

A Self Clamping PVC Pipe Patch, Version 1.0

By R. G. Sparber

Protected by Creative Commons.¹



I use Schedule 40 PVC pipe in my home irrigation system. Thinner, flexible lines [connect](#) to this PVC via holes I drill through the pipe walls.



Sometimes I need to patch these holes but replacing the pipe using couplers is expensive and a lot of work. Instead, I [patch the pipe](#), but this technique only

works for ½ inch pipe. It also requires me to either hold the patch on tightly or use a hose clamp until the cement sets up.



Today I perfected a technique that can work on any size PVC pipe and does not require a clamp.

Needed tools include a PVC pipe cutter, some scrap PVC pipe of the same size as being repaired, a 1-inch by 5-inch strip of soft aluminum sheet metal, and a bit of water.

¹ This work is licensed under the Creative Commons Attribution 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.



First, I snip off about 1-inch of pipe of the same diameter as being patched.



Then I cut the piece axially.



And, finally, I rotate the piece about 90° and make a second cut.



The patch is the correct shape but the wrong size.



I use my hot air gun² to warm the plastic until it is the consistency of leather. My hands were full, so I did not take any pictures.



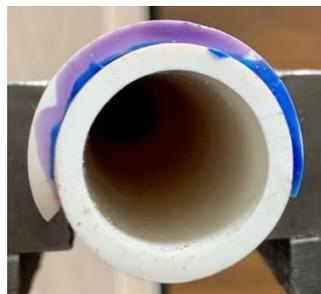
Then, I place the warm plastic patch around the piece of scrap pipe and apply even pressure by pulling on the ends of the piece of sheet metal. The goal is to form the patch to be a tight fit to the outside diameter of the pipe.

Once the patch tightly fits, I spray the strap with water. This quickly sets the plastic. The patch is ready for use.

My plan is to make a few of these patches and keep them in my irrigation repair kit.



To use the patch, I first apply primer to the inside of the patch and the outside of the pipe being patched.



I then apply PVC cement. Since the patch encircles the pipe by more than 180°, it snaps in place.



The setup time is a function of the type of cement used and the ambient temperature. I prefer to give the joint around 2 hours before applying pressure. Since the patch self clamps, at least I'm not tying up any tools while I wait.

² If you do not have a hot air gun, you should be able to soften the plastic in a toaster oven. Do work outside with good ventilation because overheated plastic gives off dangerous fumes.

I welcome your comments and questions.

If you want me to contact you each time I publish an article, email me with “Subscribe” in the subject line. In the body of the email, please tell me if you are interested in metalworking, software plus electronics, kayaking, and/or the Lectric XP eBike so I can put you on the right distribution list.

If you are on a list and have had enough, email me “Unsubscribe” in the subject line. No hard feelings.

Rick Sparber

Rgsparber.ha@gmail.com

Rick.Sparber.org