

SK3000 Structural Channel Bolted Pallet Rack: Model Number System

Upright Frames

BCF 3 H 030 096

BCF= SK3000 Upright Frame

Column size; "3"= 3" wide; "4"= 4" wide; "5"= 5" wide

Material Type; L or H.

Height of frame, inches (excludes thickness of baseplates) (must be 3 digits)

Depth of Frame, inches (must be 3 digits)

Step/Channel Beams

CB 7 X L 300 092

Beam type; SB= Step Beam; CB= Channel Beam

7= new SK3000 Connection Clip

Beam type; "U"= new style step beam, "X" used with other beams

Material Type; M,G,B, W,N,R, L, H, etc.

Beam height, inches; 250= 2.50 inch, 300= 3.00 inch, etc

Beam length, inches; 092= 92" (bay width); must be 3 digits

STEEL KING POWDER COAT PAINT ADVANTAGE

SK3000 Bolted Channel Pallet Rack (FOB GA only) is painted with a high-durability POWDER COAT paint finish. Powder coated products offer better resistance to water and corrosion, better gloss, hardness, and adhesion. In fact, Steel King powder coated products give you:

- 60% GREATER RESISTANCE TO SOLVENTS
- 74% GREATER RESISTANCE TO SALT SPRAY
- 94% GREATER IMPACT RESISTANCE

As a Steel King dealer, this means that your customer's equipment looks better, arrives in better shape with fewer freight claims, requires less maintenance, and lasts longer. Selling Steel King powder coated products is better for the environment too, because unlike liquid paints, powder coat paints do not emit fumes into the air and generates less waste.





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



Upright Frame Post Type:	BCF3L	BCF3H	BCF4L	BCF4H	BCF3LR	BCF3HR	BCF4LR	BCF4HR
Post width	3"	3"	4"	4"	3"	3"	4"	4"
MAX vertical Beam Spacing:					NOTE: reinforced	NOTE: reinforced	NOTE: reinforced	NOTE: reinforced
36"	39,990	43,270	56,860	62,170	71,470	81,440	100,000	100,000
42"	39,990	43,000	56,860	62,170	66,000	74,970	100,000	100,000
48"	37,410	39,560	56,860	62,170	71,470	81,440	100,000	100,000
54"	34,200	35,990	55,170	59,760	66,000	74,970	100,000	100,000
60"	30,930	32,380	52,250	56,320	60,160	68,000	100,000	100,000
66"	27,680	28,820	49,200	52,740	53,940	60,700	95,900	100,000
72"	24,510	25,360	46,060	49,080	47,325	52,850	90,300	100,000
78"	21,480	22,070	42,880	45,390	40,430	44,990	83,600	95,000
84"	17,740	19,020	31,050	32,750	34,860	38,790	77,800	88,000
90"	16,200	16,570	31,050	32,750	30,370	33,790	71,740	80,500
96"	14,240	14,560	31,050	32,750	26,690	29,700	65,170	72,470
102"	12,610	12,900	30,410	31,190				
108"	11,250	11,510	27,510	27,900				
114"	10,090	10,330	24,700	25,040				
120"	9,110	9,320	22,290	22,600				
126"	8,260	8,450	20,220	20,500				
132"	7,530	7,700	18,420	18,670				
138"	6,890	7,040	16,860	17,090				
144"	6,320	6,470	15,480	15,690				

Over 144"=Consult Factory

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



IMPORTANT NOTES TO CHART:

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.
- 2) Capacities are for selective rack only.
- 3) The above capacities do not consider seismic loading.
- 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 2012
- 8) Capacities are to be reduced to account for the weight of the rack system; deduct the weight of beams, frames, decking, and accessories.
- 9) Other frame capacities are available for applications with large quantities; consult the factory.
- 10) 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) Calculate the maximum load per bay; number of levels X load per level (supported levels only).
- 2) Determine the MAXIMUM distance between levels, or the distance from the floor to the first beam level, whichever is greater. This dimension is the "vertical beam spacing" to use in the above chart.
- 3) Using the "vertical beam spacing" as determined in step 2 above, follow the appropriate row towards the right until
- 4) You may wish to choose an even greater capacity upright, for additional abuse resistance.
- 5) Verify the adequacy of the end user's floor to support these loads.
- 6) NOTE: It may be more cost effective to use a reinforced column than to upgrade to a larger or heavier column.

Consult Factory for proper height of reinforcements.



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

Beam Series:	Number of Pallets per shelf	SB7UM250	SB7UM300	SB7UM350	SB7UM400	SB7UM475
Beam Height:		2.5625"	3.1875"	3.6875"	4.1875"	4.8125"
Beam Length		Capacity	Capacity	Capacity	Capacity	Capacity
48"	1	4,260#	6,000#	7,400#	8,700#	10,540#
54"	1	3,780#	5,320#	6,680#	7,840#	9,460#
60"	1	3,400#	4,800#	6,100#	7,140#	8,580#
66"	1	3,100#	4,360#	5,640#	6,580#	7,880#
72"	1	2,840#	4,000#	5,080#	6,100#	7,300#
78"	1	2,620#	3,680#	4,680#	5,700#	6,800#
84"	2	2,740#	3,840#	4,900#	6,020#	7,160#
90"	2	2,540#	3,600#	4,560#	5,680#	6,740#
92"	2	2,500#	3,520#	4,460#	5,540#	6,620#
96"	2	2,380#	3,360#	4,280#	5,300#	6,380#
100"	2	2,240#	3,160#	4,080#	5,100#	6,140#
102"	2	2,180#	3,060#	3,940#	5,000#	6,040#
108"	2	1,980#	2,760#	3,560#	4,520#	5,760#
114"	2	1,800#	2,520#	3,240#	4,120#	5,420#
120"	2	1,660#	2,320#	2,980#	3,760#	4,940#
126"	2	1,540#	2,140#	2,740#	3,440#	4,540#
132"	3	1,420#	1,980#	2,520#	3,180#	4,160#
138"	3	1,320#	1,840#	2,340#	2,940#	3,840#
144"	3	1,240#	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	SB7UG500*	SB7UM550	SB7UG550*	SB7UM600	SB7UG600	SB7UB600	SB7UW600
Beam Height:		5.0625"	5.5625"	5.5625"	6.0625"	6.0625"	6.0625"	6.0625"
Beam Length		Capacity	Capacity	Capacity	Capacity	Capacity	Capacity	Capacity
48"	1	13,600#	13,000#	15,000#	14,780#	15,000#	15,000#	15,000#
54"	1	13,600#	11,640#	15,000#	13,220#	15,000#	15,000#	15,000#
60"	1	12,380#	10,540#	14,260#	11,960#	15,000#	15,000#	15,000#
66"	1	11,320#	9,660#	13,020#	10,940#	14,820#	15,000#	15,000#
72"	1	10,440#	8,920#	12,000#	10,080#	13,640#	15,000#	15,000#
78"	1	9,700#	8,280#	11,140#	9,360#	12,660#	14,800#	15,000#
84"	2	10,200#	8,700#	11,700#	9,840#	13,280#	15,000#	15,000#
90"	2	9,580#	8,180#	10,980#	9,220#	12,440#	14,540#	15,000#
92"	2	9,400#	8,020#	10,760#	9,040#	12,180#	14,240#	15,000#
96"	2	9,040#	7,720#	10,340#	8,700#	11,720#	13,680#	15,000#
100"	2	8,700#	7,440#	9,960#	8,380#	11,280#	13,160#	14,900#
102"	2	8,560#	7,320#	9,780#	8,220#	11,060#	12,920#	14,620#
108"	2	8,120#	6,940#	9,280#	7,820#	10,500#	12,240#	13,840#
114"	2	7,740#	6,620#	8,840#	7,440#	9,980#	11,640#	13,160#
120"	2	7,100#	6,320#	8,440#	7,100#	9,520#	11,100#	12,540#
126"	2	6,480#	6,060#	8,020#	6,800#	9,100#	10,600#	11,980#
132"	3	5,940#	5,660#	7,360#	6,520#	8,720#	10,160#	11,460#
138"	3	5,480#	5,220#	6,760#	6,260#	8,240#	9,540#	10,740#
144"	3	5,060#	4,820#	6,240#	5,820#	7,600#	8,800#	9,900#
150"	3	4,700#	4,480#	5,800#	5,400#	7,040#	8,140#	9,160#
156"	3	4,380#	4,160#	5,380#	5,020#	6,540#	7,560#	8,500#
162"	3	4,080#	3,900#	5,020#	4,680#	6,080#	7,040#	7,900#
168"	3	3,820#	3,640#	4,700#	4,380#	5,680#	6,560#	7,380#
174"	3	3,580#	3,420#	4,400#	4,100#	5,320#	6,140#	6,900#
180"	4	3,360#	3,220#	4,140#	3,860#	5,000#	5,760#	6,480#
186"	4	3,180#	3,040#	3,880#	3,620#	4,700#	5,420#	6,080#
192"	4	3,000#	2,860#	3,660#	3,420#	4,420#	5,100#	5,740#

IMPORTANT NOTES AND CAUTIONS REGARDING THESE CAPACITIES!

EXAMPLE: SB7UG500096 is a step beam with a bolted connector for channel rack, 5.0" high x 96" long, capacity 8,740#/pair.

Capacities in pounds per pair, over top (not step) of beams, *uniformly distributed*; **concentrated, seismic, and impact loads reduce capacity**

These capacities based upon the lesser of the strength in bending or L/180 criteria.

When beam length allows only one load wide per level, decrease above capacities by 20% for impact loading.

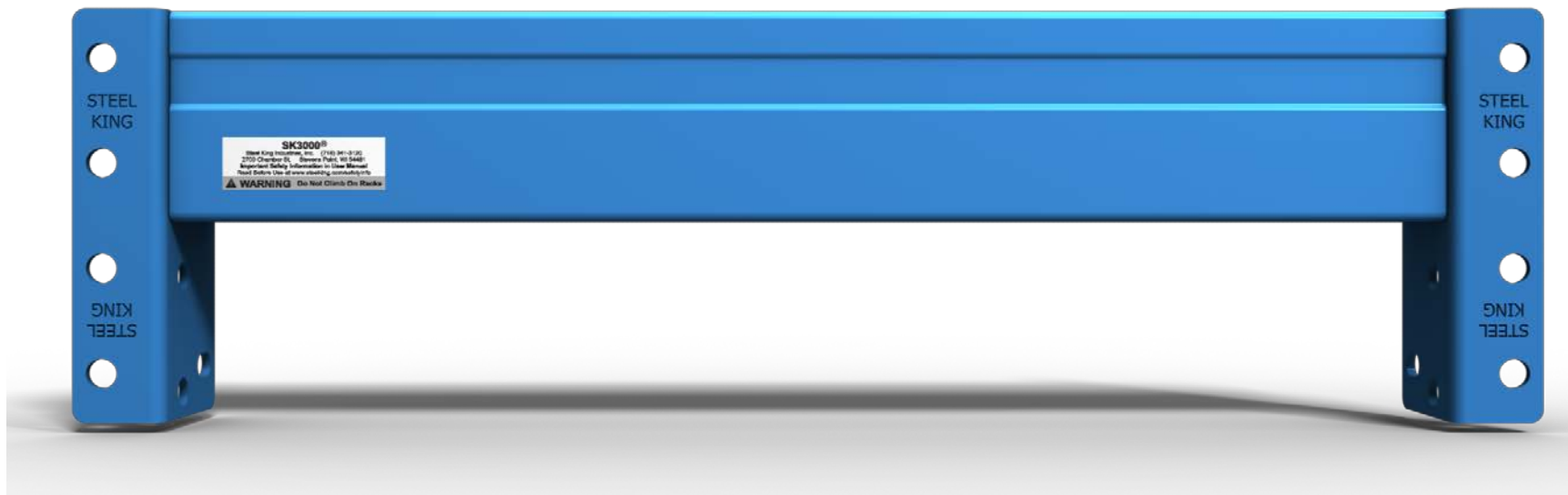
These *component* capacities are based upon RMI 2012 Design Specifications. *System* compliance with RMI 2012 requires you to provide *complete* details of the configuration of the system (beam levels, load per level, beam spacings, upright frame height and types, etc).

Above capacities are for non-seismic interior selective applications; contact factory for seismic capacities or other non-standard applications.

Based upon a MINIMUM steel yield of 55,000 p.s.i.

Other beams available (other gauges, profiles, yields) in large quantities; call factory for details.

Beam Safety Factor = 1.67:1 per AISI 2012



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

Beam Series:		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/TIE	W/2 TIE	NO/TIE	W/TIE	W/2 TIE	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#
54"	1	10,100#	8,640#	10,760#	9,340#	15,000#	13,620#	15,000#	14,860#	15,000#		15,000#	15,000#		15,000#
60"	1	9,060#	7,560#	9,660#	8,220#	14,440#	11,800#	15,000#	12,920#	15,000#		15,000#	15,000#		15,000#
66"	1	8,200#	6,700#	8,760#	7,300#	12,960#	10,320#	13,980#	11,340#	15,000#		15,000#	15,000#		15,000#
72"	1	7,480#	5,960#	8,000#	6,520#	11,740#	9,080#	12,680#	10,020#	15,000#		14,680#	15,000#		15,000#
78"	2	7,640#	5,980#	7,940#	6,600#	12,040#	9,020#	13,020#	10,000#	15,000#		14,540#	15,000#		15,000#
84"	2	6,680#	5,380#	6,940#	5,960#	11,020#	8,000#	11,940#	8,900#	15,000#		12,860#	15,000#		15,000#
90"	2	5,900#	4,840#	6,140#	5,400#	10,160#	7,080#	11,000#	7,960#	15,000#		11,380#	15,000#		15,000#
92"	2	5,660#	4,660#	5,900#	5,220#	9,880#	6,780#	10,720#	7,660#	15,000#		10,920#	15,000#		15,000#
96"	2	5,260#	4,360#	5,460#	4,900#	9,380#	6,240#	10,180#	7,120#	15,000#		10,000#	15,000#		14,100#
102"	2	4,720#	3,900#	4,900#	4,440#	8,700#	5,520#	9,460#	6,320#	13,900#		8,840#	15,000#		12,420#
108"	2	4,260#	3,500#	4,420#	4,040#	8,100#	4,940#	8,820#	5,660#	12,880#		7,880#	15,000#		11,000#
114"	2	3,880#	3,180#	4,020#	3,660#	7,560#	4,440#	8,060#	5,100#	11,980#		7,060#	15,000#		9,840#
120"	2	3,540#	2,900#	3,680#	3,320#	7,000#	4,020#	7,340#	4,600#	11,180#		6,360#	15,000#		8,840#
126"	2	3,240#	2,640#	3,380#	3,040#	6,400#	3,660#	6,700#	4,200#	10,440#		5,780#	14,800#		8,000#
132"	3	3,000#	2,420#	3,100#	2,800#	5,860#	3,360#	6,140#	3,840#	9,760#		5,260#	13,820#		7,280#
138"	3	2,780#	2,240#	2,880#	2,580#	5,400#	3,080#	5,660#	3,520#	9,140#		4,820#	12,920#		6,640#
144"	3	2,580#	2,080#	2,680#	2,380#	5,000#	2,840#	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#	

IMPORTANT NOTES AND CAUTIONS REGARDING THESE CAPACITIES!

EXAMPLE: CB7XH500096 is a channel beam with a bolted connector for SK3000 rack, 5.0" high x 96" long, capacity 14,780#/pair w/tie and 6,850# w/o a tie.

Capacities in pounds per pair, *uniformly distributed*; **concentrated, seismic, and impact loads reduce capacity**

These capacities based upon the lesser of the strength in bending or L/180 criteria.

When beam length allows only one load wide per level, decrease above capacities by 20% for impact loading.

These *component* capacities are based upon RMI 2012 Design Specifications. *System* compliance with RMI 2012 requires you to provide *complete* details of the configuration of the system (beam levels, load per level, beam spacings, upright frame height and types, etc).

Applications with loads of greater than 7,500# per level should not use "P gauge" upright frames (BTFAP, BTFBP, BTFCP).

Above capacities are for non-seismic interior selective applications; contact factory for seismic capacities or other non-standard applications.

Based upon a MINIMUM steel yield of 50,000 p.s.i.

Other beams available in large quantities; call factory for details.

