

**BA/LBV/B/HB I-Joist & Structural Composite Lumber Hangers**

Engineered Wood & Structural Composite Lumber Connectors



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 94-108. See Hanger Options on pages 183 for hanger modifications, which may result in reduced values.

**MATERIAL:** See tables, pages 94-108.

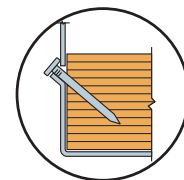
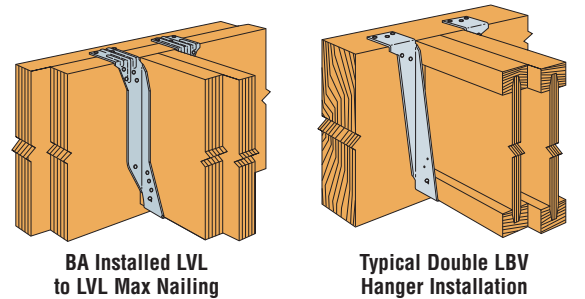
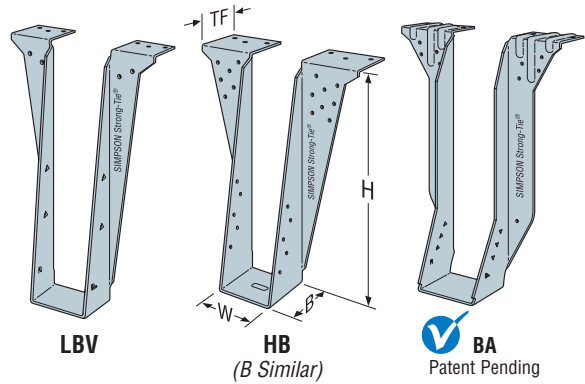
**FINISH:** LBV, B, BA and HB—Galvanized; all saddle hangers and all welded sloped and special hangers—Simpson gray paint. LBV, B, BA and HB may be ordered hot-dip galvanized; specify HDG.

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

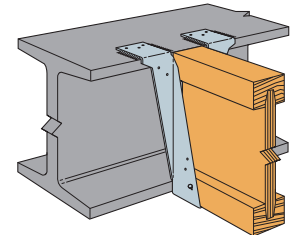
- LBV, B, BA and HB may be used for weld-on applications. Minimum weld size is 1/8" x 2" fillet weld to each side of each top flange tab. Distribute the weld equally on both top flanges. Welding cancels the top and face nailing requirements. Consult the code for special considerations when welding galvanized steel. The area should be well-ventilated, see page 14 for additional weld information. Weld on applications produce the maximum factored resistance listed. Uplift values do not apply to welded applications.
- 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 the use of web stiffeners. BA Max nailing does require web stiffeners.
- Ledgers must be evaluated for each application separately. Check TF dimension, nail length and nail location on ledger.

**OPTIONS:** • LBV, B and HB

- See Hanger Options, page 183 for hanger modifications and associated reductions in resistance.



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.

**B SERIES WITH VARIOUS HEADER APPLICATIONS**

Model Series	Fasteners			Factored Resistance							
	Top	Face	Joist	Uplift (K <sub>D</sub> =1.15)	Normal (K <sub>D</sub> =1.00)						
					D.Fir-L	S-P-F	LVL	PSL	LSL	S-P-F I-Joist	
					lbs	lbs	lbs	lbs	lbs	lbs	
kN	kN	kN	kN	kN	kN						
LBV	6-10dx1½	4-10dx1½	2-10dx1½	435	3165	2340	3760	3885	3295	2200	
				1.94	14.10	10.42	16.75	17.31	14.68	9.80	
	6-10d	4-10d	2-10dx1½	435	3890	2805	3760	3885	4330	—	
				1.94	17.33	12.49	16.75	17.31	19.29	—	
	6-16d	4-16d	2-10dx1½	435	3905	3125	3905	4410	4630	—	
				1.94	17.39	13.92	17.39	19.64	20.62	—	
BA (Min)	6-10dx1½	10-10dx1½	2-10dx1½	—	—	—	—	—	—	2420	
				—	—	—	—	—	—	10.78	
	6-10d	10-10d	2-10dx1½	435	4470	3975	4695	5385	5665	—	
				1.94	19.91	17.71	20.91	23.99	25.23	—	
	6-16d	10-16d	2-10dx1½	435	4990	4370	5835	5385	5820	—	
				1.94	22.23	19.47	25.99	23.99	25.92	—	
BA (Max)	6-10d	10-10d	8-10dx1½	1915	5265	4035	5825	5945	5980	—	
				8.53	23.45	17.97	25.95	26.48	26.64	—	
	6-16d	10-16d	8-10dx1½	1915	5940	4370	6490	7075	6185	—	
				8.53	26.46	19.47	28.91	31.51	27.55	—	
	B	6-10d	8-10d	6-10dx1½	1630	5265	3590	5825	5230	5965	—
					7.26	23.45	15.99	25.95	23.30	26.57	—
6-16d		8-16d	6-16dx2½	1650	5940	3910	6490	5230	6185	—	
				7.35	26.46	17.42	28.91	23.30	27.55	—	
HB		6-16d	16-16d	10-16dx2½	3300	9335	5945	9525	9240	10475	—
					14.70	41.58	26.48	42.43	41.16	46.66	—

1. Factored uplift resistances shown are for D.Fir-L. Multiply tabulated loads x 0.71 for either SPF joist or header.
2. Factored resistances shown are for header connection only. The Designer must ensure the joist is capable of generating the factored resistances shown.
3. 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 column.
4. I-joist values shown refer to I-joists made with SPF or LVL flanges.
5. I-joists with flanges less than 1 5/16" thick used in combination with hangers thinner than 14 gauge may deflect an additional 1/32 inch beyond the standard 1/8" limit.
6. For flanges with thicknesses from 1 5/16" to 1 3/8", use 0.85 of the S-P-F I-joist header value. For flanges with thicknesses from 1 1/2" to 1 3/4", use 0.75 of the S-P-F I-joist header value.
7. For LBV optional uplift, fill all triangle holes with 10dx1½" nails. Uplift resistances are 1085 lbs (4.83 kN) D.Fir-L and 775 lbs (4.83 kN) S-P-F.
8. **NAILS:** 16d = 0.162" dia. x 3 1/2" long, 16dx2½" = 0.162" dia. x 2 1/2" long, 10d = 0.148" dia. x 3" long, 10dx1½" = 0.148" dia. x 1 1/2" long. See page 16-17 for other nail sizes and information.

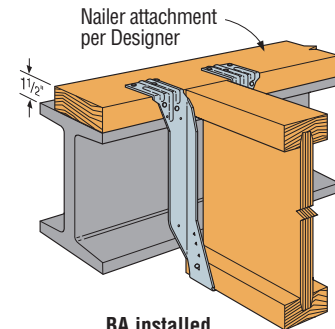
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**BA/LBV/B/HB** I-Joist & Structural Composite Lumber Hangers

**NAILER TABLE**

This shows the maximum factored resistances for BA, LBV, 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. This table also applies to sloped-seat hangers.

Model No.	Nailer	Header Nailing	Factored Resistance ( $K_D=1.00$ )	
			D.Fir-L	S-P-F
			lbs	lbs
LBV	2x	10-10dx1½	2835	2340
			12.63	10.42
	2-2x	10-10d	2835	2340
			12.63	10.42
	3x	10-16dx2½	3135	—
			13.96	—
	4x	10-16d	3135	—
			13.96	—
BA	2x	10-10dx1½	3220	2870
			14.34	12.78
	2-2x	14-10d	3915	3660
			17.44	16.30
	3x	14-16dx2½	4055	—
			18.06	—
	4x	14-16d	4055	—
			18.06	—
B	2x	10-10dx1½	2835	2340
			12.63	10.42
	2-2x	14-10d	3915	3660
			17.44	16.30
	3x	14-16dx2½	4055	—
			18.06	—
	4x	14-16d	4055	—
			18.06	—
HB	4x	22-16d	9015	—
			40.15	—



**BA installed**  
**2X nailer on steel beam**  
**minimum nailing**

1. Maximum factored uplift resistance ( $K_D=1.15$ ) is the lesser of the value shown in the table on page 90 or 385 lbs. (1.71kN).
2. **NAILS:** 16d = 0.162" dia. x 3½" long, 16dx2½ = 0.162" dia. x 2½" long, 10d = 0.148" dia. x 3" long, 10dx1½ = 0.148" dia. x 1½" long. See page 16-17 for other nail sizes and information.

Engineered Wood & Structural Composite Lumber Connectors

**GLTV/HGLTV** Heavy Duty Hangers

GLTV and HGLTV hangers are designed for use with structural composite lumber headers, and may take heavy loads. The top flange nails are sized and specifically located to prevent degradation of the header due to splitting of laminations.

For heavy loads with a face-mount application, see the HGUS series.

**MATERIAL:** Top flange—3 gauge; Stirrups—7 gauge

**FINISH:** Simpson gray paint

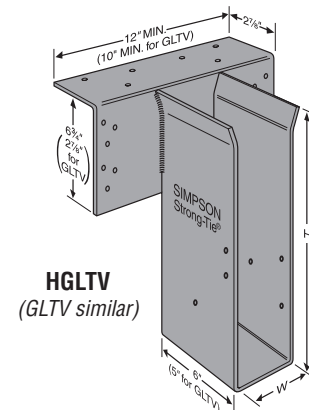
**FACTORED RESISTANCES:** • For hanger heights exceeding the joist height, the factored resistance is 0.50 of the tabulated resistance.

**INSTALLATION:** • Use all specified fasteners. Verify that the header can take the required fasteners specified in the table.

- This series may be used for weld-on applications. Minimum required weld is a ¾" x 2½" fillet weld at each end of the top flange for GLTV, and a ¼" x 2½" fillet weld at each end of the top flange for HGLTV. Weld-on applications produce maximum factored resistances listed. Uplift resistances do not apply to this application.
- Web stiffeners are required with I-joists using this hanger style.
- Nailers and ledgers must be a minimum of 4x lumber to guarantee the resistances given in the tables. Thinner lumber or laminated veneer lumber used as a nailer must be evaluated by the Building Designer. The HGLTV series cannot be used with a nailer.

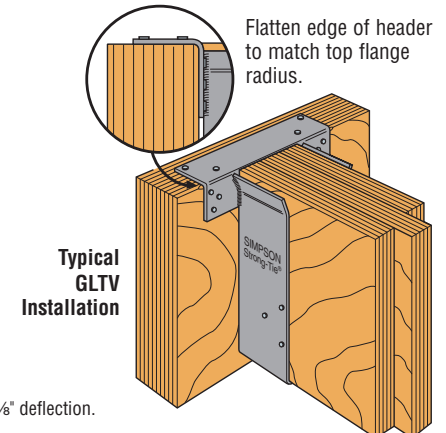
**OPTIONS:** • Hot-dipped galvanized: specify HDG.

- See Hanger Options, page 183.



**HGLTV**  
**(GLTV similar)**

Flatten edge of header to match top flange radius.



**Typical**  
**GLTV**  
**Installation**

Model No.	Fasteners			Uplift ( $K_D=1.15$ )	Factored Resistance				
	Top	Face	Joist		Normal ( $K_D=1.00$ )				
					D.Fir-L	S-P-F <sup>5</sup>	LVL <sup>6</sup>	PSL <sup>3</sup>	LSL <sup>4</sup>
GLTV series	4-16d	6-16d	6-16d	1980	10455	7470	10890	10745	8590
				8.82	46.57	33.27	48.51	47.86	38.26
HGLTV series	6-16d	12-16d	6-16d	1980	13070	9830	15365	11325	13795
				8.82	58.22	43.79	68.44	50.45	61.45

1. Uplift resistances have been increased 15% for short-term loading with no further increase allowed. Reduce resistance when other load durations govern.
2. Uplift loads only apply when "H" is 28" or less.
3. If header is multiple plies of 1¾" PSL the factored resistance is 9440 lbs (42.05 kN).
4. HGLTV at maximum factored resistance may have greater than 1/8" deflection.
5. S-P-F factored uplift resistance is 1405 lbs (6.26 kN).
6. 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 S-P-F column.
7. For joist widths less than 3½" use 16d x 3½" nails into the joist.
8. **NAILS:** 16d = 0.162" dia. x 3½" long. See page 16-17 for other nail sizes and information.