



Fog Chiller Guide & Tips v.2

The following is a simple guide on how to build a Fog Chiller plus a few tips. We will show you two styles of fog chillers and why we feel one is better than the other one. Feel free to email us at Help@10-31Store.com with any questions or comments you may have about this or anything else Halloween related.

Warning: Please be advised that any project that you may work on could result in injury to property or oneself. Always take safety precautions and be properly informed on how to use any tool required in this project. 10-31 Store is not responsible for any type of injury or property damage that could result from making a fog chiller or using a fan for your fog effects.



This Fog Chiller's design is from the Antari Ice (pictured below).



Before we continue on showing how to build this model, let's talk about one of the simplest styles of chillers, the Trash Can Chiller.



This version uses a Dryer hose shown below.



Set the dryer hose inside of a normal trashcan, box, or etc. 'Most people use trash cans because of the size and the use of the handles.'

To make this Trash Can Chiller, cut out two holes on opposite sides of the trash can. Set the dryer tube inside the trash can so that it circles throughout or coil through it. Once you lay the hose through the trash can, make sure that you have both sides of the hose sticking out of the holes you made in the trash can. Now the most important part of this project is to seal up the gaps between the hole and dryer tube. This can be done by using silicone or even with Gorilla Glue. This prevents the chiller from leaking once the ice begins to melt.

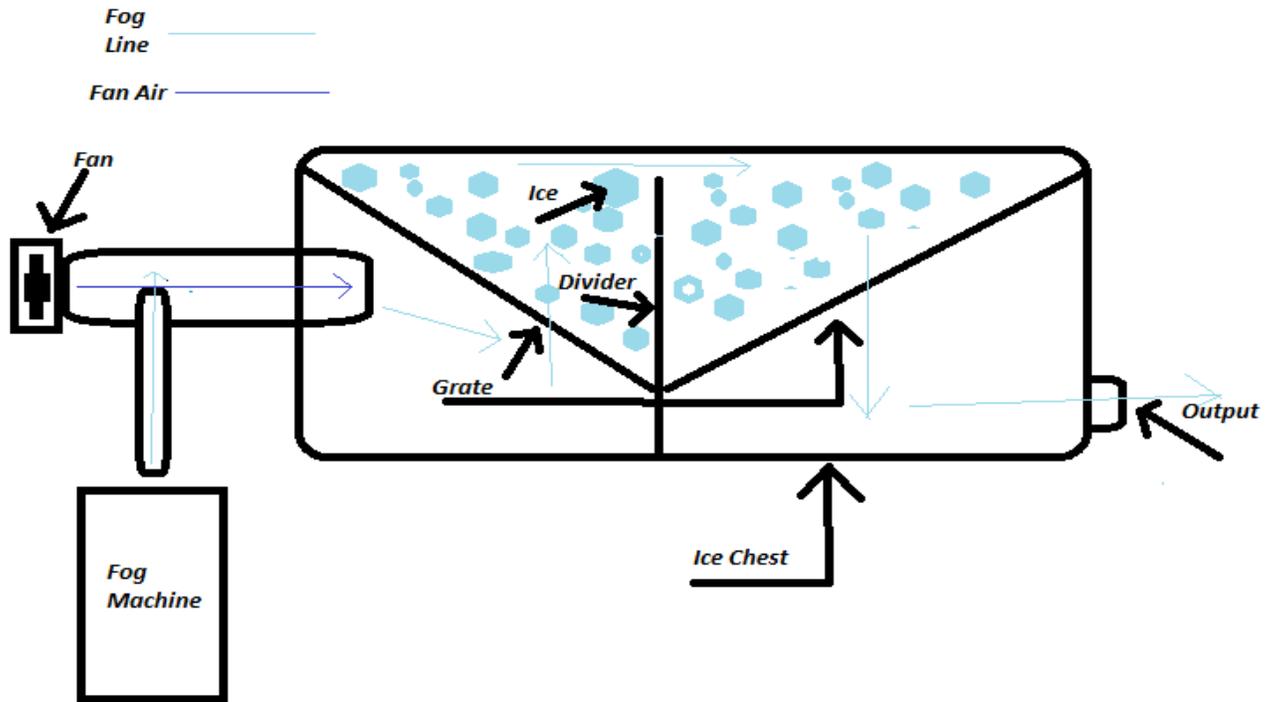
Another quick idea you can do is to take an ABS three way fitting and connect it to the one side of the hose.



The black arrow is where you would put the fog machine nozzle. The blue arrow is where you'd connect a fan and finally the red would be what connects to the hose of the chiller. Pretty simple huh?

Now that we have shown you the simplest way of making a fog chiller, let us now show you a better version of a fog chiller. Now why would you need a better version if you can simply make the one above? Well we have noticed that since the fog is only traveling through a cold tube but not through the ice itself, the fog is not as cold. With this other style of chiller the fog goes through two layers of ice making it extra cold. We have provided a picture below for reference.

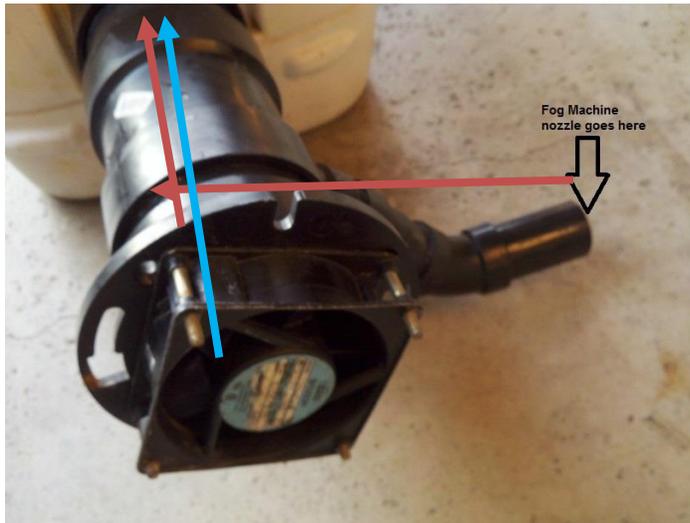
The picture below is of a simple diagram of the chiller and how it works.



One of the most important parts of this chiller is the fan that is connected to it. The fan helps push the fog through the chiller so there is never fog just chilling 'pun intended' in the fog chiller. As said before the fog actually goes through the ice twice making the fog extra cold. The other machine will leave what are known as hot spots. This means that sometimes the fog will come out both low lying and airborne. Another important part of the fan is that even if you have a smaller fog machine it helps boost the fog output to allow for better coverage.

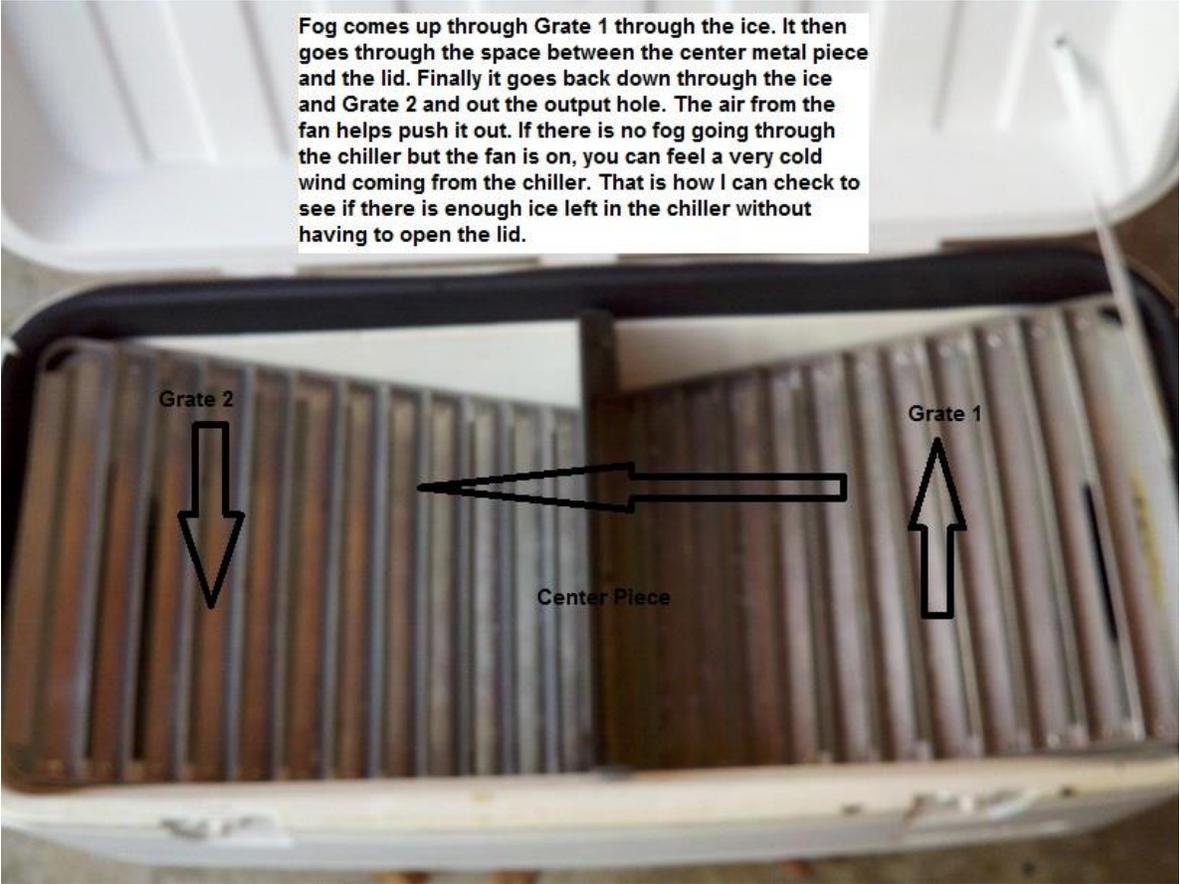
On the next page we'll show you all the steps you need to know.

The first picture shows the fan and the tube that the fog machine is connected to.



The fog goes inside of the machine and hits the wall of the tube as shown with the red arrow. The fan then pushes it through the chiller as shown with the blue arrow.

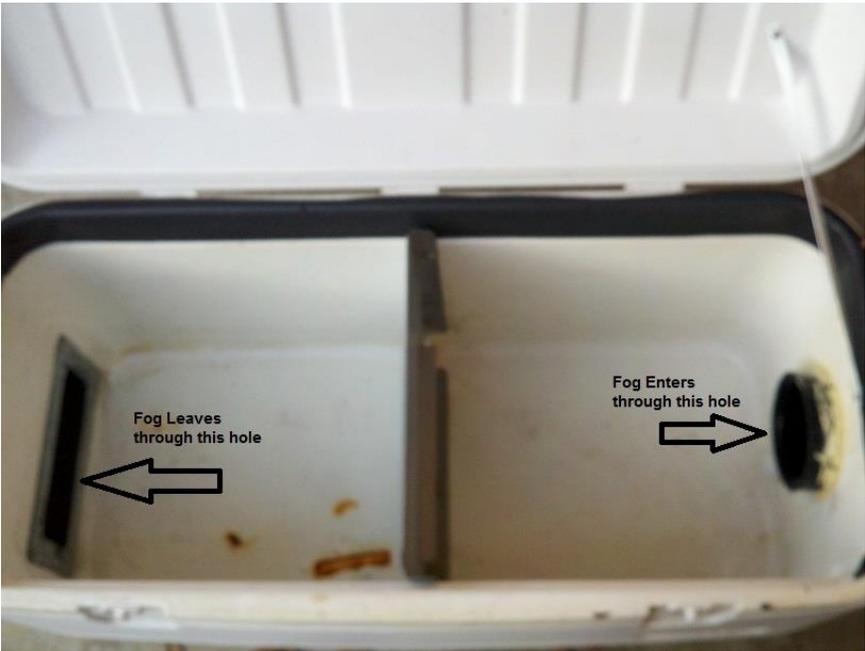
This next picture is the inside of the chiller. These arrows show the movement of the fog as being pushed through with the help of the fan.



This is the center piece of the chiller without the grates.



Below is the whole view of the chiller without the grates.



This next piece is one of the most important parts of the chiller which is the grates themselves. Here is a picture of grate.



We took aluminum flat stock and bent it at about 130 degree angles and then riveted it to another piece of bent aluminum. Now we know what you are thinking, well maybe we do. That this is way too crazy and I just wanted it to be simpler. Well you can make it simpler. Below we will show you a simpler version.

The final picture is where the fog comes out of the chiller.



Truthfully this part is completely up to you. When we built this we simply copied the same design as the Antari. However if we had to do it all over, we would add an ABS pipe fitting so that we would be able to

attach a dryer hose to it if needed. It would be like a shop-vac style vacuum cleaner hose.



Now that we have shown you a really well done version of the Antari Ice let us now show you a simpler and quicker version.

First start off with an Ice chest. The size of the ice chest is up to you. A thick plastic cool box would work too. We used a 48 quart Igloo ice chest.



To make the grates we used two 5 Gallon Painters grids.



'Note- We clipped of the hooks shown by the blue arrow and straightened the curve at the green arrow.'

These grids are what will be used for as the grates in this chiller. When looking for these we paid about \$2.50. The reason this is mention because we have seen them elsewhere for up to \$10.00 so be careful. Now depending on how big of an ice chest or box you buy will depend on the amount of these grids you'll also need to buy. You can take these grids and zip tie them together to make them wider or longer.

The next piece you'll need is some ABS Pipe. These are what you will use for your input as well as output. We used a 3" tube for the output which allows for a dryer hose to be connected to it. The input is all up to you because you may find that you bought a bigger fan or even a smaller one.



The next piece that you'll need to buy is the fan. These types of fans are called Muffin Fans and they look like this.



This fan will now connect to an ABS DWV Adjustable Closet Flange Spigot which is pictured below.



This is one of the easiest ways to connect a fan to allow for it to connect with the other abs pipes. You'll need to finally get yourself an ABS DWV Hub x Hub x Hub Long Sweep Sanitary Tee. This is what the spigot and the fog machine will hook up to. This fitting looks like this.



Another piece that we bought was a sheet of metal. Now mind you this could be plastic or such but please be advised that buy sheets of metal at Home depot is very expensive compared to going down to a metal yard where the prices are a quarter of the price.

Let's start building!

WARNING! : Be advised that 10-31 Store is not responsible for any injuries that can or may occurring during the building of any of these projects. Please wear proper safety gear and follow all the rules of the tools that are used.

This picture is a quick measurement of the sheet of metal that we had lying around.



The sheet of metal shows where we bent the two sides and the bottom to snug up against the ice chiller. The best way to bend the sheet is to stick it inside of a vise like the following picture shows.



Once you place the metal in the vice hammer it down to make the angles.



Next set it on a table to smooth out the angle like shown in the picture above.

Pictured below is what it looks once the sheet is placed into the chiller.



The arrow shows the lip where the grate will rest upon.

The picture above also shows that the holes have already been cut into the ice chest. The tool that we used for this is a hole saw. This tool is used in your cordless drill like the picture below.



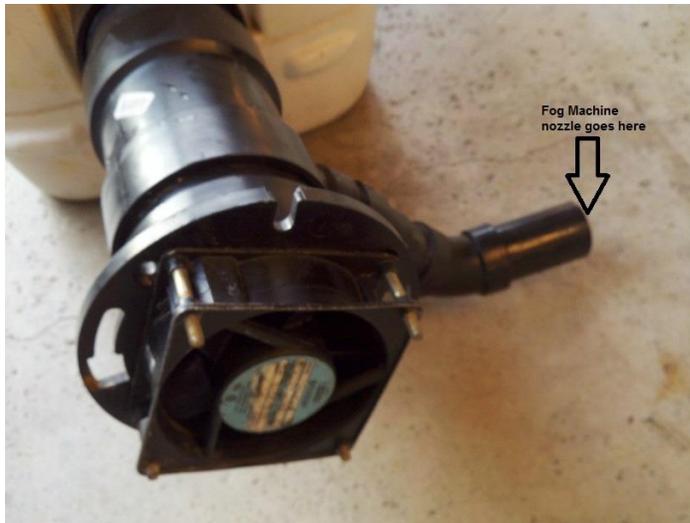
Once you have the holes drilled out, it's time to glue a piece of abs into the side that will be the output fitting connection.



You can use Gorilla glue or a silicone type sealant you connect it. The Gorilla glue might not look as nice but it is very strong and works great as a sealer.

On the opposite side of the chiller attach the fan and the input for the fog machine. This is the flange shown earlier that the fan will connect to.





Now we will be honest maybe these aren't the most detailed instructions and there could have been more text giving measurements and what not but the reason there wasn't was simply because this doesn't have to be exact or perfect. As long as you follow these simple rules and diagrams you can take this concept and make a great chiller.

The last thing that we want to share with everyone is something that we have found to work really great. If you have ever dealt with a Fog Chiller outside you will know that any bit of wind will completely kill the effect. No matter how cool or great of a chiller you make, wind will destroy it. After dealing with too much wind we decided to use a box fan to see what type of effect that gives. Once we tried the fan we never looked back.

This is very simple and all you need is some type of larger or box fan to be set about 3-4 feet in front of the fog machine. This is done to cut down on the condensation from the fog machine.

'WARNING!: Though we have never damaged a fan doing this, 10-31 Store is not responsible for any damage or electrical problems that may be caused by condensation from the fog machine on the fan.'

Depending on what you like, adjust the fan speeds accordingly.

Now that we have explained everything to you, please go watch a video which shows both chillers in action as well as the box fan technique by following this link.

[Fog Chiller & tips.](#)

We hope that these designs have not only helped you out with building a Fog Chiller but also gave you some insight on what makes a good chiller. We know we may have missed some stuff and so if you have any question feel free to email us at Help@10-31Store.com. Thank you all again from all of us here at 10-31 Store!