CPTZ Concealed Post Base

Concealed Post Base Offers Clean Look with Code-Required 1" Standoff

The new CPTZ concealed post base provides a clean, concealed look while providing a 1" standoff height above concrete. The 1" standoff reduces the potential for decay at the post end and satisfies code requirements for posts that are exposed to weather, water splash or 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.
- Solutions have been calculated per ACI 318, Appendix D to determine their allowable load in different concrete configurations.

MATERIAL: See table below

FINISH: Knife plate, washers and standoff base are ZMAX®-galvanized steel. The standoff base has an additional textured, flat black powder coat finish for aesthetic purposes. The 1⁄2" diameter drift pins are steel. The standoff base has an additional textured, flat black powder

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Post Size</th>
<th>Base (Ga.)</th>
<th>Knife Plate (Ga.)</th>
<th>Dim. (in.)</th>
<th>Fasteners</th>
<th>Allowable Loads (DF/SP) (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>W</td>
<td>L</td>
<td>Anchor</td>
<td>Post</td>
<td>Uplift</td>
</tr>
<tr>
<td>CPT44Z</td>
<td>4x4</td>
<td>12</td>
<td>10</td>
<td>3⁄4</td>
<td>3⁄8 x 3⁄4 dowel</td>
<td>3035</td>
</tr>
<tr>
<td></td>
<td>RGH 4x4</td>
<td></td>
<td></td>
<td></td>
<td>1⁄8 MB</td>
<td></td>
</tr>
<tr>
<td>CPT66Z</td>
<td>6x6</td>
<td>12</td>
<td>10</td>
<td>5⁄8</td>
<td>3⁄8 x 3⁄8 dowel</td>
<td>4430</td>
</tr>
<tr>
<td></td>
<td>RGH 6x6</td>
<td></td>
<td></td>
<td></td>
<td>1⁄8 MB</td>
<td></td>
</tr>
<tr>
<td>CPT88Z</td>
<td>8x8</td>
<td>12</td>
<td>10</td>
<td>7⁄8</td>
<td>3⁄8 x 3⁄8 dowel</td>
<td>3625</td>
</tr>
<tr>
<td></td>
<td>RGH 8x8</td>
<td></td>
<td></td>
<td></td>
<td>1⁄8 MB</td>
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</tr>
</tbody>
</table>

1. Uplift loads have been increased for wind or earthquake load with no further increase allowed; reduce where other loads govern.
2. Downloads may not be increased for short-term loading and shall not exceed the post capacity. See pages 226-227 of the 2013 Wood Construction Connectors catalog for common post capacities.
3. CPTZs are supplied with (3) CPT88Z 8x8, CPT66Z 6x6, CPT44Z 4x4, RGH 6x6, RGH 8x8.
4. Corner – Flush Edge conditions show either the wide face or the edges of the lumber strands/veneers. Values in the tables reflect dowel or bolt installation into the wide face.
5. Lateral loads (F1 = F2) for Corner – Flush Edge conditions are calculated per ACI 318-11, Appendix D. Foundation design by others.

CPTZ Anchorage Using SET-XP® Anchoring Adhesive

1. Uplift loads have been increased for wind or earthquake load with no further increase allowed, reduce where other loads govern.
2. Edge distance is measured from the center line of the nearest anchor bolt to the edge of concrete.
3. All anchorage loads are calculated per ACI 318-11, Appendix D.
4. Foundation dimensions are for anchorage only. Foundation design by others. Refer to ACI318-11.
5. Lateral loads (F1 = F2) for Corner – Flush Edge conditions are CPT44Z = 395 lbs., CPT66Z = 570 lbs., CPT88Z = 740 lbs. For all other installations using CPTZ with SET-XP® anchoring adhesive, use the allowable loads from the CPTZ table above.
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**CPTZ Cast-in-Place Anchorage**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Embedment (in.)</th>
<th>Edge Distance (in.)</th>
<th>Allowable Uplift (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Corner – Flush Edge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPT44Z</td>
<td>2 1⁄4</td>
<td>—</td>
<td>870</td>
</tr>
<tr>
<td>CPT66Z</td>
<td>2 1⁄4</td>
<td>—</td>
<td>1590</td>
</tr>
<tr>
<td>CPT88Z</td>
<td>2 1⁄4</td>
<td>—</td>
<td>2435</td>
</tr>
<tr>
<td>Corner – Away from Edge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPT44Z</td>
<td>5</td>
<td>4</td>
<td>3760</td>
</tr>
<tr>
<td>CPT66Z</td>
<td>6</td>
<td>5</td>
<td>5390</td>
</tr>
<tr>
<td>CPT88Z</td>
<td>6</td>
<td>5</td>
<td>5390</td>
</tr>
<tr>
<td>10” Diameter Circular Pedestal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPT44Z</td>
<td>5</td>
<td>4</td>
<td>3945</td>
</tr>
<tr>
<td>CPT66Z</td>
<td>5</td>
<td>3 3⁄4</td>
<td>3860</td>
</tr>
<tr>
<td>CPT88Z</td>
<td>5</td>
<td>3 3⁄4</td>
<td>5710</td>
</tr>
<tr>
<td>12” Diameter Circular Pedestal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPT44Z</td>
<td>5</td>
<td>5</td>
<td>5170</td>
</tr>
<tr>
<td>CPT66Z</td>
<td>5</td>
<td>4 1⁄4</td>
<td>5140</td>
</tr>
<tr>
<td>CPT88Z</td>
<td>5</td>
<td>4 1⁄4</td>
<td>5140</td>
</tr>
</tbody>
</table>

1. Uplift loads have been increased for wind or earthquake load with no further increased allowed, reduce where other loads govern.
2. Edge distance is considered to be measured from the center line of the nearest anchor bolt to the edge of concrete.
3. Tabulated anchor embeddings will also achieve the maximum lateral loads from the CPTZ table above.
4. Foundation dimensions are for anchorage only. Foundation design by others. Refer to ACI318-11.

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### Installation

**PREPARE THE POST**

1. **Drill holes**
   - Use knife-plate portion of the CPTZ as a template to mark the pin/bolt locations on the post. See drawing 1a.
   - Drill ½” diameter holes perpendicular to the post at marked locations. See drawing 1b.
     - A commercially available drill-guide attachment will aid in this process. If drilling multiple posts, it is suggested that a drill block is created out of a short length of a 2x4. This will accomplish the same purpose and is easier to use in repetitive applications.
     - If not drilling all the way through, the hole depth should be calculated to leave the pin roughly centered (±1⁄4”) in the post. Using a 2 1⁄4” pin in a 4x post would imply a 3 1⁄8” deep hole. Similarly, using a 4 3⁄4” pin in a 6x post would require a 5 1⁄8” deep hole.
     - **Note:** Drilling the holes before cutting the slot is recommended to avoid interference in the slot.

2. **Cut Slot**
   - Cut a 3⁄8” wide slot in the end of the post. Cut slot on the face adjacent to the one with the holes. See drawing 2.
     - If using a circular saw, cut the slot as follows: 4x4 = 6 1⁄2” up the post; 6x6 = 7 1⁄2” up the post; 8x8 = 9 1⁄2” up the post. To cut a 6x6 or 8x8 post, a 10” diameter circular saw is required.
     - If a smaller slot height is desired, mark the post at 5”. Cut from both sides with a circular saw and then finish removing material with a reciprocating blade saw or a hand-held saw.
     - A chain saw (1⁄4” chain) can also be used to cut the slot.
     - If no visible slot is desired, making a plunge cut is necessary. Great care and safety precautions should be taken if attempting to make a plunge cut with a chain saw or like device.
   - Check that the knife plate slides freely in the slot and that the holes in the post line up with the holes in the knife plate.
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Installation (cont.)

SET THE ANCHORS

The anchorage details shown are recommended but not required, the Designer can specify alternate anchorage details to accommodate different substrates and configurations. If specifying alternate anchorage, the allowable load for the connection will be the lower of the load for the anchorage or the table values for the CPTZ.

Note: the holes in the CPTZ tabs are sized for ½” diameter anchors.

Cast-in-Place Anchors

1. Place the anchors before concrete is poured. There should be ⅜” (+⅛”) of anchor above the top surface of the concrete.
   • The CPTZ can be used as a template for anchor bolt location.
     One possible approach is shown.

2. Pour concrete and allow it to be set before attaching CPTZ.

3. See drawings 3 and 4 for potential details in common applications. Note that there are reduced values for near-edge conditions.

Retrofit Anchors

The following is based on Simpson Strong-Tie® SET-XP® anchoring adhesive. See our Anchoring and Fastening Systems for Concrete and Masonry catalog (C-SAS) for other alternate anchors and additional information concerning retrofit solutions

1. Use the CPTZ to mark the anchor locations (as shown in drawing 5).

2. Drill holes in concrete. Follow the requirements for diameter and depth found in the latest C-SAS catalog. (See drawing 6a).

3. Fill holes two-thirds of the way with SET-XP® anchoring adhesive. For best results, material should be between 70° to 80° F at time of application. Note that it must be above 50° F. (See drawing 6b).

4. Install ½” diameter threaded rod in holes. There should be ⅜” (+⅛”) of threads above the top surface of the concrete. (See drawing 6c).

5. Allow SET-XP™ anchoring adhesive to set before attaching CPTZ.

INSTALL CPTZ POST BASE

1. Install the knife-plate portion of the connector on the anchor bolts.

2. Install supplied rectangular washers on top of the CPTZs tabs.

3. Attach nuts and tighten. The CPTZ assembly should look like drawing 7.

4. Slide the stand off base over the knife plate.

INSTALL POST

1. Install the post over the CPTZ (as shown in drawing 8). The post must be installed perpendicular to the concrete. The connections components may be damaged if the post is rotated during or after installation. Damaged components may be noticeable and reduce the capacity of the connector.

2. Drive in the pins supplied with the connector. The pins should be roughly centered within the post. Plug and finish the post as desired.

   a. Alternate bolt installation. Use ½” diameter machine bolts, with nuts and washers, instead of the supplied pins. The bolts, nuts and washers are sold separately. Simpson Strong-Tie recommends a hot-dip galvanized finish on the bolts, nuts and washers for exterior applications.