

## VPA Variable Pitch Connector

The VPA variable pitch connector is a versatile, field-adjustable solution for connecting rafters to the wall top plate. It adjusts in the field to accommodate slopes between 3:12 and 12:12, making it a complement to the versatile LSSU joist hanger.

- Easy to adjust the pitch in the field to match the application.
- Eliminates the need for time-consuming notching of rafters.
- Available for solid sawn and engineered wood applications.

**Material:** 1.3mm thick.

**Finish:** Galvanised. See Corrosion Information.

### Installation

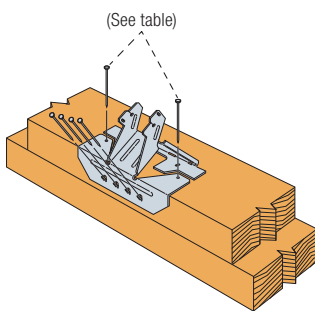
- Use all specified fasteners. See General Notes.
- Watch an installation video; [www.strongtie.com/videolibrary/con-vpa.html](http://www.strongtie.com/videolibrary/con-vpa.html).



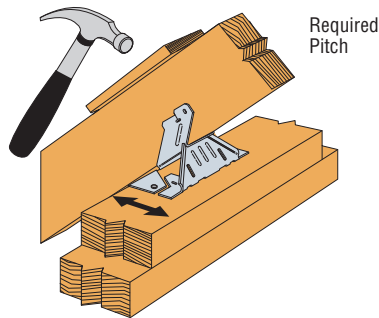
VPA

### Typical Installation

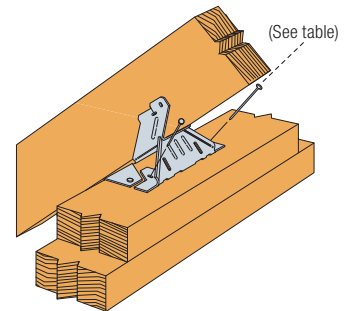
**STEP 1:** Install top nails and face PAN nails in "A" flange to outside wall top plate.



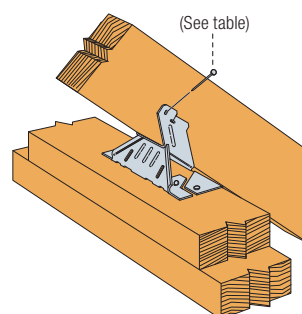
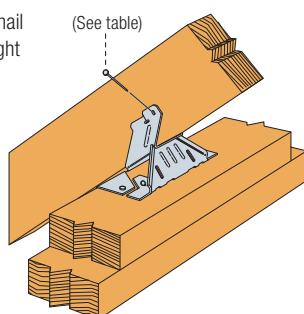
**STEP 2:** Seat rafter with a hammer, adjusting "B" flange to the required pitch.

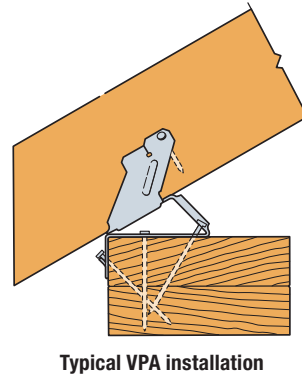
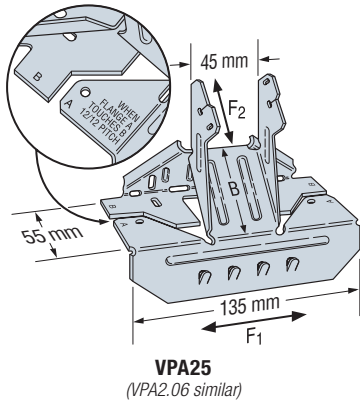


**STEP 3:** Install "B" flange nails in the overband nail holes, locking the pitch.



**STEP 4:** Install nail into tab nail hole. Hammer nail in at a slight angle to prevent splitting.





## VPA Technical Data

Joist Width (mm)	Model No.	Dimensions (mm)		Fasteners (No. – Length x Dia., mm)		Country	Design Capacity (kN)				
		W	B	Carrying Member	Carried Member		Uplift	Download		F1	F2
								Floor	Roof		
45	VPA25	46	51	8 – 75 x 3.75	2 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	$k_1 = 1.14$	$k_1 = 1.14$
							1.58	2.88	2.88	1.85	1.16
45	VPA25	46	51	8 – 75 x 3.75	2 – 40 x 3.75	NZ	$k_1 = 1.0$	$k_1 = 0.80$	$k_1 = 0.80$	$k_1 = 1.0$	$k_1 = 1.0$
							1.49	2.71	2.71	1.74	1.16
50	VPA2.06	52	51	9 – 75 x 3.75	2 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	$k_1 = 1.14$	$k_1 = 1.14$
							1.89	5.06	5.06	1.85	1.16
50	VPA2.06	52	51	9 – 75 x 3.75	2 – 40 x 3.75	NZ	$k_1 = 1.0$	$k_1 = 0.80$	$k_1 = 0.80$	$k_1 = 1.0$	$k_1 = 1.0$
							1.74	4.76	4.76	1.74	1.16

- Design Capacity is the lesser of (1) the Characteristic Capacity multiplied by the Australian Capacity Factor, or the NZ Strength Reduction Factor ( $\phi$ ), and applicable the k modification factors following AS 1720.1 and NZS 3603 and (2) the Serviceability Capacity which is the load at 3.2mm joint slip. Design Capacity is the minimum of test data and structural joint calculation.
- For Australia, the Capacity Factor ( $\phi$ ) is 0.85 for nails and screws for structural joints in a Category 1 application. Reduce tabulated values where other Category applications govern. For NZ, the Strength Reduction Factor ( $\phi$ ) is 0.80 for nails in lateral loading.
- Duration of Load Factor ( $k_d$ ) is as shown. Reduce Duration of Load Factor where applicable. Capacities may not be increased.
- Timber species for joint design is seasoned Radiata Pine, which is Australia Joint Group JD4 per AS 1720.1 Table H2.4 and New Zealand Joint Group J5 per NZS 3603 Table 4.1.
- F1 load direction is parallel to the supporting timber member and F2 is parallel to the rafter seat.
- For simultaneous loads in more than one direction, the connector must be evaluated using the Unity Equation. See General Note 'e' on page 15.