



How to Dig Post Holes

Whether you are building a fence or putting up a flagpole or a bird house on a pole, you may find the need to dig a small diameter hole. Using a shovel for this job means making your hole larger than you need, so you may choose to use post hole diggers for the job instead. Here is how it is done.

Steps

- 1** Obtain a pair of post hole diggers. This tool is designed specifically for the task, and will enable you to do the job in the least time with minimum effort. There are a few things you need to consider, however, before starting.
 - Rocky soils are difficult to use post hole diggers in, since a relatively small stone will prevent the cutting edge of the diggers from penetrating the soil.
 - Very loose, sandy, and dry soils are hard to remove from the hole, as the *clamping* action of the jaws is not as effective on these non-cohesive materials. If you have time, start the holes one day, fill them with water and come back to remove the much softened soil the next.
 - Post hole diggers have a maximum effective depth of about 3/4 of their handle length, so a five foot pair will dig about 3 1/2 feet deep.
 - Very hard earth like clay is extremely difficult to dig with a manual pair of post hole diggers.
- 2** Select the location for the hole you will dig. If it is a single hole for a project like installing a flagpole, you can *eyeball* the location, but for fences and other projects requiring multiple holes, you may want to *lay out* the locations of your holes more accurately. Using stakes and a string line to guide you, and a long measuring tape to establish your spacing will help for this purpose. Plant the stakes on either end of the line that you want to dig along. Tie the string to one stake, pull taut, and tie to the other stake.
- 3** Determine if there is any possibility of underground utilities being in the area you are digging. For fencing around a field on private property, this may not be an issue, since the property owner should be aware of any utility right of ways on his land, but if there is any doubt, call your local utility locating service to be sure.
- 4** **Begin digging by holding the post hole diggers by the handles, one in each hand, with the handles close together.** Thrust the blades into the earth so they cut a *plug* out of the soil (and turf, if there is any present). If the soil or turf resists the digger's blade, you may repeat the downward thrust several times to cut into the soil and break it up. You should penetrate the soil several inches before extracting the soil (dirt) you are removing.
- 5** Spread the handles apart to **capture the soil in the jaws (between the hole digger's blades), using enough pressure to grasp it securely, then lift the hole diggers out of the hole.**
- 6** Swing the hole diggers to the side of your hole, **then close the handles back together.** This will open the jaws and allow the soil you have extracted to spill out.
- 7** Repeat the steps above, going deeper with each successive thrust. If roots or other difficult material interfere with your progress, rotate the blades so you attack the obstacle from a different angle until they are cut through. Start narrow and make the hole wider as you go deeper. This will help stabilize the post. Moist soil will hold better than dry soil.
- 8** **Wet the soil if you encounter very hard material or very sandy, dry material you cannot otherwise extract**

with a reasonable effort. Allowing the soil to soak up moisture will improve your success and make the job easier.

9 Install your posts, pole, or other item **you have dug your hole for.**

- Plumb it up with a builder's spirit level if desired backfill the hole, and tamp the fill material to stabilize it.

10 **When using concrete to set the fence posts in place be sure to use proper concrete working techniques to avoid weak fence post anchors.**

- Some contractors prefer to dump dry pre-bagged concrete into the hole and sprinkle with water. This would decrease the finished strength of the concrete by as much as 80% as you can not control even mixing or water proportions.

11 **Use the minimal amount of water to mix concrete for maximum strength.** A damp sand feel to the concrete is enough to complete the chemical reaction to make the concrete hard. Adding more water can help to make the concrete easier to place but will dramatically reduce the finished strength.


12 **For large projects it is more cost effective to make your own concrete mix as opposed to using bagged concrete.** Use 3 parts sharp masonry sand to 1 part type 1 (or type N) concrete for a strong mortar mix or add 2 parts gravel to bulk up each mix.

13 **How deep to dig the hole?** There is only one hard-and-fast rule when you're digging a fence posthole: Dig a hole for the post that is half as deep as the fence is high


14 **Why use concrete?** Concrete makes a wooden post rot faster. The wood will rot sooner or later and you will have to dig out the concrete when you replace the post. Instead put a rock/slate into the hole for the post to rest on and fill around it with rocks/gravel and finally sand which you can pound down to keep the post straight.

Community Q&A


How deep should dig to be below frost level?

 The frost level is about 16 inches. You will want to go minimum 6 inches below the frost level.
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I want to dig a hole 18 feet deep and 4 feet in diameter. What is the quickest way to do that?

 Get an excavator. The cave-in protectors that keep people from getting buried alive only are about 8' deep or so. An excavator is both faster and much safer for the depth you're after.
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What if I hit water when digging the hole?

 Unless your water table is very high or you hit a water pipe, you shouldn't hit water. Otherwise, you'll have to make a big hole because it'll cave in constantly.
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Your answer...

Reply

Tips

- All new post hole diggers need a good sharp edge, just like your lawn mower blades. So, get a little hand held grinder and sharpen the post hole digger blades and all your shovels and lawn mower blades, if you can get them off and clamp them in a vise while you sharpen them. They do not have to be razor sharp. Take a close look at the cutting edge of new lawn mower blades at a home improvement store. Now you should have a good idea of how sharp your post hole digger blades should be. Always wear safety glasses while using a hand grinder.
- Use dry sand or set posts in **concrete** for a good, solid post.
- Use a "digging stick" to break up the soil as you go. A "digging stick" is a heavy metal pole with a dull blade on the end, also sometimes known as a "spud" bar. The weight helps you to break up tree roots, small rocks, etc.
- You may need to use a jackhammer to break up very large rocks when digging post holes.
- The photos show the typical (old fashioned) post hole diggers, there are new, composite handled, ergonomically designed diggers available, but for the price, standard hole-diggers are hard to beat.
- If your soil is sandy, you might want to carefully enlarge only the very bottom of the hole, making it bigger than the shaft of the hole, before you fill with concrete. This larger bulb at the bottom will help keep the pole from coming up out of the hole when tension is applied to chain link fencing.
- Make sure you dig at least 2 feet (0.6 m) down below the frost line or when the ground freezes it will heave the post out of the ground.

Warnings

- Call to have underground utilities located before digging.
- Using post hole diggers can be strenuous work, wearing gloves will help prevent blisters, but do not over-exert yourself on your task.

Things You'll Need

- Post hole diggers
- String line
- Spirit level
- Measuring tape
- Shovel for back filling your hole

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