

CPTZ Concealed Post Tie

The CPTZ concealed post base provides a clean, concealed look while providing a 25mm standoff height above concrete. The 25mm standoff reduces the potential for decay at the post end and satisfies code requirements for posts that are exposed to weather or water splash or are in basements.

- The CPTZ is tested and load-rated for uplift, download and lateral load.
- Simpson Strong-Tie saves installers' time by providing all the necessary components to make the connection in one box.
- The CPTZ anchorage can either be cast-in-place or retrofitted with adhesive or mechanical anchors.

Material: See table on next page.

Finish: Knife plate, washers and standoff base are galvanised—ZMAX® coating. The standoff base has an additional textured, flat black powder coat finish for aesthetic purposes. The ½" (12.7mm) diameter drift dowels are mechanically galvanised. If substituting M12 diameter bolts, a hot-dip galvanised finish is recommended. See Corrosion Information.

Installation

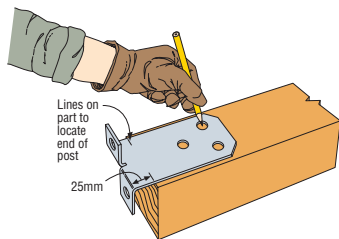
- Use all specified fasteners. See General Notes.
- Post bases do not provide adequate resistance to prevent members from rotating about the base and therefore are not recommended for non-braced or non-top-supported installations.

Anchorage Options

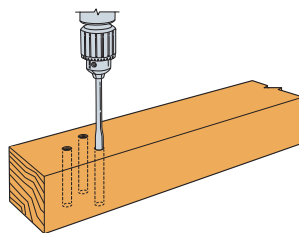
- The holes in the CPTZ tabs are sized for 12mm diameter anchors.
- For cast-in-place anchors, there should be 22mm (±3mm) of anchor above the top surface of the concrete.

Typical Installation

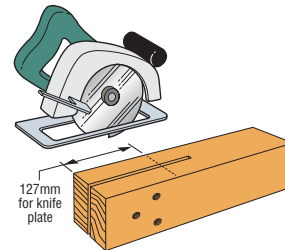
STEP 1: Use the knife plate as a template to mark dowel locations.



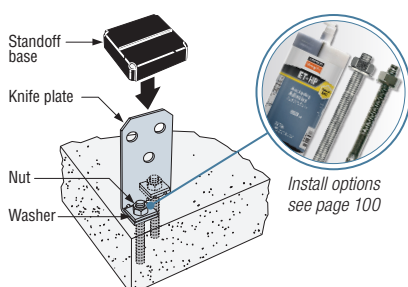
STEP 2: Drill ½" (12.7mm) holes perpendicular to the post at marked locations.



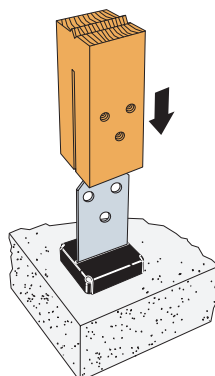
STEP 3: Cut a 5mm wide slot on the side adjacent the drilled holes. Check that the knife plate slides freely.



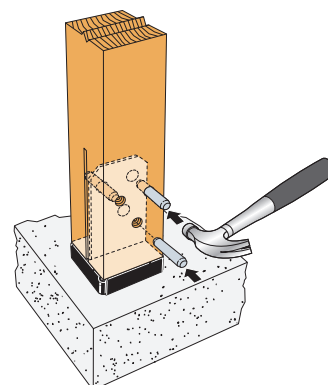
STEP 4: Fix down the knife plate to concrete foundation and lower the standoff over the knife plate.

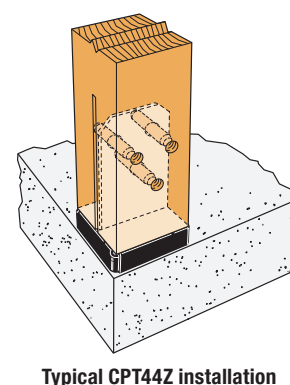
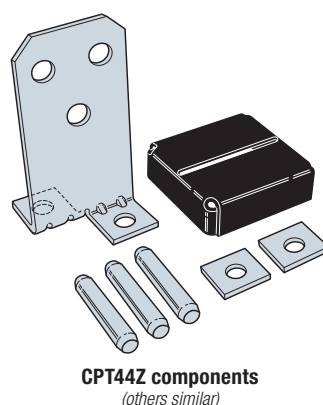
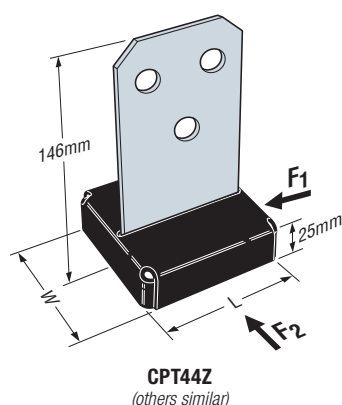


STEP 5: Lower the post onto the knife plate with the drilled holes aligned with the three holes in the knife plate. Be careful to avoid rotating the post during installation.



STEP 6: Drive the dowels into the post. They should be roughly centred within the post.





CPTZ Technical Data

Model No.	Post Size (mm)	Material (mm)		Dimensions (mm)		Fasteners				Country	Design Capacity (kN)				
		Base Thickness	Knife Plate Thickness	W	L	Anchor		Type			Uplift	Download ^B		F1	F2
						Qty	Dia (mm)	Qty	Type ⁵ (mm)			Floor	Roof		
CPT44Z	90 x 90, 100 x 100	2.7	3.5	90	90	2	12	3	12 x 70 Dowel	AU	k ₁ = 1.14	k ₁ = 0.69	k ₁ = 0.77	k ₁ = 1.14	k ₁ = 1.14
											8.97	47.51	53.01	2.67	3.43
											k ₁ = 1.0	k ₁ = 0.80	k ₁ = 0.80	k ₁ = 1.0	k ₁ = 1.0
CPT66Z	140 x 140, 152 x 152	2.7	3.5	137	137	2	12	3	12 x 120 Dowel	AU	k ₁ = 1.14	k ₁ = 0.69	k ₁ = 0.77	k ₁ = 1.14	k ₁ = 1.14
											11.04	109.34	109.34	2.92	4.56
											k ₁ = 1.0	k ₁ = 0.80	k ₁ = 0.80	k ₁ = 1.0	k ₁ = 1.0
CPT88Z	190 x 190, 203 x 203	2.7	3.5	184	184	2	12	3	12 x 120 Dowel	AU	k ₁ = 1.14	k ₁ = 0.69	k ₁ = 0.77	k ₁ = 1.14	k ₁ = 1.14
											10.46	114.30	114.30	3.29	4.80
											k ₁ = 1.0	k ₁ = 0.80	k ₁ = 0.80	k ₁ = 1.0	k ₁ = 1.0
										NZ	8.61	94.13	94.13	3.29	4.80

1. Design Capacity is the lesser of (1) the Characteristic Capacity multiplied by the Australian Capacity Factor, or the NZ Strength Reduction Factor (ϕ), 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.
2. For Australia, the Capacity Factor (ϕ) 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 (ϕ) is 0.80 for nails in lateral load and 0.70 for other fasteners.
3. Duration of Load Factor (k_d) is as shown. Reduce Duration of Load Factor where applicable. Capacities may not be increased.
4. 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.
5. CPTZs are supplied with three 12mm diameter steel dowels. Alternate 12mm diameter hex or square head machine bolts may be substituted and will achieve table loads.
6. Lag or carriage bolts are not permitted.
7. Structural composite timber columns have sides that either show the wide face or the edges of the timber strands/veneers, known as the narrow face. Values in the table reflect installation into the wide face.
8. Downloads shall be reduced where limited by the capacity of the timber post.