

Steel King Industries Inc. Structural Channel Bolted Pallet Rack Upright Frame Capacity Chart



OTHER IMPORTANT NOTES

The above listed component capacities are based upon RMI 2012 Design Specifications. System compliance includes consideration of connections. The great array of potential beam and column combinations cannot be represented in a chart format. For verification of system compliance to RMI 2012, or conformance to other local or regional codes, please consult our corporate office.

- 1) Capacities based upon interior usage. If rack needs to be located outside, contact Steel King for assistance.
- 2) Capacities are for selective rack only.
- 3) The above capacities do not consider seismic loading. If rack is located in a seismic area, contact Steel King for assistance.
- 4) Each column/post of each frame MUST be anchored to an adequate concrete floor.
- 5) Capacities based upon installation in a plumb condition.
- 6) Capacities are total per upright, assuming equal loading on both posts.

If any of these conditions do not apply to your application, or if you are unsure if they apply, DO NOT USE THIS CHART; in those cases, consult Steel King Engineering dept. for design information.

- 7) Upright Safety Factor varies between 1.67:1 per AISC 15th Edition
- 8) Other frame capacities are available for applications with large quantities; consult the factory.
- 9) RMI 2012 recommends the use of optional accessories to reduce damage to frames. Items including column protectors, double columns, and guard rail are available from Steel King.

NOTE: Any upright that exceeds the 6 to 1 ratio that does not have row spacers or cross-aisle ties, needs special attention. Please contact Steel King for assistance.

HOW TO USE THIS CHART:

- 1) Units are in pounds
- 2) Standard base plates are limited in their capacity to transfer the load to the concrete slab. If your upright load exceeds this capacity, it is necessary to use an oversized baseplate. Contact Steel King. Capacities highlighted in green exceed the capacity of standard baseplates.
- 3) For any shelf levels that are greater than 80 inches from the ground floor, for these beam spacings the upright capacity at that point must be based on the capacity for 48' bracing panel heights.
- 4) If the first beam level is equal to or greater than 84", then oversized baseplates are required. Contact Steel King.
- 5) If the upright exceeds the 6 to 1 ratio that does not have row spacers or cross aisle ties, then contact Steel King.

Steel King Beam Capacity Chart; Step Beams, SK3000 Bolted Rack Only

Beam Series:	Number of Pallets per shelf	SB7UM300	SB7UM350	SB7UM400	SB7UM475
Beam Height:		3.1875"	3.6875"	4.1875"	4.8125"
Beam Length		Capacity	Capacity	Capacity	Capacity
48"	1	6,000#	7,400#	8,700#	10,540#
54"	1	5,320#	6,680#	7,840#	9,460#
60"	1	4,800#	6,100#	7,140#	8,580#
66"	1	4,360#	5,640#	6,580#	7,880#
72"	1	4,000#	5,080#	6,100#	7,300#
78"	1	3,680#	4,680#	5,700#	6,800#
84"	2	3,840#	4,900#	6,020#	7,160#
90"	2	3,600#	4,560#	5,680#	6,740#
92"	2	3,520#	4,460#	5,540#	6,620#
96"	2	3,360#	4,280#	5,300#	6,380#
100"	2	3,160#	4,080#	5,100#	6,140#
102"	2	3,060#	3,940#	5,000#	6,040#
108"	2	2,760#	3,560#	4,520#	5,760#
114"	2	2,520#	3,240#	4,120#	5,420#
120"	2	2,320#	2,980#	3,760#	4,940#
126"	2	2,140#	2,740#	3,440#	4,540#
132"	3	1,980#	2,520#	3,180#	4,160#
138"	3	1,840#	2,340#	2,940#	3,840#
144"	3	1,720#	2,180#	2,740#	3,560#

Steel King Beam Capacity Chart; Step Beams, SK3000 Bolted Rack Only

Beam Series:	Number of Pallets per shelf	SB7UM550	SB7UM600	SB7UG600	SB7UB600
Beam Height:		5.5625"	6.0625"	6.0625"	6.0625"
Beam Length		Capacity	Capacity	Capacity	Capacity
48"	1	13,000#	14,780#	15,000#	15,000#
54"	1	11,640#	13,220#	15,000#	15,000#
60"	1	10,540#	11,960#	15,000#	15,000#
66"	1	9,660#	10,940#	14,820#	15,000#
72"	1	8,920#	10,080#	13,640#	15,000#
78"	1	8,280#	9,360#	12,660#	14,800#
84"	2	8,700#	9,840#	13,280#	15,000#
90"	2	8,180#	9,220#	12,440#	14,540#
92"	2	8,020#	9,040#	12,180#	14,240#
96"	2	7,720#	8,700#	11,720#	13,680#
100"	2	7,440#	8,380#	11,280#	13,160#
102"	2	7,320#	8,220#	11,060#	12,920#
108"	2	6,940#	7,820#	10,500#	12,240#
114"	2	6,620#	7,440#	9,980#	11,640#
120"	2	6,320#	7,100#	9,520#	11,100#
126"	2	6,060#	6,800#	9,100#	10,600#
132"	3	5,660#	6,520#	8,720#	10,160#
138"	3	5,220#	6,260#	8,240#	9,540#
144"	3	4,820#	5,820#	7,600#	8,800#
150"	3	4,480#	5,400#	7,040#	8,140#
156"	3	4,160#	5,020#	6,540#	7,560#
162"	3	3,900#	4,680#	6,080#	7,040#
168"	3	3,640#	4,380#	5,680#	6,560#
174"	3	3,420#	4,100#	5,320#	6,140#
180"	4	3,220#	3,860#	5,000#	5,760#
186"	4	3,040#	3,620#	4,700#	5,420#
192"	4	2,860#	3,420#	4,420#	5,100#



Steel King Beam Capacity Chart; Channel Beams, SK3000 Bolted Rack Only

Beam Type		CB7XL300		CB7XH300		CB7XL400		CB7XH400		CB7XH500		CB7XH600			
Beam Height		3.00"		3.00"		4.00"		4.00"		5.00"		6.00"			
Beam Length	Pallets per Shelf	w/ tie	no tie	w/ tie	no tie	w/ tie	no tie	w/ tie	no tie	w/ (1) tie	w (2) ties	no tie	w/ (1) tie	w (2) ties	no tie
48"	1	11,400#	9,940#	12,120#	10,720#	15,000#	15,000#	15,000#	15,000#	15,000#		15,000#	15,000#		15,000#
54"	1	10,100#	8,640#	10,760#	9,340#	15,000#	13,020#	15,000#	14,860#	15,000#		15,000#	15,000#		15,000#
60"	1	9,060#	7,560#	9,660#	8,220#	13,900#	11,260#	15,000#	12,920#	15,000#		15,000#	15,000#		15,000#
66"	1	8,200#	6,700#	8,760#	7,300#	12,480#	9,820#	13,980#	11,340#	15,000#		15,000#	15,000#		15,000#
72"	1	7,480#	5,960#	8,000#	6,520#	11,300#	8,620#	12,680#	10,020#	15,000#		14,680#	15,000#		15,000#
78"	2	7,640#	5,980#	7,940#	6,600#	11,580#	8,540#	13,020#	10,000#	15,000#		14,540#	15,000#		15,000#
84"	2	6,680#	5,380#	6,940#	5,960#	10,600#	7,540#	11,940#	8,900#	15,000#		12,860#	15,000#		15,000#
90"	2	5,900#	4,840#	6,140#	5,400#	9,740#	6,600#	11,000#	7,960#	15,000#		11,380#	15,000#		15,000#
92"	2	5,660#	4,660#	5,900#	5,220#	9,480#	6,320#	10,720#	7,660#	15,000#		10,920#	15,000#		15,000#
96"	2	5,260#	4,360#	5,460#	4,900#	9,000#	5,820#	10,180#	7,120#	15,000#		10,000#	15,000#		14,100#
102"	2	4,720#	3,900#	4,900#	4,440#	8,340#	5,160#	9,460#	6,320#	13,900#		8,840#	15,000#		12,420#
108"	2	4,260#	3,500#	4,420#	4,040#	7,740#	4,620#	8,820#	5,660#	12,880#		7,880#	15,000#		11,000#
114"	2	3,880#	3,180#	4,020#	3,660#	7,220#	4,160#	8,060#	5,100#	11,980#		7,060#	15,000#		9,840#
120"	2	3,540#	2,900#	3,680#	3,320#	6,740#	3,760#	7,340#	4,600#	11,180#		6,360#	15,000#		8,840#
126"	2	3,240#	2,640#	3,380#	3,040#	6,220#	3,420#	6,700#	4,200#	10,440#		5,780#	14,800#		8,000#
132"	3	3,000#	2,420#	3,100#	2,800#	5,700#	3,140#	6,140#	3,840#	9,760#		5,260#	13,820#		7,280#
138"	3	2,780#	2,240#	2,880#	2,580#	5,260#	2,880#	5,660#	3,520#	9,140#		4,820#	12,920#		6,640#
144"	3	2,580#	2,080#	2,680#	2,380#	4,860#	2,660#	5,220#	3,240#	8,580#		4,420#	12,100#		6,080#
150"	3									8,060#	8,660#		11,340#	13,800#	
156"	3									7,580#	8,040#		10,640#	13,100#	
162"	3									7,140#	7,480#		10,000#	12,460#	
168"	3									6,720#	6,980#		9,380#	11,680#	
174"	3									6,320#	6,540#		8,820#	10,920#	
180"	4									5,960#	6,140#		8,300#	10,220#	
186"	4									5,600#	5,760#		7,760#	9,600#	
192"	4									5,260#	5,420#		7,260#	9,020#	