JB/JBA/LB/LBAZ/BA/HB

Joist, Beam and Purlin Top-Flange 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 LBAZ and JBA hangers provide higher loads for 2x10, 2x12 and 2x14 members in 14-gauge and 18-gauge steel, respectively. The nail locations on the JBA enable effective use with nailers.

The BA hangers are cost-effective hangers featuring min./max. joist nailing option. Min. Nailing featuring Positive Angle Nailing targets moderate load conditions whereas the Max. Nailing generates capacities for higher loads. The unique two-level embossment provides added stiffness to the top flange. See tables on pp. 136–140. See Hanger Options on pp. 102–103 for hanger modifications, which may result in reduced loads.

Material: JB/JBA — 18 gauge; LB/LBAZ — 14 gauge; BA — 14 gauge or 12 gauge; HB — 10 gauge

For modified hangers, gauge may increase from that specified for non-modified hangers. Hanger configurations, height and fastener quantity may increase from the tables depending on joist size, skew and slope. Embossments may be omitted.

Finish: BA, HB, JB, JBA, LB and LBAZ — galvanized; BA, HB and LB may be ordered hot-dip galvanized; specify HDG.

Installation:

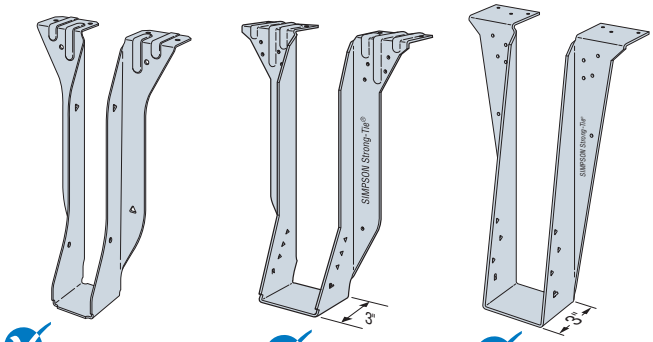
- Use specified fasteners; see General Notes and nailer table notes.
- LB, LBAZ, HB and BA may also be welded to steel headers with weld size to match material thickness. The minimum required weld to the top flanges is 2" (1⁷⁄₁₆" for LBAZ) fillet weld to each side of each top flange tab. Distribute the 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 p. 20, note k for welding information). Weld on applications produce the maximum allowable down load listed. For uplift loads refer to technical bulletin T-C-WELDUPLFT at **strongtie.com**.
- Ledgers must be evaluated for each application separately. Check TF dimension, nail length and nail location on ledger.
- For modified hangers, fastener quantity may increase from the tables depending on joist size, skew and slope.
- Bevel cut the carried member for skewed applications.

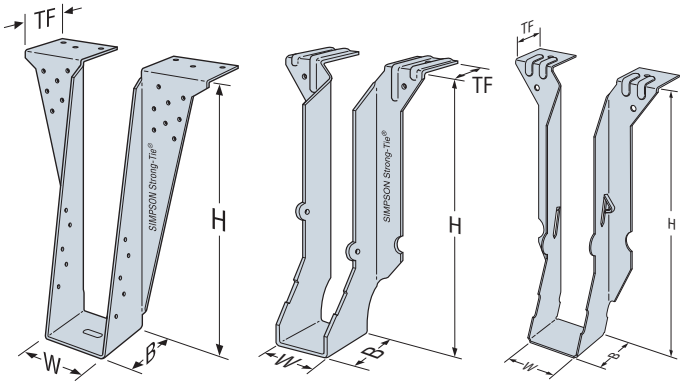
Options:

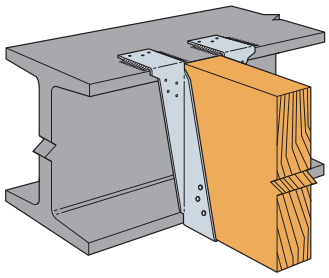
- See modification tables for allowed options and associated load reductions on p. 131

Codes: See p. 13 for Code Reference Key Chart

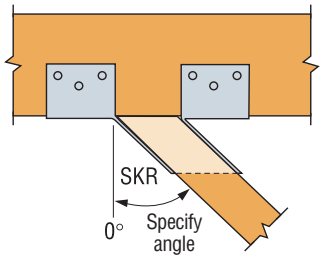
Web Applications: Visit **app.strongtie.com/hs** to access our Hanger Selector web application.







LBAZ and BA are acceptable for weld-on applications. See Installation Information.



Top View BA Hanger Skewed Right

Joist, Beam and Purlin Top-Flange Hangers (cont.)

Various Header Applications

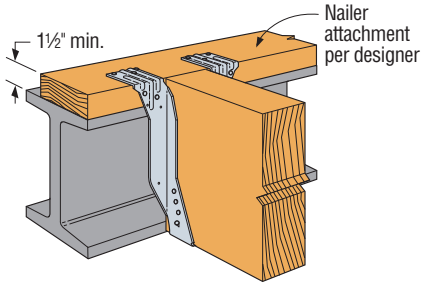
Model No.	Ga.	Dimensions (in.) W	H	B	TF	Fasteners (in.) Header	Joist	Allowable Loads by Header Type and Fastener Uplift (160)	LVL	PSL	DF/SP	SPF/HF	Code Ref.
JB26	18	1 9/16	See p. 136	1½	1 5/16	(4) 0.148 x 3	(2) Prong	—	—	—	995	780	IBC®, FL, LA
JB28				1½	1 5/16	(4) 0.148 x 3	(2) Prong	—	—	—	995	775	
JB210A JB212A JB214A				2	1 7/16	(6) 0.162 x 3½	(2) 0.148 x 1½	260	—	—	1,685	1,190	
						(6) 0.148 x 3	(2) 0.148 x 1½	260	—	—	1,445	1,015	
LB26	14	1 9/16	See p. 136	1½	1½	(4) 0.162 x 3½	(2) 0.148 x 1½	380	—	—	1,135	705	
LB28				1½	1½	(4) 0.162 x 3½	(2) 0.148 x 1½	380	—	—	1,135	710	
LB210AZ LB212AZ LB214AZ				2	1 7/16	(6) 0.162 x 3½	(2) 0.148 x 1½	355	—	—	1,865	1,330	
						(6) 0.148 x 3	(2) 0.148 x 1½	355	—	—	1,705	1,220	
BA min.	12 and 14	1 9/16 to 7½	7¼ to <11	3	2 7/16	(16) 0.148 x 3	(2) 0.148 x 1½	255	3,230	3,630	2,980	2,980	
			11 to 30			(16) 0.148 x 3	(2) 0.148 x 1½	255	3,230	3,630	3,870	2,980	
			7¼ to <11			(16) 0.162 x 3½	(2) 0.148 x 1½	255	4,015	3,705	3,205	2,660	
			11 to 30			(16) 0.162 x 3½	(2) 0.148 x 1½	255	4,015	3,705	3,780	3,095	
BA max.			7¼ to 30			(16) 0.148 x 3	(8) 0.148 x 1½	1,275	3,555	3,630	3,625	3,550	
						(16) 0.162 x 3½	(8) 0.148 x 1½	1,275	4,715	4,320	4,720	4,005	
HB	10		11 to 16	3½	3	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,818	5,640	5,395	3,820	

1. Uplift loads have been increased for earthquake or wind loading with no further increase allowed. Reduce where other loads govern.
2. Uplift loads are based on DF/SP lumber. For SPF/HF, use 0.86 x DF/SP uplift load.
3. Where noted for single-ply joist hangers, use (6) 0.148" x 1½" nails.
4. **Fasteners:** Nail dimensions are listed diameter by length. See pp. 23–24 for fastener information.

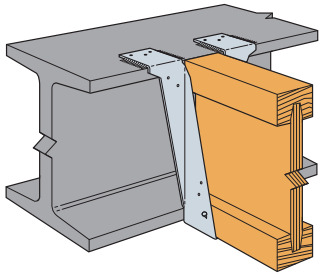
Nailer Table

Model No.	Nailer	Fasteners (in.) Header	Joist	DF/SP Allowable Loads Uplift (160)	Download (100)	SPF/HF Allowable Loads Uplift (160)	Download (100)
BA	2x	(10) 0.148 x 1½	(2) 0.148 x 1½	255	1,970	220	1,875
		(10) 0.148 x 1½	(8) 0.148 x 1½	355	1,970	305	1,875
	(2) 2x	(14) 0.148 x 3	(2) 0.148 x 1½	255	2,695	220	2,235
		(14) 0.148 x 3	(8) 0.148 x 1½	710	2,695	710	2,235
	3x	(14) 0.162 x 2½	(2) 0.148 x 1½	255	3,230	220	2,650
		(14) 0.162 x 2½	(8) 0.148 x 1½	970	3,230	835	2,650
	4x	(14) 0.162 x 3½	(2) 0.148 x 1½	255	3,230	220	2,650
		(14) 0.162 x 3½	(8) 0.148 x 1½	1,170	3,230	1,005	2,650
	Steel	(6) PDPAT-62KP	(2) 0.148 x 1½	—	3,695	—	3,695
HB	(2) 2x	(18) 0.148 x 3	(10) 0.148 x 1½	585	3,810	505	3,000
	3x	(18) 0.162 x 2½	(10) 0.148 x 1½	885	3,810	765	3,000
	4x	(22) 0.162 x 3½	(10) 0.148 x 1½	1,465	5,200	—	—

1. Uplift loads have been increased for earthquake or wind loading with no further increase allowed. Reduce where other loads govern.
2. Attachment of nailer to supporting member is by the designer.
3. PDPAT allowable loads apply to steel header material with thickness between ¼" and ¾". Minimum F_y = 36 ksi. Steel header by designer.
4. 0.157"-diameter x ⅝"-long powder-actuated fastener = PDPAT-62KP. A red (level 5) or purple (level 6) load may be required to achieve specified penetration.
5. **Fasteners:** Nail dimensions are listed diameter by length. See pp. 23–24 for fastener information.



Typical BA Installation on Wood Nailer
(LB similar)



Typical HB Welded Installation
See technical bulletin T-C-WELDUPLFT at **strongtie.com** for information.
(LB similar)

Joist, Beam and Purlin Top-Flange Hangers (cont.)

Modifications and Associated Load Reductions

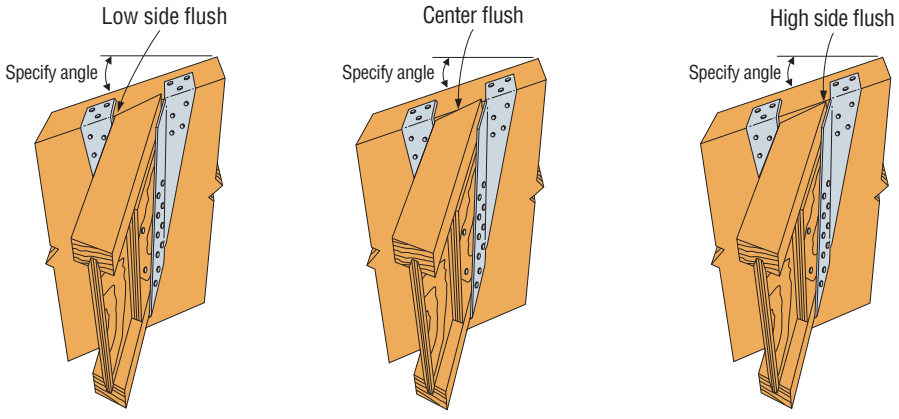
Hanger	Condition	Seat							Top Flange	
		Sloped Down 45° Max.	Sloped Up 45° Max.	Skewed 45° Max.	Sloped Down and Skewed		Sloped Up and Skewed		Top Flange Sloped 35° Max.	Top Flange Bent Open or Closed 30° Max.
BA	Min. height →	6	6	6	9¼	14	9¼	14	14[3]	9¼
	W < 2½"	0.82	0.66	0.95	0.54	0.82	0.64	0.64	(90 – a) / 90	(90 – a) / 90
	W ≥ 2½"	0.8	0.95	1	0.7	1	0.8	0.8	(90 – a) / 90	(90 – a) / 90
HB	Min. height →	8	8	8	11¼	14	11¼	14	14	11¼
	W < 2½"	0.84	0.7	1	0.47	0.84	0.62	0.69	(90 – a) / 90	(90 – a) / 90
	W ≥ 2½"	0.87	0.7	0.96	0.59	0.87	0.7	0.7	(90 – a) / 90	(90 – a) / 90

1. Reduction factors are not cumulative. Use the lowest factors that apply.
2. For straight-line interpolation, "a" is the specified angle.
3. The sloped top flange option is permitted for BA hangers with a minimum height of 11¼" when the load reduction factor is applied to the tabulated BA allowable loads for the minimum installation.
4. Allowable loads and reduction factors apply to backed and unbacked installations.

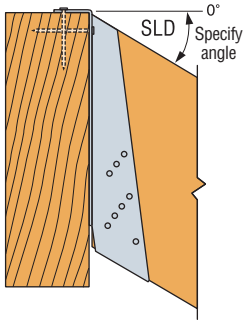
Reduction Factor Instructions

Allowable Download = Lower of (Seat or Top Flange) x (Table Load)

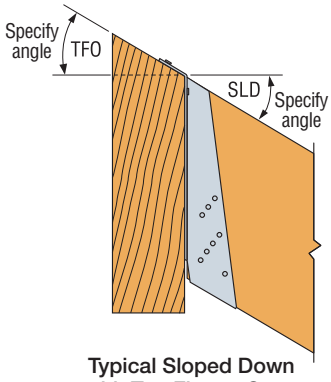
Allowable Uplift = 0.90 x (Table Load) for BA with W < 2½"
= 0.71 x (Table Load) for HB with W < 2½"
= 1.00 x (Table Load) for all others



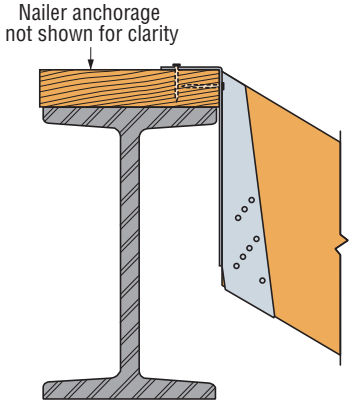
Sloped down and skewed left with sloped top flange installation.
When ordering, specify low side flush, center flush or high side flush.



Typical Sloped Down Installation with Full Backing



Typical Sloped Down with Top Flange Open



Typical Sloped Down on Nailer Non-Backed