

## Gray Watson Personal Thoughts 2003.07.25

### Desert Spring Humidifier Review

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*[ Understand that I am not involved with the below mentioned company in any way. I just like the product. ]*

One of my big pet peeves is wasted water. I'm not consistent about this since I like long showers but I do have a 750 gallon system in my garage feeding my outside spickets. That's a subject for a future thoughts column however.

So because I hate wasting water, my old humidifier annoyed me to no end. If you don't have a humidifier in your home you should consider getting one -- especially if you have forced air heat. Humidity is very important for comfort, plants, furniture, health, etc.. Experts recommend humidity levels in your home of 30-50% through numerous studies. Humid air feels hotter and makes the home more comfortable, keeps wooden furniture and floors from drying out and getting brittle, lowers bacteria levels, etc..

#### Types of Humidifiers

Basically there are a few different types of humidifiers which are designed to go onto the side of a forced air furnace:

- The most common design is where the water runs down through a mesh substance and the water evaporates as the air from the furnace passes through the mesh. Often the water either is running constantly 24hrs/day or runs whenever the blower motor is turned. A large percentage of the water does not evaporate but runs down out the bottom of the humidifier and out the drain. After a while, depending on the "hardness" of the water, the mesh gets filled with the deposits in the water and has to be replaced.
- Other models have a reservoir of water and a drum wrapped in absorptive pads that spins through the water. The air from the furnace goes through the pads and the water evaporates. These units usually do not waste any water but again, depending on the water "hardness", you need to replace the pads when they get encrusted with the deposits.
- A cheaper model of humidifier is just a spray unit which plugs into the duct on a furnace. The water is misted into the warm air and evaporates. The problem here is that the water deposits are vaporized and distributed throughout the house, settling in the form of a fine white powder on all horizontal surfaces. The deposits also clog the spray nozzle meaning it has to be cleaned or replaced often.

#### Desert Spring Humidifier

The product that I found and installed over the winter is called the [Desert Spring Humidifier](#). It does not waste water nor does it suffer from the hard water limitations of the other systems described above. It has a reservoir of water but instead of absorptive pads, it utilizes plastic disks (see image at right) in an accordion shape which are rotated through the water. The water coats the disks and evaporates into the air passing around the 15 square feet of surface area provided by the disks. The mineral deposits from hard water wash off the disks and collect in the reservoir to be drained off. The unit comes with a screw knob at the bottom of the reservoir which I attached a garden hose ball valve so you can drain the unit easily into a bucket every month or so.

The humidifier is connected between the hot output and cool input to your furnace. Some of the hot air output is redirected through the plastic disks coated with water and into the input side of the furnace. There is a float valve inside of the unit which maintains the water at a prescribed level. It comes with a standard water pipe peircers like you'd have on your freezer's ice maker which tap into a cold water pipe. They provided plastic tubing but I replaced it with 1/4" copper tubing which is stronger. I connected the included 24v DC transformer to the output from my furnace blower motor circuit so that it only rotates when air is passing through the unit. I did not install the humidity sensor which comes with the unit on my furnace because we've always needed more humidity.



So far I am impressed with the unit. It seems very well made, comes with decent installation documentation and a video which I'd recommend watching. I watched it after I installed it (of course) and it answered some questions and would have saved me time. It uses minimal electricity and water and we immediately saw the droplets of water in the corners of the window panes that we were supposed to get. No recurring charges or pads to change. The only maintenance is the draining of the reservoir every month or so. It would be good to wipe out the reservoir and rinse off the plastic disks at the start of the season. I also turn off the water in the Spring and turn it on in the Fall to be safe.

So if you are in the market for a humidifier I strongly recommend the [Desert Spring Humidifier](#). It is currently selling for US\$260 from [High Q Products](#) which is more than other models but well worth the difference. This difference will have paid for itself after a couple of years of water and pad costs (often US\$10-\$20+ and need to be changed monthly).

### Comments About Installation Manual

The following are a number of notes that I took that augment the installation manual that comes with the unit. Unless you are pretty handy I'd recommend getting someone to install it for you. The included parts (see image at right) are many. I'm a pretty handy guy and I'd rate this a 3 out of 5 on my difficulty scale. Took a while but not too difficult.

- I initially hung the unit on the wide part of my duct but I moved it to the side which is much better. You will have to have ducts that are 8" along the side for this to work.
- 3 x 3/16" machine screws are square pegs instead of phillips screws which is annoying. The unit is from Canada which may not use phillips heads.
- Tool suggestions: electric drill with 3/32" or 7/64" NOT 1/16" drill bit as listed in manual.
- On the template instructions, the diagram which shows the mounting hanger 1/2" below the top of the hole is confusing. Some more detail or better indication where the 1/2" is in the picture would be good.
- The directions mention that you can use copper instead of the supplied plastic tubing for the water supply line but not that it should be 1/4" tubing.
- It took me a while to find the "textured bands" on the inside of the basin. A diagram would have been nice.
- To adjust the water level it says "look into the inlet". I could not find any diagram or other mention of what the inlet was. The installation video showed that they mean you to leave the bypass duct off and look into the side of the unit with the drum installed to make sure that the water covers (slightly) the bottom of the disks at the bottom.
- Hanging the basin: there are no pilot holes in the bracket. The instructions should say "drill 3 pilot holes in the bracket with the 3/32" drill bit.

- The template for the hole to be cut in the duct is 8" x 6". It would nice to specify that in case people want to measure instead of using the template.
- The parts list shows the templates although they are usually inside of the instruction manual.
- I could not get the drain to stop leaking and had to apply some plumbers yellow recto-seal (??) to the rubber washer and threads of the drain.
- Took me a while to find the bands on the sides of the unit. Could not get the water level up to them however even with the float adjustment all of the way up. I had to *slightly* bend the float upwards. Then I moved the float mount down to fine tune the level.
- I've had a hard time keeping the flexible duct attached to the unit. The low vibration of the furnace motors caused the supply line to pop off a couple of times. I've been thinking of replacing it with stiffer aluminum duct material or attaching it with a screw.

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