



## Types of Piers: Drilled Concrete Piers

If you listen to the hype, it sounds like there must be 20 or 30 different types of piers out there. Company A says they have an exclusive Super-Duper Pier that nobody else has, and they claim it's the only one that really works. Company B, however, has "invented" the Ultra Fantastic Pier that you can only get from them, and they claim that it is the strongest pier on the market. "All others pale in comparison", they say.

But in all honesty, there are really only 3 basic types of piers available and used by all companies:

Pressed Pilings, Drilled Piers, and Steel Piers.

The small variations found in each of the 3 main types make very little difference to the overall effectiveness of the pier. In this section, we will look at the Drilled Concrete Pier.

The Drilled Concrete Pier is created by digging a starter hole, called a footing. This is common to all types of piers. From there, an auger is used to drill out a hole in the ground as deep as possible. The dirt is removed from the hole, thus leaving an empty shaft extending into the ground. Some drilled pier designs use 1 shaft while others use 2 shafts in each pier. These pier shafts can vary in diameter from 6" to 18" or more, and some are even belled at the bottom to give more bearing area. Single 12" diameter shafts piers and single-or-double 8" diameter shaft piers are the most common installed for residential foundation repair. Steel rebar is installed in the pier shafts in order to add strength and flexibility. Fresh wet concrete is then poured into the holes, filling them to about 1' below the bottom of the foundation. After allowing this concrete to dry and harden for approximately one week, the house is then lifted and stabilized on these piers and dirt is back-filled to cover the remaining hole.

### ADVANTAGES:

\* This method does not rely on the weight of the house for installation, so works very well on lighter structures such as wing walls, fence columns, and sometimes even patio slabs.

\* The piers are adjustable by almost every company in the industry.

\* As the home is not utilized for downward force, no new cosmetic damages are created in the installation of drilled piers.

### DISADVANTAGES:

\* This is by far the messiest and most time-consuming method on the market.

\* Drilled piers are limited in depth and rarely extend deeper than 10' which is not deep enough to reach rock in many areas of Texas, so are more prone to failure.



\* If the pier holes are not properly cleaned of loose soil before pouring the concrete, the piers can compress into this loose dirt when lifting the house which can at times cause the pier shaft to break and the pier to fail.

\* Open pier holes are exposed around the home for 6-10 days, thus increasing the risk of injury.

\* Dirt piled in the yard for a week increases the chances of killing vegetation.

\* This system is typically more expensive than pressed pilings.

Overall, Drilled Piers can be a very good foundation repair system if installed properly and used in the proper areas and applications.