www.diamondpiers.com
253 858-8809 ph
858-8607 fx

MANUFACTURER'S INSTALLATION INSTRUCTIONS

Diamond Pier® - Model **DP-50**

The following are generic instructions for the DP-50 – ICC Code Compliant pier for residential use.
They may be varied for specific projects or unique applications as necessary. See the Installation Video on the website.
For applications in frost heaving or expansive soils, see the "*Heave & Expansion*" document on the website.
NOTE: The DP-50 is NOT for use in peats, rocky soils, uncompacted fills, contaminated soils, wetlands, or on slopes greater than 2:1.

You will need: Diamond Piers with the corresponding number of Pins and Pin Caps, Inspection Plugs as necessary, a shovel, automatic driving hammer with driving head, small sledge hammer, and a level. **Note**: Check for Buried Utilities before Pin Driving.

Step 1: Dig a hole with a conical base which is approximately the shape of the bottom half of the concrete pier, and slightly larger than the width of the pier itself to allow for adjustment. *(On sloping terrain, dig the hole deeper on the uphill side so that the pier sits level.)*

Step 2: Being careful when lifting, position the concrete pier in the hole, level and centered on your alignment. Replace some of the the removed soils back around the sides of the pier at grade, just enough to maintain level and alignment during Pin driving. *See Notes 1&2.*

Step 3: If you are using inspection plugs, these should be fitted to the lower end of the Pins before setting them in the pier. Slide opposing Pins through the driving holes in the concrete pier, and, making sure to support them in the center or top of the driving holes, set the Pins a foot or so into the soil with the small sledge hammer. Then drive each Pin alternately in increments with the automatic hammer, periodically checking for plumb and alignment. Do not attempt to drive the pins all the way down just with the small sledge hammer, or allow the weight of the auto-hammer to force the pin against the lower half of the driving hole. The piers are concrete, and may crack if subjected to continued impact blows with the Pin in this orientation. A cracked pier must be removed and replaced.

Step 4: Finish driving the Pin with the automatic hammer, being careful not to damage the precast pier, or upper ends of the Pin, and leaving 3/4"of the Pin protruding from the top of the concrete. Before capping, allow for inspection of the pin length down through the core of the Pin, if required. Once dead loads have been applied, verify the length of the protruding pin, adjust as necessary by tapping with the small sledge, and cover the exposed end of the Pin with the cap, sealing it against the concrete with a 50 year, siliconized adhesive caulk, or equal. (Note: *Ensure that the concrete is dry before applying caulk.)* Repeat steps 1 through 4 for the remaining Diamond Piers.

Note 1: Do not drive a Pin all the way down at once if this causes the Pier to be pulled to one side. Continue to rotate around the Pier, driving the Pins in increments, until the growing strength in the pile group is sufficient to allow final driving. If driving a given Pin does not cause the pier to go out of level, the Pins may be driven all the way, one at a time.

Note 2: Do not continue to hammer away at a Pin which is bouncing or rattling against an impassable object if it causes the Pier to ride up the Pin, pushes the pier to one side, or risks cracking the pier. Ensure that the pier will remain in place when encountering difficulties in the soil, and when following the steps in Note 3.

Note 3: If a Pin meets substantial resistance in the soil before it has been fully driven, and the obstruction is close enough to the surface, it may be dug up and removed. Once accomplished, recompact the soils with the sledge, and reset the pier and redrive the Pin or Pins. The pier may also be turned, or relocated, within the parameters of your superstructure design, in order to avoid underground obstacles. To relocate a pier, the Pins may be removed by turning them with a pipe wrench and corkscrewing them upward. See "*Pin Removal"* video on the website.

Note 4: 6x6 posts may supported on the DP-50 Pier, provided a pressure treated, cedar or composite lumber block is placed between the bottom of the bracket and the steel stand-off base of a fully nailed, screwed or bolted Simpson Strong-Tie® ABU or ABE bracket. ABA brackets do NOT need additional blocking.