

Bolted Connection Specifications: New Construction

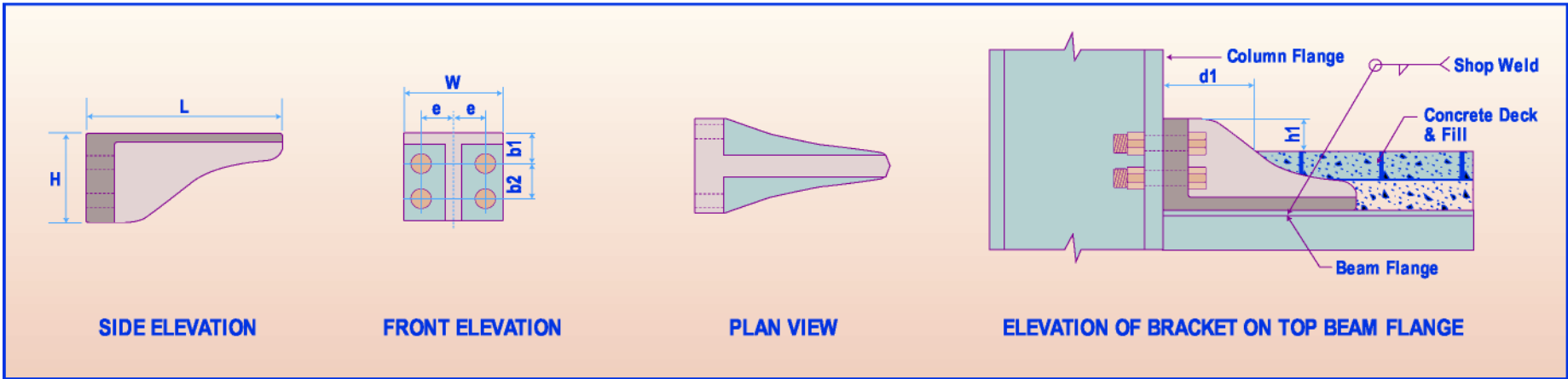


Table of Bolted Bracket® Properties

Bracket Type	L	H	W	e	b1	b2	b3 ⁽¹⁾	5 1/2" deck ⁽²⁾		6 1/4" deck ⁽²⁾		Fu	Zx ⁽³⁾ d _{eff}	#of bolts ⁽⁴⁾	bolt Ø
								h1	d1	h1	d1				
W 1.0	25 1/2"	12"	9 1/2"	3 1/4"	3"	3 1/2"	3 1/2"	6 1/2"	12"	5 3/4"	1 0 3/4"	973		6	1 1/2
W 2.0	16"	8 3/4"	9"	3"	3"	3 1/2"	NA	3 1/4"	8"	2 1/2"	7 1/4"	545		4	1 3/8
W 2.1	18"	8 3/4"	9 1/2"	3 1/4"	3"	3 1/2"	NA	3 1/4"	8 1/2"	2 1/2"	7 5/8"	648		4	1 1/2
W 3.0	16"	5 1/2"	9"	2 3/4"	3"	NA	NA	0"	0"	0"	0"	272		2	1 3/8
W 3.1	16"	5 1/2"	9"	2 3/4"	3"	NA	NA	0"	0"	0"	0"	324		2	1 1/2

Notes:

- b₃ is the bolt spacing for the third row of bolts in bracket type W 1.0 (not shown).
- h₁ and d₁, are distances above the deck and fill for decks with 5 1/2" and 6 1/4" thickness as shown. Bracket protrusion above concrete can be offset by lowering top of steel or pouring curb.
- (Fu * Zx) / d_{eff} is the design limit for the bracket. d_{eff} depth of the beam plus the distance to the centroid of the bolts. A W30x108 beam with Type W 2.1 Brackets top and bottom

has a d_{eff} of 29.83" + 4.75" + 4.75" = 39.33" Fu is assumed 65 ksi. Use this ratio to determine the size of Bracket for the moment frame beam, keeping the ratio below the maximum listed for the selected Bracket.

- Bolts are A490 high strength bolts.
- Unit costs include the cost of Bracket and Bolts, F.O.B. Seattle, WA. Prices are subject to change without notice.
- Bolted Brackets are patented by Steel Cast Connections LLC

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