VPA

Variable-Pitch Connector

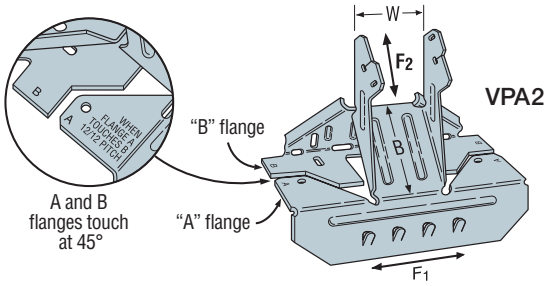
The VPA may be sloped in the field, offering a versatile solution for attaching rafters to the top plate. It will adjust to accommodate slopes between 3:12 and 12:12, making it a complement to the versatile LSSU. This connector eliminates the need for notched rafters, beveled top plates and toe nailing.

Material: 18 gauge

Finish: Galvanized

Installation: • Use all specified fasteners; see General Notes

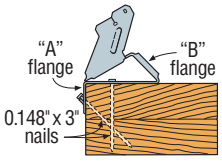
Codes: See p. 12 for Code Reference Key Chart



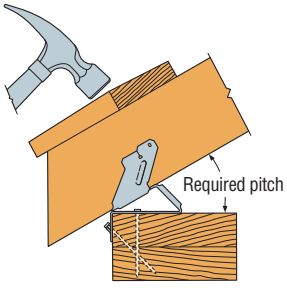
Joist Width	Model No.	W (in.)	Fasteners (in.)		DF/SP Allowable Loads				SPF/HF Allowable Loads				Code Ref.
			Carrying Member	Carried Member	Uplift (160)	Download (100/115/125)	Lateral (160)		Uplift (160)	Download (100/115/125)	Lateral (160)		
							F_1	F_2			F_1	F_2	
1½	VPA2	1⅜	(8) 0.148 x 3	(2) 0.148 x 1½	255	1,105	345	300	220	950	295	260	IBC, FL, LA
2½	VPA3	2⅜	(9) 0.148 x 3	(2) 0.148 x 1½	255	1,245	345	300	220	1,070	295	260	
3½	VPA4	3⅜	(11) 0.148 x 3	(2) 0.148 x 1½	255	1,245	345	300	220	1,070	295	260	

1. Loads have been increased for wind or earthquake loading, with no further increase allowed. Reduce where other loads govern.
2. **Fasteners:** Nail dimensions in the table are listed diameter by length. See pp. 21–22 for fastener information.

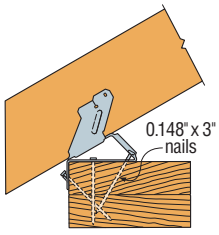
VPA Installation Sequence



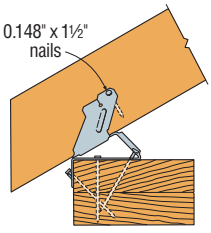
Step 1
Install top nails and face PAN nails in "A" flange to outside wall top plate.



Step 2
Seat rafter with a hammer, adjusting "B" flange to the required pitch.



Step 3
Install "B" flange nails in the obround nail holes, locking the pitch.



Step 4
Install 0.148" x 1½" nail into tab nail hole. Hammer nail in at a slight angle to prevent splitting.

HCP

Hip Corner Plate

The HCP connects a rafter or joist to double top plates at a 45° angle.

Material: 18 gauge

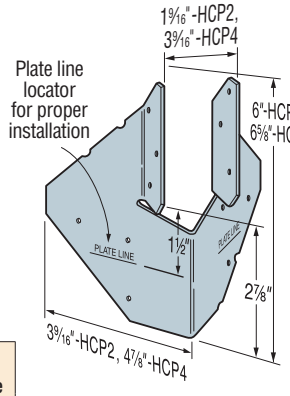
Finish: HCP2 — galvanized or ZMAX® coating; HCP4Z — ZMAX coating

Installation: • Use all specified fasteners; see General Notes.

- Attach HCP to double top plates; birdsmouth not required for table uplift loads but may be required for download.
- Install rafter and complete nailing. Rafter may be sloped to 45°.

Codes: See p. 12 for Code Reference Key Chart

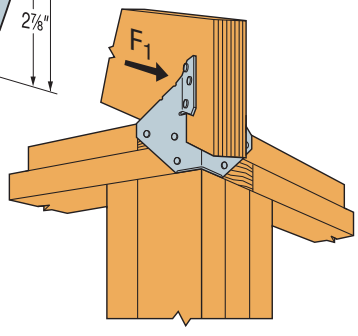
These products are available with additional corrosion protection. For more information, see p. 15.



HCP2
(HCP4Z similar)
U.S. Patent 5,380,115

Member Size	Model No.	Fasteners (in.)		DF/SP Allowable Loads (160)		SPF/HF Allowable Loads (160)		Code Ref.
		To Rafters	To Plates	Uplift	F_1	Uplift	F_1	
2x	HCP2	(6) 0.148 x 1½	(6) 0.148 x 1½	590	255	510	220	IBC, FL, LA
4x	HCP4Z	(8) 0.148 x 3	(8) 0.148 x 3	990	230	850	200	

1. Loads have been increased for wind or earthquake loading, with no further increase allowed. Reduce where other loads govern.
2. The HCP can be installed on the inside and the outside of the wall with a flat bottom chord truss and achieve twice the allowable load.
3. **Fasteners:** Nail dimensions in the table are listed diameter by length. See pp. 21–22 for fastener information.



Typical HCP Installation

VPA

Variable-Pitch Connector

The VPA may be sloped in the field, offering a versatile solution for attaching rafters to the top plate. It will adjust to accommodate slopes between 3:12 and 12:12, making it a complement to the versatile LSSR. This connector eliminates the need for notched rafters, beveled top plates and toenailing.

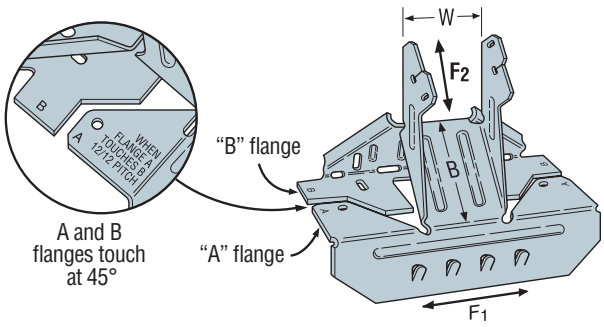
Material: 18 gauge

Finish: Galvanized

Installation:

- Use all specified fasteners; see General Notes

Codes: See p. 12 for Code Reference Key Chart

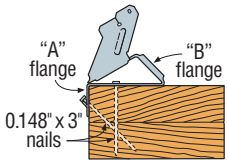


VPA25

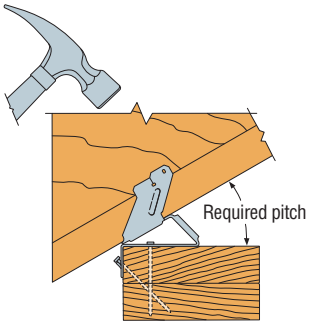
Actual Joist Width (in.)	Model No.	W (in.)	B (in.)	Fasteners (in.)		Allowable Loads								Code Ref.
				Carrying Member	Carried Member	Uplift		Download		Lateral				
						DF/SP Species	SPF Species			DF/SP Species		SPF/HF Species		
										(160)		(160)		
						(160)	(160)	DF/SP	SPF	F_1	F_2	F_1	F_2	
1½	VPA2	1⁹⁄₁₆	2	(8) 0.148 x 3	(2) 0.148 x 1½	255	220	1,105	950	345	300	295	260	IBC, FL, LA
1¾	VPA25	1¹³⁄₁₆	2	(8) 0.148 x 3	(2) 0.148 x 1½	255	220	1,105	950	345	300	295	260	
2	VPA2.06	2⅛	2	(9) 0.148 x 3	(2) 0.148 x 1½	255	220	1,245	1,070	345	300	295	260	—
2⅛	VPA2.1	2⅛	2	(9) 0.148 x 3	(2) 0.148 x 1½	255	220	1,245	1,070	345	300	295	260	
2¼ – 2⁵⁄₁₆	VPA35	2⁵⁄₁₆	2	(9) 0.148 x 3	(2) 0.148 x 1½	255	220	1,245	1,070	345	300	295	260	IBC, FL, LA
2½ – 2⁹⁄₁₆	VPA3	2⁹⁄₁₆	2	(9) 0.148 x 3	(2) 0.148 x 1½	255	220	1,245	1,070	345	300	295	260	
3½	VPA4	3⁹⁄₁₆	2	(11) 0.148 x 3	(2) 0.148 x 1½	255	220	1,245	1,070	345	300	295	260	

1. Uplift loads have been increased for earthquake or wind loading with no further increase allowed. Reduce where other loads govern.
2. Loads may not be increased for duration of load.
3. **Fasteners:** Nail dimensions in the table are listed diameter by length. See pp. 21–22 for fastener information.

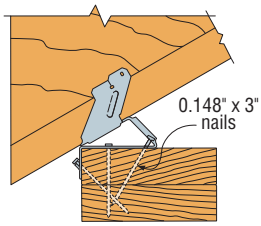
VPA Installation Sequence



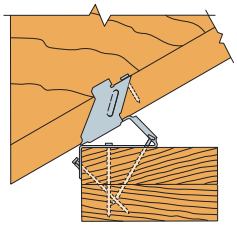
Step 1
Install top nails and face PAN nails in "A" flange to outside wall top plate.



Step 2
Seat rafter with a hammer, adjusting "B" flange to the required pitch.



Step 3
Install "B" flange nails in the obround nail holes, locking the pitch.



Step 4
Bend tab with hammer and install 0.148" x 1½" nail into tab nail hole. Hammer nail in at an approximate 45° angle to limit splitting.