

Building GroPocket Towers

Building a tower with GroPockets is quick and requires minimal tools and skills.

Materials

- 4" PVC S&D pipe. S&D stands for sewer and drain. This pipe has a rating standard of D2729. As far as we know, it is only available in 10' lengths. Frequently, 6" of one end has been shaped into a bell for connection to another piece of pipe. This bell is only usable at the top of a GroPockets tower to hold the splash guard and must be cut off.
- PVC Cement (PVC primer is not required)
- Nitrile or latex gloves to wear while applying PVC cement
- Zip ties to clamp pockets in place while cement is drying (optional)
- GroPockets
- Alcohol to remove ink markings from pipe

Tools

- Saw to cut PVC pipe to length (In order of preference: 1. miter saw 2. reciprocating saw, 3. hack saw)
- Pencil for marking
- Tape measure
- Electric drill (2, if available)
- ¼" drill bit for pilot holes
- 2 ¼" or 2 ½" hole saw with pilot bit
- A dauber for the PVC cement
- One 2" net pot for alignment during glue up
- For attaching stainless steel eye bolts, a long ¼" drill bit (6-8" would be preferable)

Prepare Pipe

Two Options for 10' (9' 6" without bell):

- 3 towers @ 3' 2" (4 pockets each)
 - 2 @ 4' 9" (6 pockets each)
1. Mark the pipe according to the length you decide to use.
 2. Cut the pipe using the tool you have available. It will look better if the cut is perpendicular to the pipe.
 3. If desired, clean ink off the pipe using alcohol.
 4. Measure down from the top of the pipe 4" and draw a line. The first part starts at this distance from the top. The extra space allows room for the irrigation assembly.

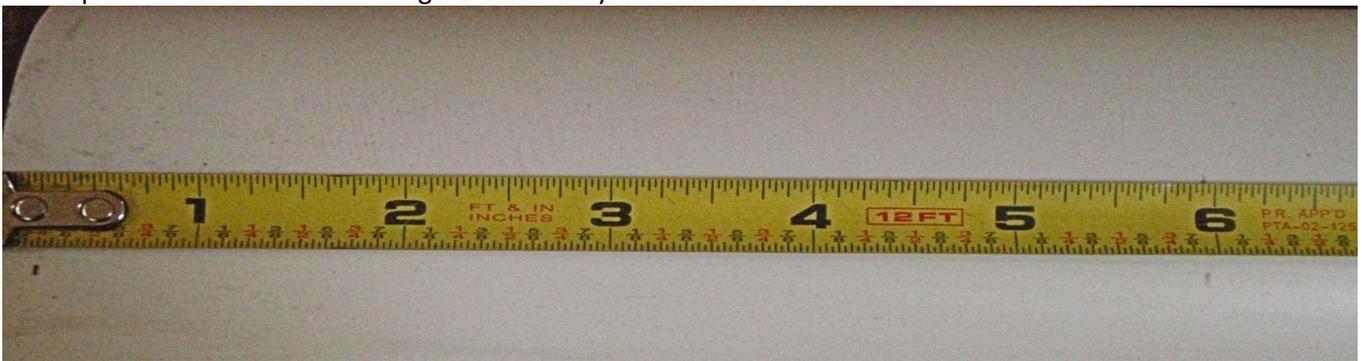


Figure 1-- Mark the top of 1st part at 4"

Parameters for Marking Pipe without Template

5. All GroPockets have alignment nicks in the middle of the top.
6. Use a straight line for the middle of the top and a circle for the pilot hole location.
7. The pilot hole should be 2 ¼" from the top mark.
8. Each pocket is 6" long.

Using the optional Template

The video at the top of the web page called How to make a Garden Tower explains how to use the printed template.

Drilling the Pipe

Now that the pipe is marked, we are going to drill a hole wherever there is a round mark. It is hard to see the round mark when you are using a hole saw. Consequently, we recommend that you pre-drill for the pilot bit of the hole saw with a twist bit.

Drilling a pilot hole doesn't take very long and it ensures that your hole ends up where you intended it.

Ideally, the twist bit would be the same diameter as the pilot bit in your hole saw. However, it can be any size as long as it is not significantly larger than your hole saw pilot bit.

If you have two power drills, load one of them with the twist bit and the other with the hole saw.

Hole Saw Options

There are at least two different cutting teeth on the hole saw. One is the saw blade type teeth found on a bi-metal blade. The other option is a diamond edged hole saw usually used for cutting tile. Either one will work as long as you have a pilot bit (not shown below).



Figure 2 -- Two styles of Hole Saws

Step by Step

9. Using the twist bit, drill a hole in the pipe every place you have marked a circle.



Figure 3 -- Drilling Pilot Hole

10. Using the hole saw, line up the pilot bit in the hole you just made and drill 2 ½" circles in the pipe.



Figure 4 -- Drilling hole for GroPocket

When you have drilled all the holes in your pipe, it will look something like this:



Figure 5 -- Drilled Pipe ready for GroPockets

Drilling for Stainless Steel Eyebolts

If you have purchase the eyebolts from us for hanging your towers, this section applies to you.

You will need a ¼" drill bit. If you have a long one (more than 4 ½"), you can just drill straight across the pipe, keeping your drill bit level with the top. Without it, you can use a string (or geometry) to determine the location which bisects the pipe for the second hole.

1. Decide on a face based on where your GroPocket holes are. The front and back will be determined by where you drill the holes for the eye bolts.
2. Measure down from the top of the pipe to allow for the cap.
3. Drill the two holes directly across from each other and the same distance from the top of the pipe.

Attaching GroPockets

To finish assembling your GroPockets tower, you will need PVC cement and a dauber (which is usually included in the can). PVC cement dries quickly but before that it is slippery. You may find it useful to hold the GroPockets in place with zip ties until the glue dries as Murray explains in the video.

- Protect the work surface from the PVC cement with newspaper or similar.
 - If using zip ties, connect 2 of them to the proper length for both top & bottom of each pocket before applying the cement.
 - Put your gloves on before opening the can of PVC cement.
 - Use a 2" net pot or a 2" dowel to help you align the GroPocket over the hole.
1. Apply PVC cement to the opening around the pipe.



Figure 6 -- PVC Cement freshly applied to 4" Pipe

2. Apply PVC cement to the sides of the GroPocket on the inside. The GroPocket has a round shape which matches the 4" PVC pipe



Figure 7 -- PVC Cement freshly applied to GroPocket

3. Place the center top of the GroPocket at the dash mark you made earlier.
4. Press the GroPocket onto the pipe around the hole.
5. Use a 2" net pot to make sure the net pot fits down into the hole in the pipe.
6. Once aligned, use zip ties at the top and bottom to hold the GroPocket in place while it dries.
7. If you use masking tape, you will need to adhere every other pocket in one round and then do the remaining pockets after the first ones have dried.
8. Once all the pockets are attached, your tower will look something like this:



End of Assembly Document
