

Ghosts of Halloween

http://www.ghostsofhalloween.com/projects/fog_chiller/

PROJECT in 2001: **Ultimate Fog Chiller**

This chiller won in the 2004 HauntCon Chill-off competition

After seeing and building different fog chillers we finally came up with a wonderful design.

Most of the fog chillers use a cooler and pvc pieces. We decided to use a 3/4th size Trash can and 18 feet of aluminum dryer hose.

One of the problems we noticed was that the fog didn't stay in the holding area long enough on most chillers. This doesn't allow as much time for the fog to cool. In 2000 we spent 50 dollars on dry ice with our old "cooler style" fog chiller. It worked great, but that 50 dollars can be spent elsewhere each year. Our new fog chiller makes sure the fog touches a lot of cold surface area and is very easy to build. The only draw back to this is it takes up a little more space then the "cooler" way.

One word of note, we have a powerful fogger, a VEI V-940. It's a 1000 Watt, 7000 Cubic feet per minute Fogger. We haven't tested it with a regular fog machine which is usually a 300w 2500cfm fogger. So we don't know if the smaller fog machines will be able to pump the fog through all the tubing.

ADDENDUM 2003:

Many people have been asking me, "Will this work with a smaller fogger?" After using the VEI V-940 I feel that the output is a little much. Although, I still haven't tested a lower output fogger I am assuming that the smaller fogger will work *better* than the high output fogger. This is due to the fog being pushed slower through the tubing and thus allowing more 'cooling' time in the tubes. Ultimately, the fog gets even colder and creates denser fog.

ADDENDUM 2007:

I have recently been enlightened by other haunters that using a leaf sized garbage bag at the output of the chiller helps keep the fog denser and closer to the ground.

Cut a hole on the closed side of the bag,
attach that end to the output, and the fog will creep out slower from the large end.

Even more: Rebecca says, "We were having difficulty keeping the bag down due to the wind so we added a small bag of ice (opened and spread out through the inside of the trash bag) it worked to keep the bag down AND made a big difference in the density of the fog!"

A few other Frequently Asked Questions:

Q: Do I need that much tubing?

A: Nope, but the more tubing you have, the more surface the fog has to cool.

Q: Does the lid need to be on the top?

A: Since the fog only says in the tubing no fog will escape out of the top. Though, I figure having the top would keep the ice from melting as fast.

PARTS:

- Small Trash Can (could go bigger if you want)
- Aluminum Dryer Tubing (The hard metal kind)
- Something to cut the holes in the trashcan with.
- A lot of ice. Any kind.

We cut two holes in the garbage can with a 4 inch bit. One hole on either side. This bit costs around 12 bucks. We just happened to have one to use on the old Coolers.



The great thing about the garbage can is the material is much thinner, I'd just score it a bunch of times with an x-acto blade instead of buying the 4 inch bit. The hole where the fog comes out is right at the bottom and the hole where the fogger nozzle is placed it about 2 inches higher on the other side.



Since the aluminum dryer hose came in 6 foot pieces we had to attach them together using 3M Water Resistant Duct Tape. Then we put on end of the tubing out of the lower (exit) hole and coiled it around the inside of the can. Once we got to the top we fed the tube back out the higher (enter) hole.



Here's a side angle of the chiller. The tube coming out of the right is the one where the fog goes in. See, all done. Quite simple yet very effective. The fog has to go through 18 feet of tubing. That's a lot of cold going on!



This is a 20 pound bad of ice for 6 dollars. Much cheaper then 50 bucks of dry ice.



Here we are testing it. Seems very dense. On the other chillers we have tried half the fog would stay down and the other half would rise and dissipate.

We noticed that with this system the fog would rise about 1 foot and settle back down.



With this much fog coming out we wanted it to cover more area as it came out. So we rigged up a box with a hole cut out the back for the tube to go in, and a slit at the bottom for the fog to come out in a wider pattern.

As you can see there's A LOT of fog coming out and it covers the entire area.

The rest of the pictures are more examples of how effective this works. Even outside with a bit of wind the fog still hugged the floor.



And the rest...





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