

TOP FLANGE HANGERS LBV/BA/B/HB I-Joist & Structural Composite Lumber Hangers



This product is preferable to similar connectors because of
a) easier installation, b) higher loads, c) lower installed cost,
or a combination of these features.

The BA hanger is a cost effective hanger targeted at high capacity I-joists and common Structural Composite Lumber applications. A min/max joist nail option gives dual use of this hanger. Minimum values featuring positive angle nailing are targeted at I-joist without web stiffeners requirement and the maximum nailing generates higher loads to support structural composite lumber. The unique two level embossment provides added stiffness to the top flange.

The newly improved LBV, B and HB hangers offer wide versatility for I-joists and structural composite lumber. The enhanced load capacity widens the range of applications for these hangers. The LBV still features positive angle nailing and does not require the use of web stiffeners for standard non modified I-joist installations.

See Top Flange tables on pages 96 to 105. See Hanger Options on pages 181-183 for hanger modifications, which may result in reduced loads.

MATERIAL: See tables, pages 96 to 105.

FINISH: LBV, B, BA and HB—Galvanized; all saddle hangers and all welded sloped and special hangers—Simpson Strong-Tie® gray paint. LBV, B, BA and HB may be ordered hot-dip galvanized; specify HDG.

INSTALLATION: • Use all specified fasteners. See General Notes and nailer table.

- LBV, B, BA and HB may be used for weld-on applications. Weld size to match material thickness (*approximate thickness shown*). The minimum required weld to the top flanges is 1/8" x 2" fillet weld to each side of each top flange tab for 14 and 12 gauge and 3/16" x 2" fillet weld to each side of each top flange tab for 7 gauge and 10 gauge. Distribute the weld equally on both top flanges. Welding cancels the top and face nailing requirements. Consult the code for special considerations when welding galvanized steel. The area should be well-ventilated, see page 14 for weld information. Weld on applications produce the maximum allowable down load listed. For uplift loads refer to T-WELDUPLFT.
- LBV hangers do not require the use of web stiffeners for non-sloped or non-skewed applications.
- B and HB hangers require the use of web stiffeners. BA MIN nailing does not require web stiffeners. BA MAX nailing requires the use of web stiffeners.
- Ledgers must be evaluated for each application separately. Check TF dimension, nail length and nail location on ledger.
- Refer to technical bulletin T-SLOPEJST for information regarding load reductions on selected hangers which can be used without modification to support joists which have shallow slopes ($\leq 4:12$).

OPTIONS: • LBV, B and HB

- Other widths are available; specify W dimension (*the minimum W dimension is 1 9/16"*).
- The coating on special B hangers will depend on the manufacturing process used. Check with your Simpson Strong-Tie representative for details. Hot-dip galvanized available; specify HDG.
- Refer to technical bulletin T-BSERIES for the complete line of LBV, BA, B and HB hangers, including models not shown here, their available modification combinations and their associated reduction factors.
- Modified hangers have reduced loads, see Hanger Options, pages 181-183.

CODES: See page 12 for Code Reference Key Chart.

Model No.	Nailer	Top Flange Nailing	Uplift ¹ (160)	Allowable Loads	
				DF/SP	SPF/HF
LBV	2x	10-10dx1 1/2	265	2280	2085
	2-2x	10-10d	265	1955	1530
	3x	10-16dx2 1/2	265	2490	—
BA	4x	10-16d	255	2590	—
	2x	10-10dx1 1/2	265	2220	1755
	2-2x	14-10d	265	2695	2235
	3x	14-16dx2 1/2	265	3230	—
B	4x	14-16d	265	3300	—
	2-2x	14-10d	710	3615	2770
	3x	14-16dx2 1/2	825	3725	—
HB	4x	14-16d	825	3800	—
	4x	22-16d	1550	5500	—

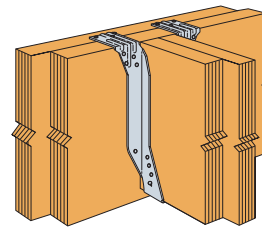
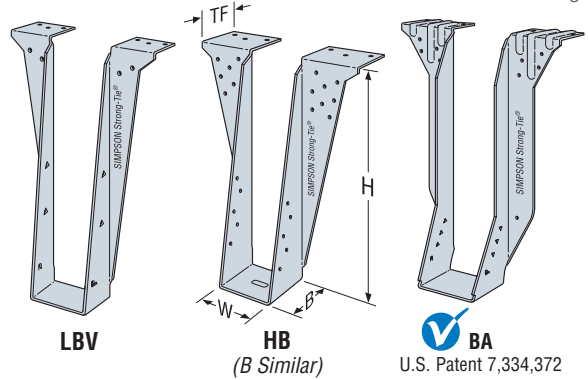
NAILER TABLE

The table indicates the maximum allowable loads for LBV, BA, B and HB hangers used on wood nailers. Nailers are wood members attached to the top of a steel I-beam, concrete or masonry wall.

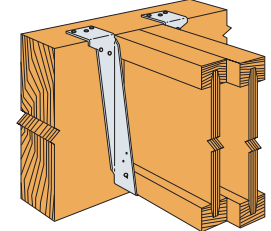
1. Uplift values are for DF/SP members only. LBV and BA hangers resist more uplift when web stiffeners are used. Refer to technical bulletin T-NAILERUPLFT for additional information (*see page 191 for details*).
2. See page 184 for reductions on modified hangers on nailers.
3. B hangers require 6-10dx1 1/2 joist nails to achieve published loads. For joist members 2 1/2" or wider, 16dx2 1/2" joist nails should be installed for additional uplift loads on the 3x and 4x nailer applications of 970 lbs. and 1010 lbs. respectively.

B SERIES WITH VARIOUS HEADER APPLICATIONS

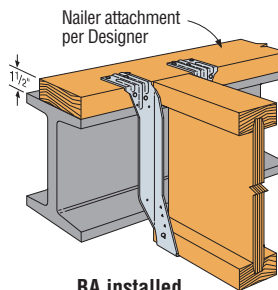
Model Series	Fasteners			Allowable Loads Header Type								Code Ref.
	Top	Face	Joist	Uplift ¹ (160)	LVL ⁸	PSL	LSL	DF/SP ²	SPF/HF	I-Joist ⁹		
										DF/SCL	SPF/HF	
LBV (Min)	6-10dx1 1/2	4-10dx1 1/2	2-10dx1 1/2	265	2295	2610	2270	1790	1835	1495	1340	11, F21
	6-10d	4-10d	2-10dx1 1/2	265	2295	2610	2645	2310	2060	—	—	
	6-16d	4-16d	2-10dx1 1/2	265	2910	2885	3190	2460	2060	—	—	
LBV (Max)	6-10dx1 1/2	4-10dx1 1/2	6-10dx1 1/2	635	2295	2610	2270	1790	1835	1495	1350	
	6-10d	4-10d	6-10dx1 1/2	785	2295	2610	2645	2310	2060	—	—	
	6-16d	4-16d	6-10dx1 1/2	895	2910	2885	3190	2460	2060	—	—	
BA (Min)	6-10dx1 1/2	10-10dx1 1/2	2-10dx1 1/2	—	—	—	—	—	—	1495	1495	
	6-10d	10-10d	2-10dx1 1/2	265	3230	3630	4005	3080	2425	—	—	
	6-16d	10-16d	2-10dx1 1/2	265	4015	3705	4005	3435	2665	—	—	
BA (Max)	6-10d	10-10d	8-10dx1 1/2	1170	3555	3630	4120	3625	2465	—	—	
	6-16d	10-16d	8-10dx1 1/2	1170	4715	4320	4500	3800	2665	—	—	
B ³	6-10d	8-10d	6-10dx1 1/2	990	3575	3195	3640	3625	2190	—	—	
	6-16d	8-16d	6-16dx2 1/2	1010	4135	3355	4500	3800	2650	—	—	
HB ²	6-16d	16-16d	10-16dx2 1/2	2610	5815	5640	6395	5650	3820	—	—	



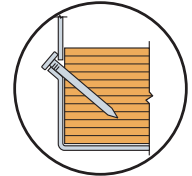
BA Installed LVL to LVL Max Nailing



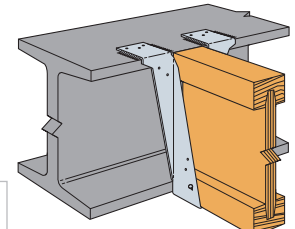
Typical Double LBV Hanger Installation



BA installed 2X nailer on steel beam minimum nailing



LBV features positive angle nailing, no web stiffeners are required



BA, B, HB and LBV are acceptable for weld-on applications (*LBV shown*). See Installation Information.

NAILS: 16d = 0.162" dia. x 3 1/2" long,
16dx2 1/2 = 0.162" dia. x 2 1/2" long,
10d = 0.148" dia. x 3" long,
10dx1 1/2 = 0.148" dia. x 1 1/2" long.
See page 16-17 for other nail sizes and information.

1. This table assumes joists with $F_c \perp = 750$ psi. For other joists, check that bearing and joist nails are adequate.
2. Loads for B's and HB's assume a joist width of 2 1/2" or greater.
3. Uplift loads are based on DF/SP lumber and have been increased 60% for wind or earthquake loading with no further increase allowed. For normal loading applications such as cantilever construction refer to Simpson Strong-Tie® Connector Selector® software or conservatively divide the uplift load by 1.6. For SPF/HF use 0.86 x DF/SP uplift load.
4. Loads may not be increased for short term loading.
5. Web stiffeners required when more than two joist nails are used.
6. SCL (*structural composite lumber*) is LVL (*laminated veneer lumber*), LSL (*laminated strand lumber*), and Parallam® PSL.
7. Code values are based on DF/SP header species.
8. Applies to LVL headers made primarily from Douglas Fir or Southern Pine. For LVL made primarily from Spruce-Pine-Fir or similar less dense veneers, use the values found in the SPF/HF column.
9. DF I-joists include flanges made from solid sawn Douglas Fir, LVL made primarily of Douglas Fir/Southern Pine, or LSL. For flanges with thicknesses from 1 9/16" to 1", use 0.85 of the I-joist header load. For flanges with thicknesses from 1" to 1 1/4", use 0.75 of the I-joist header load.

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