

## Junkyard Vacuum Canner

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You have probably read or heard of all the advantages of vacuum canning and seen the ads for the poly bag type canners or the hand pump canners that use a canning jar with a band aid type seal on top. How about a canner made from scrap that you can use to do a large quantity of dry food (50 pounds of rice or beans) quickly and easily.

My first junkyard vacuum canner was built about 1997 and is still in use today with minor modifications.

First a list of items to find:

- an automobile air conditioner pump, bad clutch OK
- scrap PVC pipe 6 inch diameter or larger
- scrap plexiglass 1/4 inch thick or more
- garden hose and hose clamps
- pipe fittings to fit the hose
- vacuum gauge
- gas valve
- ac motor 1 hp or better
- scrap lumber to mount pump and motor
- pulleys and belt
- Goop type of cement/glue and epoxy

Look for an auto a/c pump that has some sort of pipe fittings that you can cut and attach a hose.

The clutch is not important because you will epoxy or weld it together.

An auto mechanic told me that since a/c pumps get their lubricant from the coolant it would be a good idea to dump a little oil into the intake occasionally.

The PVC pipe should be a thick wall type, schedule 40 is nice but not necessary, just don't get the very thin stuff. This is to make a vacuum chamber. You will need a length long and wide enough to accommodate the largest jars you will be using for storing food. Mine is 8 inch diameter and 14 inch high, so I can use up to one gallon jars or multiple smaller jars.

If you can't find a vacuum gage check the price at any auto parts store.

You don't need a super accurate gauge, just enough to show maximum vacuum.

Lets start making the vacuum chamber. Cut the pipe to your chosen length, smooth and level as much as possible with the tools that you have, a disk sander in a drill worked for me.

Cut three pieces of 1/4 inch or thicker plexiglass large enough to cover the end of the pipe.

Next spread a liberal coating of GOOP or similar glue to one end of the pipe, set on one of the pieces of plexiglass then add a bead all around the outside of the pipe.

You should end up with something that looks like this:



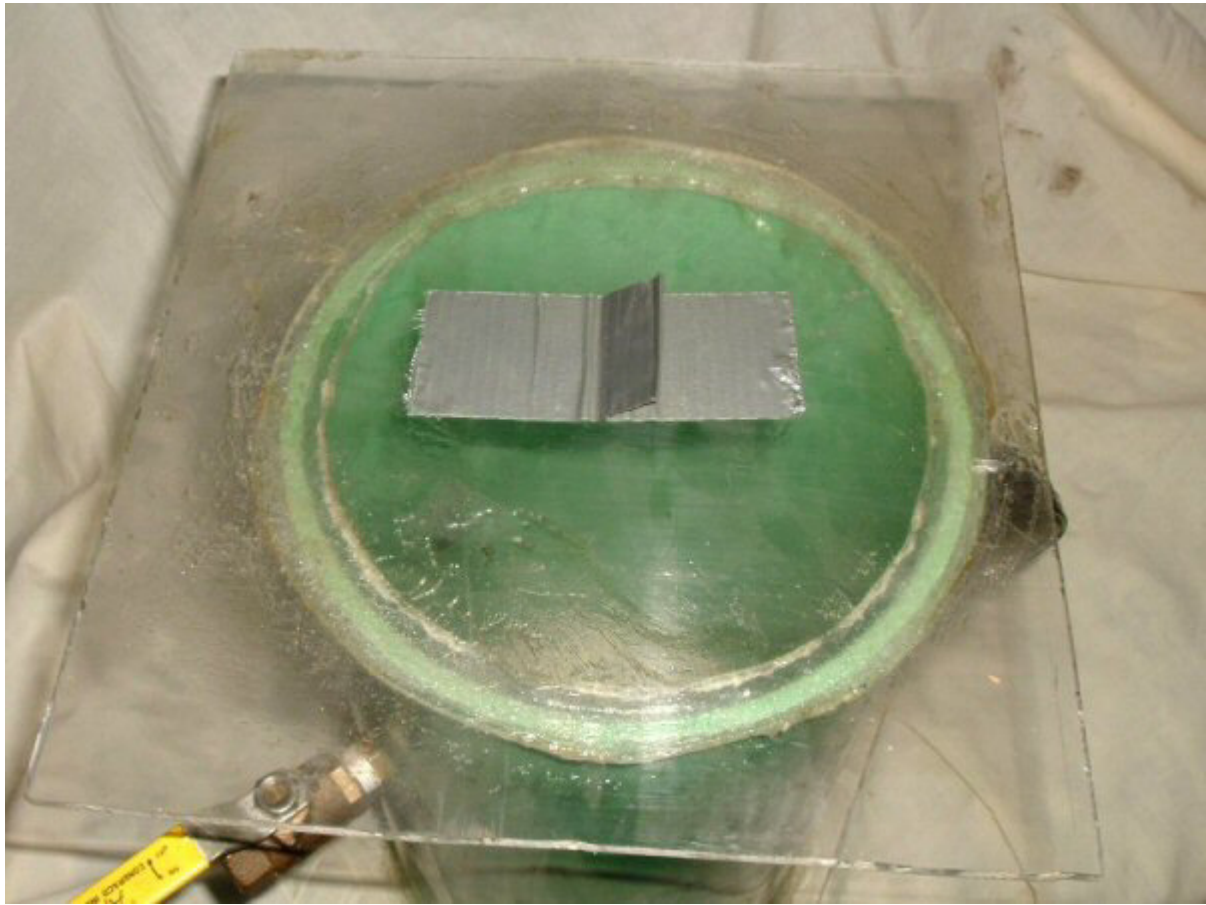


Let this cure overnight, then do the same thing to the top. After both ends are sealed and dry, drill a hole in the end you choose to be the top, then cut out the inner portion so that you end up with a ring on top with a very smooth surface, You will probably have to bevel the inside edge a bit to remove any lumps or burrs from cutting.

Now that your vacuum chamber is finished drill holes and insert your valve, vacuum gauge, and outlet fitting. Be sure to check that your air outlet pipe will fit the hose you intend to use. Again be liberal with the glue to seal these, NO LEAKS allowed. Placement is not critical, leave yourself room to work!

When you get ready to use the vacuum chamber spread a coating of vaseline on the top ring. Lay the third piece of plastic on top of this and the vacuum will seal it.

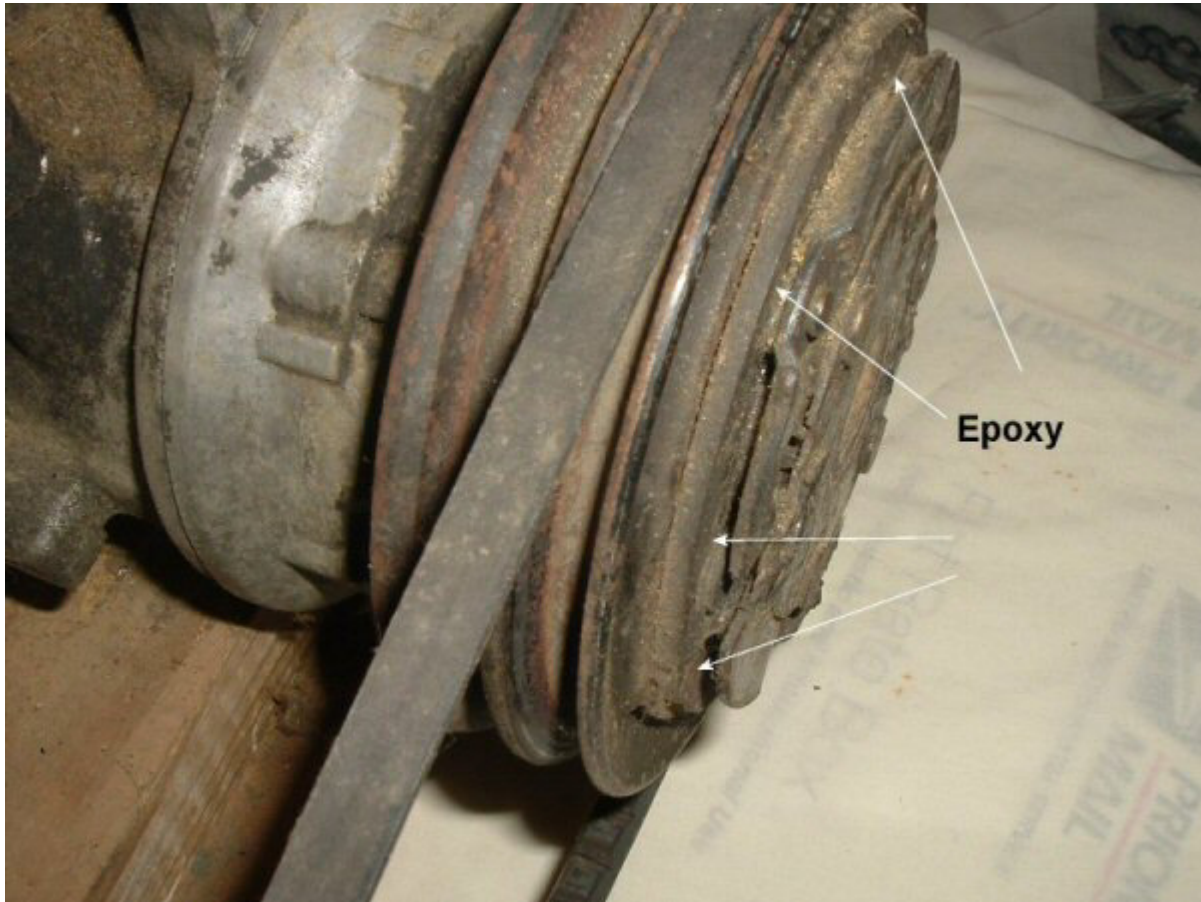




Your a/c vacuum pump is next, first epoxy the clutch together so that it is no longer freespinning and drives the pump. I hope you got the slow curing epoxy, it sets up harder than the 5 minute stuff. Cut off the inlet and outlet tubes at whatever length is convenient to allow attaching a hose to the inlet. Next mount your pump on some scrap lumber by whatever means you choose. It doesn't have to be pretty, it just has to work.

Don't forget to check rotation before mounting the pump and motor !

The motor I use is a 1/2 horsepower 1725 rpm, bought at a garage sale for five dollars. You will have to experiment with pulley sizes for the best operation, mine is stepped down quite a bit to prevent loading down the motor. This will depend on your pump and motor combination.



If you have everything assembled, attach your hose to the chamber and pump. With a coating of vaseline on the top of the chamber, place the top on and start the pump with the valve open. Double check to see that you are drawing a vacuum and not pumping air. With the valve closed you should reach maximum vacuum in a short time, the top of the chamber may bow inward almost a quarter of an inch if you have a good vacuum. Now shut off or unplug the motor leaving the valve closed. The chamber should hold the vacuum for several minutes if it is not leaking.



Ready to begin canning? You may use regular canning jars or any jar from the store that has a plastic liner such as pickles, salsa. Wash thoroughly then check for odor. If the lid has an odor from the contents place a teaspoon of baking soda in the jar and set upside down overnight so the baking soda is on the inside of the lid. Rewash and check again. Check your jars, not just visually, but run your finger across the top to check for chips or rough spots. If using regular canning jars do NOT use the more expensive lids with the rough sealer inside, use the economy brands, they are thinner and have a smooth sealer that works better for vacuum canning.

Place your dry food in a jar, add lid and ring, tighten then loosen 1/4 turn. Place as many jars as will fit in the chamber, run the pump to maximum vacuum and continue running for 10 to 15 seconds. You may shut down the pump or leave it running when you open the air inlet valve. My canner has a state of the art duct tape handle on it to remove the lid. Immediately tighten all rings and lids. If any jars failed to seal set them aside and inspect before retrying.

For storage in basements or other areas that may be damp dip the top of the jar in melted wax to prevent rusting.

Anything that you are canning that is in a bag or pouch should have a pinhole punched in it before placing in jar or the bag may split open.

When canning flour, pancake mix or anything in powdered form do not fill the jar completely. Hit the jar on a padded surface several times to release trapped air then fill the top of the jar with toilet tissue or paper towels to trap the powder when air bubbles up thru the contents. Wipe the top of jar clean before adding lid.

About the only dry thing I have not tried to can is live ammunition. I don't know what would happen when drawing a vacuum, would the bullets become unseated, or would they be pushed in when the vacuum was released. Not to mention what the primers might do.

Just to test how good this works I recently opened a jar of aspirin canned over 5 years ago. If you have ever opened an old container of aspirin and smelled the vinegar odor (acetic acid) you know how to recognize bad aspirin. These were just fine.

