

BIG SMOKEY DESIGN



Well lets get something straight right now, I'm a rookie smoker. I built this smoker because a friend of mine, Dalton, said I need to taste real BBQ, not gas or grill. Well turns out he was right! Anyway, the Big Smokey is easy to build and cost nothing next to those pro jobs. I've outlined the steps to make the smoker under the construction area. They include color photos and some friendly advise with a list of the tools needed to make Big Smokey. You can click on the thumbnails to enlarge them. If you have any questions drop by the help center and leave some mail or your favorite recipes.



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Big Smokey

Barrel Don'ts



I bought my barrel kits from
[Vogelzang Inc](http://www.vogelzang.com)
1-800-222-6950



- The units that I bought are the Model BK150E Deluxe Barrel Stove Kit. Features include a large, well fitting, gasket, feed door. A separate gasket ash clean out door engineered for “easy clean” ash removal. A “cool touch” cam-lock type door latch and a counter weighted spin dial draft control. The Model BK50E Double Barrel Adaptor Kit does just what it says. Mounts the second barrel on top.
- I also had to order two more [damper](#) collars. One for the extra vent from the fire chamber to the cook chamber, and the other for the outlet on the cook chamber. All of the dampers are 6 inches in diameter, which is fine for moving heat to the cook chamber but bad for holding heat in. The damper on the cook chamber works great at stopping the heat loss. Don't worry to much about this stuff. You'll get to see it in the construction phase.

Barrel Don'ts

- **Chemicals** Don't use barrels that have had some kind of chemical stored in them. It won't burn out for a long time and will surely make your food taste bad, and might just make you sick.
- **Rust** I got in a hurry to build this smoker when I first started. I was in such a hurry that I got some barrels that had some major rust on them and thought they would do. Don't do this. I spent about 3 hours sandblasting one of them and then stopped. Wasted the three hours. I then did the right thing and made a burn barrel out of it. I then went back on the hunt for some newer barrels that had contained some food grade product.



Barrel Do's

- **Food Grade Barrels** Do get food grade barrels. Get 3 of them, you will see why during the construction phase of the smoker. What I mean by food grade barrels is, some barrels that have been used to store some type of food product. I came across some barrels at the local Kebler factory that had malt extract in them. I've also read that other folks have found barrels of this type at their local bakery as well. Strange thing is they are just sitting there and some place wont let you have them. Seems its a liability issue for you to take them. Um, who's gonna eat what's in them? We just want to cook!
- **Clean** Do get new barrels that have not been sitting around to long. I also washed them out at the local car wash before I took them home. It's also a good idea to wash them out after you are done with your final assembly, more about this later in the project.

Cost & Inventory

Big Smokey

- **Vogolzang** The first thing you need is the barrel conversion kit and the double adaptor kit. Both kits cost \$124.00 total.
- **Vogolzang** I also had to get two more damper collars \$18.00 each = \$36.00
- **Barrels** You should be able to get these at no cost, I did anyway.
- **Angle Iron** This is the stuff they have in the rack at Home Depot. I got 4 pieces about \$10.00 total.
- **Wheels** 3 inch hard rubber wheels, Home Depot about \$5.00 each = \$20.00.
- **Cedar Shelf** Cedar 1x6x6 and I used it all, True Value Hardware. Somewhere around \$4.00
- **Platform** This is just a 2x6x8 pressure treated piece from Home Depot \$8.00
- **Hinges** I used 3 brass hinges, about \$3.50 each = \$10.50.
- **Grills** Major cost here. I paid \$19.00 each, about \$40.00 total.
- **Fire Bricks** I got these from True Value hardware cost was .90 each and I got 20, only used 17 of them to line the bottom barrel, \$20.00.
- **Temp Gauge** Got it at Home Depot for \$20.00.
- **Misc Screws & Hardware** Screws, nuts & bolts. I intend on painting Big Smokey. The paint is somewhere around \$4.00 a can. I figure about 4 cans should do it. Total in this area should be \$25.00.
- **Total Cost**

Well, we stayed under the \$320.00 mark. You could probably cut some corners here and there, but these are real world prices. If you look at the cost of one of those "professional" jobs we saved about \$1000.00 and

you can say you built it yourself! Big Smokey is an Icon of smokers and will be the envy of your block, I hope.

Big Smokey

Needed Tools



- **Saber saw** This is the tool you will need the most! If you don't have one by it or borrow one. Get a few bi-metal blades for it as well. I got them from a WalMart super store for about 4 bucks.
- **Drill** I used a Makita cordless drill, any drill will work! Get a full set of drill bits, new ones work best. Having shape new bits is always nice.
- **Metal Shears** used to trim the stove pipe for the barrel connections.
- **Hammers** You know what this is for, just have a few around.
- **Files** These are good for smoothing out the rough metal edges on the barrel openings and the lid.
- **Air Grinder** This tool is not required to build the BBQ, but nice to have. I used it, with a cutting wheel on it, to cut slits in the barrels. I then used the saber saw to make the cuts.
- **Screw Drivers** Um should know how to use these, right?
- **Sockets** You only need a few of these, 7/16 and 1/2. I guess wrenches would work also. Just that there are 10 bolts on each damper, lotta screw'in to do.
- **Soft Tape** This is one tool, I got from my wife, that makes the barrel opening and lid lay out easier to do.

Big Smokey

Fire Door



The first thing I did was install the fire box door. What I did was just put barrel on end with the two caps facing up. Then place the door on the barrel so the lower ash and vent door (the small one) cover the small cap on the barrel. Open the doors one at a time and make an outline of the door opening on the barrel with a dark marker.



You will need to make the outline a little larger so the door will fit in once you cut it out. As you can see in this and other photos I made a second line about 1/2 inch farther out. Then I used my air grinder to make a small slit in the barrel so as to get my saber saw in.



Now with the lines drawn and the slits cut I just follow the line with my saber saw. It did a nice job of cutting the metal curves of the door outline.



Here is the opening for the fire door once it is cut out. I needed to use a file to make the two holes a little larger, I didn't want to risk making them to big with the saw. Once you have the door in then just drill out the holes and bolt it in. As you will see in other photos it goes on easy.

Bottom Barrel Legs

Big Smokey



Once I had the fire door installed I placed the barrel on the legs with the fire door in a vertical position. Then I used a scribe to mark the holes for the legs. As you see in the photo I rolled the barrel over and drill out the holes for the legs and then just bolted them on.

There was one problem with the casting of the legs. Once I mounted the legs on and turned the barrel over I noticed one of the legs was a bit shorter than the other. This gave the smoker the old rocking stool effect. I didn't do anything about at this time as I was going to mount the smoker on some sort of platform so I could roll it around. I figured it would be easier to fabricate something in wood than to heat and bend the metal.

Big Smokey

Bottom Collar



What I did here was to just place the collar on the bottom barrel and center it. Using a nail or scribe, I marked the inside of the collar on the barrel.



OK, here is where you make your money with your saber saw(sawzall). It does an excellent job of cutting out the round holes for all the vent pipe connections.



Once the hole was cut in the top of the bottom barrel for the vent damper, just drilled the holes for it and bolt it in place.

Big Smokey

Vents



I cut a small piece of stove pipe, about 3 inches. (HINT) To get a close measurement place the top barrel in the seperator legs and hold the collar up to the bottom barrel. This will let you get close to the size of stove pipe.



Then I placed the small piece of stove pipe on the damper of the bottom barrel. I used it to hold the top adaptor in place while I marked the holes.



As you see in this photo, I've used the scribe to mark the outside of the vent. I also marked two of the screw holes.



I drilled out two holes and mounted the vent. Then marked and cut out the damper opening. Once again I put the top barrel back on the bottom to check fit the collar.



Here is the final mounting of the vent damper. You will need to do this on the other end of the barrels as well. You can follow these instruction for the other lower vent damper.

Bottom Barrel Legs

Big Smokey

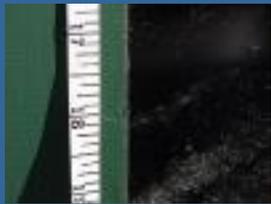


Once I had the top collar installed on the bottom barrel I moved onto the top barrel. I just eye-balled the barrels to get them in a vertical position and marked the holes for the separator legs. I didn't drill out the top barrel at this point, just the bottom legs for now.

Big Smokey Top Barrel Door



OK, the object is to cut out 1/4 of the top barrel as this will be the opening of your smoker. I found it easier to just take duck tape and use it as my outline.



It works out that 18 inches is 1/4 of the barrels diameter. I just marked with my scribe in 3 place across the barrel and lined up my duck tap. Then put the tape for the outer edge right up against the edge of the barrel, see the above photo. As you see in the photo below I just followed the inside edge of the tape with the saw.



You've seen the saber saw go so I'll just show you a photo of the finished opening on the top barrel. I've still not mounted the top barrel to the legs yet. I want to finish the vent first, so lets go see that.

Big Smokey

Smoker Lid



The lid is done just like the opening of the top barrel with some small changes in the measurements. As you can see, I again outlined the area that I want to cut out with the duck tape. This makes it easier to cut a straight line.



You want to make the lid just a little bigger than the opening in the top barrel. I made it 1/2 larger on all 4 sides. So just measure 19 inches around the barrel and then put the tape along these lines. For the sides put the tape on just like the barrel opening and make a mark on the tape 1/2 inch farther out.



I had 3 old brass hinges sitting around so now they are part of the smoker any hinge will work. Just put the lid on the top barrel with the edges set with the 1/2 inch over-hang (you can drill and mount the hinges to the lid first) then mark and drill the holes.

Big Smokey

The Grills



For the grills all I did was get some angle iron from the hardware store and run a piece in the front and the back about an inch below the lid opening. I bolted it in with 3 bolts on each side. I went by the "Grill Outlet here in town, they sell it all, and got some grills. Unfortunately, no one makes a 22x32 inch grill. So I had to take two smaller ones and modify them. This gave Big Smokey a cooking area of 22x30.

You can also see the opening in the top of the cook chamber for the vent. This was later changed to a damper collar. The installation here is the same as the other two holes in the barrels.

Handle & Temp Gauge

Big Smokey



I picked up a temp gauge at Home Depot and a handle at the Grill Outlet. Any place that has gas grills will have the handles. Drill the one inch hole for the temp gauge and keep it as close to the cooking surface as possible. This will keep the gauge as close to the foods real cooking temp and not just give you the temp in the smoker.



I added a cedar shelf much the way I installed the grills. Just bolt some angle iron on the outer sides of the top barrel and screw some cedar to it. Great for setting your beer on! I'll take a closer look at the shelf later on.

Big Smokey

Cedar Shelf



I added a cedar shelf much the way I installed the grills. I just bolted some angle iron on the outer sides of the top barrel and screwed some cedar to it. Great for setting your beer on! Ok maybe some finishing sauce every now and then.



Here is a photo under the shelf. You can see I just tied them together with some zinc plates and screws. You also get a better look at the angle iron I used to hold the shelf on. Notice the notch in the angle iron so it fits up tight on the barrel.

Big Smokey

Wheels



I have a 3 year old daughter, she likes to touch everything. Big Smokey can get very hot. My solution? Put wheels and a base on Big Smokey and roll her outside the fence. So here's what I did. I Picked up 2 stationery wheels and 2 rotating wheels all 3 inches in size. One 2x6x8 pressure treated piece of pine and a pint of redwood stain. I cut two 3 foot pieces and two 1 foot pieces out of the board. Placed the 3 foot pieces side by side and then screw the 1 foot pieces on each end. I then drilled 1/2 inch holes through both pieces of the wood to put bolts for the wheels in (look at the enlarged photo to see what I'm talking about). Then just bolt the two stationery wheels on one end and the two rotating wheels on the other. This lets you steer the smoker like a fork lift. Yeah, if you don't need to make Big Smokey a mobile smoker you can just use some 2x6 pieces of wood screwed to the legs so she will be a little more stable.

You can also see I left a little room at one end of the stand. I am thinking about adding a place to put a gas bottle to use for starting the wood. As of now I'm just using an old barrel to burn my wood down and add it to the smoker.

Big Smokey

Fire Bricks



This is one of the best things you can do for your smoker. I picked up 20 fire bricks at the True Value Hardware store for under \$20.00 and only used 17 of them to line the bottom of the barrel. Keep in mind these are not your standard construction bricks. These babies will with-stand a few thousand degrees. They help in two ways. One, they'll make the bottom of your barral last forever. Two, they help stop heat loss out the bottom of the barrel.

Big Smokey Design

Some Final Notes

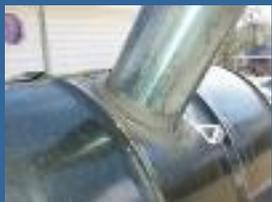
I had some trouble trying to get the smoker up to temperature with just one damper going from the fire box to the smoke chamber. The solution was simple, just add a second vent damper from the fire box to the smoke chamber, I also added a damper to the smoker chamber outlet. I had to order two more damper collars from Vogolzang, which are \$18.00 bucks each. Once I added the second collar I can run the smoker from 140 up to 400. Not that you would want either of these since most of the time you smoke from 180 to 225 and roast about 300 to 325 but its there if you want it.



[Single Stove Pipe](#)



[Dual Collars](#)



[Vent out](#)