-to-Back Row Spacer</b>	4"	<b>GVRSPC04*</b>
	6"	<b>GVRSPC06*</b>
	8"	<b>GVRSPC08*</b>
	10"	<b>GVRSPC10*</b>
	12"	<b>GVRSPC12*</b>
	18"	<b>GVRSPC18*</b>
<b>Back-to-Wall Tie</b>	4"	<b>GVWSPC04*</b>
	6"	<b>GVWSPC06*</b>
	8"	<b>GVWSPC08*</b>
	10"	<b>GVWSPC10*</b>
	12"	<b>GVWSPC12*</b>
	18"	<b>GVWSPC18*</b>



*NOTE: Load-carrying capacities for individual accessories listed are based on evenly distributed loads and are limited by the support capacity of the beams and/or upright assemblies. When skid supports, fork-entry bars and/or front-to-back supports are used to support the load, the weight is not evenly distributed to the beam and, therefore, beam capacities are reduced significantly.*