

# Do-It-Yourself Shop-Vac Drain Suction

by Leo J. Laughlin

We need to empty the water pipes in the stand each year, while most were set up to drain when the valves were open, not all could be done that way. The secret to setting up the adapter is the tubing adapter. Sinks use 1.25 or 1.5" tubing to connect to the drain, however the drain pipes in your house use pipe size, not tubing size.

The adapter shown in the picture to the right is used to connect the drain tubing to the drain pipes. The blue ring is included with the adapter and allows the adapter to fit 1.25" OD tubing. Removing it and the adapter will fit 1.5" OD tubing. Most small Shop-Vacs use 1.25" hose, which will slide right inside the blue ring. Some small pro Shop-Vacs use 1.5" hose, which will fit the adapter without the blue ring. If you have a large Shop-Vac that uses 2.5" hose, you can pick up a 2" x 1.5" Fernco rubber coupling to connect the large hose to 1.5" pipe.



From there you can pick up whatever adapters or couplings to reduce the 1.5" pipe down to the pipe size you need to vacuum out. We use threaded bushings to reduce the size in steps, down to 1", then down to 3/4" then down to 1/2". That way we can unscrew each bushing to get to the pipe size we need to clean out. We use this setup to be able to adapt to all pipes in the stand. Don't use tape or pipe dope, they are not needed as the minor leaks won't matter when connected to the suction side of a Shop-Vac. I keep a nipple of each size (male threads on both ends) if I need to run into a threaded fitting. And I have a 3/4" threaded street elbow, just in case I need to get into a tight place and the adapter doesn't fit in the space.

Materials used:

- 1 1/2" pipe adapter to 1 1/2" tubing adapter
- 4 to 6" of 1 1/2" PVC pipe
- 1 1/2" female adapter
- 1 1/2" to 1" threaded reducer bushing
- 1" to 3/4" threaded reducer bushing
- 3/4" to 1/2" threaded reducer bushing
- 1 1/2", 1", 3/4", 1/2" nipples, minimum length
- 3/4" threaded street elbow (male by female)



This week I had noticed our air conditioner was dripping around the A-coils, I unscrewed the drain hose and it was dripping water, but not very fast. I figure that dust, etc. had started to plug the drain. I used the Shop-Vac pipe adapter to connect the Shop-Vac to the drain, but needed to add a garden hose to pipe fitting in the pipe adapter. This was used to connect the Shop-Vac to the drain in the air conditioner. It worked like a charm. This is also useful to empty water lines for soldering, or gluing.

