

CharCone

The CharCone 24 User Manual

Version 040316 - Check <http://charcone.com/documentation/> for updates.

Thank you for purchasing the CharCone 24 charcoal kiln. All of our products are designed and constructed to give you years of reliable service if used properly and kept adequately maintained. Please read over the material below before assembling or using the product. Be sure to read the **safety cautions** section at the end of this manual that will help you in using the CharCone 24 safely and effectively.

There are also video companions to these instructions illustrating the assembly and most of the recommended uses. Check the disc that this manual came from for a list of video clips or go to our channel on Youtube. Also, check our website <http://charcone.com> for more detailed and up to date information on the CharCone and its many uses.

List of parts

The CharCone 24 is packed in a single box. *Please check that the box has not been damaged and that you have all the parts listed below. The numbers after each item [bold, in brackets,] refer to the illustration below.*



1. **Cone assembly with welded leg brackets**
2. **Rim shield**
3. **Shield handles and hardware**
4. **Legs (3) with hardware pack**
5. **Cone cover**

Accessories and other components

- Manual & instruction sheets disc [B]

Optional Accessories

There are accessories and other products that you can order separately for your CharCone 24. If you have ordered them with the CharCone 24, they may be included in the box (but not pictured above) or come in a separate package.

Assembling the CharCone 24

Attaching the legs

For attaching the legs, you will need the three legs, the included hardware (6 sets), and two wrenches.

1. Remove the rim shield from the cone.
 - a) “Unlock the shield by grabbing both handles and twisting sharply to deactivate the lock mechanism. Look at the tab at the base of the leg brackets on the cone to determine which way to twist.
2. Place the cone open-side down on a flat surface.
3. Line up one of the legs with the leg brackets on the cone so that the holes are in alignment.
4. Push the bolts through the holes and finger-tighten the nuts to the bolts. Using the two wrenches, tighten the nuts securely.
5. Repeat this process with the other two legs.
6. Turn the assembly open-side up so it is resting on the legs. Make sure the legs are well fastened and even.

Attaching the shield handles

1. Line up one of the handles with the handle holes on the shield. Insert the bolts through the handle and the holes and finger-tighten the nuts on the inside of the shield.
2. Fully secure the assembly with wrenches
3. Repeat the procedure with the second handle.

Attaching the shield to the cone

The CharCone 24 rim shield is recommended for all modes of use. However, you may need to remove it for emptying or cleaning or for using the CharCone as a converted charcoal grill. We have designed the shield to be removable for these purposes. A built-in locking mechanism makes the unit easier to lift and transport. Since the locked position lowers the shield slightly so that the top is not the ideal height above the cone rim (for wind current creation), we recommend keeping the shield in the unlocked position during normal operation.

To lock the shield:

1. Place the shield over the cone with the tab slots on the bottom edge.
2. Line the tab slots up with the tabs on the leg brackets and carefully lower the shield over the cone. If you find it difficult to adjust the shield to line up the tabs, gently compress the shield while holding the handles and try again.
3. When the tab slots on the shield are fully seated onto the bracket tabs, firmly and sharply twist the shield clockwise to lock the shield in place.
4. Check to see that the tabs have correctly moved into the holding position on each of the three tab slots.

To unlock the shield:

1. Holding the handles, twist the shield firmly and sharply counter clockwise until the tabs are no longer secured by the shield.

You are now ready to use the CharCone.

Feedstock

Before you can make the charcoal, you have to locate and prepare the stuff you are going to burn. This "stuff" is commonly referred to as **feedstock**. Feedstock management is a critical part of the process and requires some study, practice and the right tools to make sure your burn won't be interrupted or compromised. We have a detailed guide on preparing and managing feedstock <http://charcone.com/yard-brush/>.

Gathering and preparing feedstock is as important as any step in the charcoal making process.

Feedstock is defined as "raw material to supply or fuel a machine or industrial process". It is the term that we use for the stuff that we use to make the charcoal. It can theoretically be just about anything that will burn (organic matter) but for our purposes, it mostly refers to wood of some type, woody plants, and other products that originated from trees or plants.

Having the right type, right size and the right amount of feedstock on hand is the foundation of making charcoal. It may seem like a no-brainer, especially if you have a big brush pile waiting to be burned, but remember, wood reduces to about 1/4-1/5 of its initial weight by becoming charcoal and in terms of volume (of loose brush) about 1/10. So to fill up the CharCone with charcoal (about 15 gallons) you need about 15 cubic feet of brush. That's over 1/2 of a cubic yard. That's seven big barrels full, or 20 5 gallon pails, or 4-5 wheelbarrow loads - a lot.

Running out of feedstock is a common problem. You can't go to the store or call someone up to get more. So planning ahead is essential.

Feedstock Guidelines

Here is what you're looking for:

1. **Thickness** - the CharCone works best with small stuff - twigs and small branches. For a routine burn, anything more than 1 1/2" thick could be a problem. So if you have something bigger (we all do), it has to be split down.
2. **Length** - anywhere from 6"-16" will work but you can only use shorter stuff in the beginning.
3. **Moisture content** - dry wood is essential to keep the burn going. Use green wood (the thinner, the better) sparingly. Live wood typically needs 3-4 months in warm, dry weather to season properly.
4. **Species** - soft resinous wood will burn easier and faster. Do not burn poison ivy vines or other harmful plants.
5. **Processed wood** - any untreated wood such as scraps of a woodworking project or scrap lumber are ideal.
6. **Misc.** - nut shells, pits or another dry woody food waste is ideal
7. **Leaves or pine needles** - use very sparingly and only fully dried
8. **No Nos** - Any painted or treated (any kind of pressure treated) wood

Sourcing your feedstock

Responsibly sourcing your feedstock is extremely important. You are the custodian of all the sequestered carbon on your property (even the wood in your home). If any needs to be recycled on your watch, turn it into charcoal if you can and **uncycle** it. Go <http://charcone.com/save-the-planet/> for more information on this topic

The first place to look is of course in your yard. You probably have a brush pile (or could have one if you didn't get rid of it periodically). If not, start one and add to it any of the items in the list above.

When you've burned through your brush pile, look into other sources:

1. Your neighbor's brush pile
2. Wood scraps from local businesses
3. Make a friend in the landscaping or tree service business
4. Your local forest floor has plenty (make sure you have permission)
5. "Roadkill"

Prepping and sorting the feedstock

Assuming that you have sourced and gathered a sufficient amount of feedstock (see the section above) you can now begin to prepare it. I know, it's tempting, especially for the first burn - "why don't I just prep it as I need it while the fire is burning?".

Don't get caught in that trap. Before you know it you will find yourself looking for lost lop shears, rummaging through your pile for just the right stick, tossing aside more green wood than you expected and eventually trotting around your yard looking for strays. The demands of the burning process don't give you much slack, and the next layer is always and relentlessly only 3-5 minutes away.

A CharCone burn is supposed to be a relaxing, satisfying event and it certainly can be if you are properly prepped. To start out, you need the right tools. Here is a list for both gathering and prepping just about any kind of feedstock:

Essential:

1. Lop shears - the #1 tool for cutting up small branches. Get a *good* pair or two (for a helper).

Recommended:

1. Hand pruners - for smaller stuff
2. Small hand saw - for stuff the loppers can't handle
3. Small ax - for re-splitting thick pieces or small logs

Optional:

1. A small chainsaw - I have a nice little cordless one for this kind of stuff.
2. Splitting tools (wedge, hammer, large ax, slide hammer splitter) - for processing cord wood size logs

And don't forget a good pair of work or gardening gloves. With all of these tools handy there isn't much you can't break down and burn in the CharCone.

Sorting

After all the feedstock is cut, it helps to sort it before you use it or store it for a later burn. You will waste a lot of time rummaging around for just the right stick if you don't. Sort by these factors:

1. **Length** - you will need some pieces of equal length and thickness for the raft (actually, best to set aside the raft in a separate pile) and, of course, longer pieces toward the end.
2. **Thickness** - try to separate three different thicknesses
3. **Dryness** - put any green wood in a separate pile to use sparingly with dry
4. **Weight** - lighter material such as leaves or grass stalks can be used for kindling or at the end of the burn

Taking the time to sort through your cuttings will pay off in the quality of your results and the overall experience of managing the fire. It will also give you a better sense of inventory demands for the next time.

Storing feedstock

Now that your feedstock is gathered, cut and sorted you don't want it to get mucked up. Covering it with a tarp will protect it from weather and pesky critters (including family members). If it needs more seasoning, take the cover off on sunny days.

You're done!

So that's it. You are now ready to get the benefit of all your preparation. Go <http://charcone.com/user-guide-making-charcoal-with-charcone-24/> for a guide on how to make charcoal with the CharCone.

Making charcoal with the CharCone

Below is a step-by-step instruction guide on how to make charcoal in the CharCone using smaller yard brush or other wood waste products. There are companion videos for each step where indicated. Please contact us if you have any questions or comments on these procedures.

CharCone burn checklist:

1. **Feedstock** - You will need 8-12 cubic feet of prepared feedstock to do a complete burn (ending up with a cone almost filled with charcoal). **Do not underestimate this part of the process** - this is quite a lot of stuff and takes a good deal of time to prepare properly. Make sure you have enough feedstock at hand and ready to go or you could find yourself running about late in the burn, looking for more (this seems to happen quite a lot). Either that or you will just have a shorter burn with less charcoal.
2. **Tools** - All of the tools you will be using should be at hand. Once the burn gets going, it will require almost your full attention, and you will not have time (without consequence) to search for needed tools. Go to our store for a complete tool information and checklist.
3. **Water** - Make sure you have your quenching water ready. Also have water (or other beverages) for refreshment.
4. **Food** - if you are planning to do any cooking, all of your food should be prepped and ready to cook.
5. **Safety** - A water hose ready to spray or a fire extinguisher should be nearby. A burn kit or other first aid should be at hand.
6. **Equipment** - Make sure your CharCone is properly assembled, and the rim shield is locked in place. The cap should be tightened over the drain, and the whole system should be on level, solid ground with any combustibles a safe distance away.

Starting the burn and building the raft

It is important to start the charcoal making process from a good base of burning embers and a preheated cone. The raft technique seems to work best to accomplish this. It entails building a stack of smaller (6"-8" L) sticks in the cone to form a "chimney". The raft is then filled with light, very flammable kindling (a little accelerant is permitted here as well). Make sure you read the section below on the layering technique before you start the burn.



When the raft is prepared, and you are sure you have everything else ready (one last check around is always a good idea), light the raft *from the top*. It should catch quickly, burning down but with strong flames coming straight up. Give it a few minutes to get going and when it starts to collapse, give it a little help by compressing it down a bit. Let it burn until at least half of it is starting to ash over and you are ready to add your first layer.

The layering technique - key to making charcoal in the CharCone

Adding the feedstock in many light layers is the secret to making charcoal in an open kiln. It works on a "flame cap" or "flame curtain" principal whereby the fire burns only at the top (3-6") of the fuel stack. The fire on top consumes most of the available oxygen (limited by the design of the kiln) and the wood deeper down does not "combust" but still keeps on "cooking".

It is still over 500F or hotter down there, hot enough to release volatile gasses and water vapor. Those gasses feed and are consumed by the fire as well. This process (the transformation of organic material through elevated temperature and in the absence of oxygen) is called **pyrolysis** and is the essence of how charcoal is made.

The trick is, you have to keep the flame going on top without smothering the fire or even causing it to stall enough to create smoke. That means putting the next layer on at the right time, in the right quantity and of the appropriate weight. It takes a little practice to develop this skill, and there are other factors such as ambient conditions, feedstock moisture levels, etc., but once you get the hang of it, it flows pretty easy and becomes an engaging challenge.

The layering technique in a nutshell: ***Wait until the previous layer starts to ash over, then add the next layer being mindful of keeping the flame burning cleanly.***

One more fact about the fire dynamics: the CharCone is designed to create a horizontal vortex of air currents to recirculate the combustion gasses and smoke back into the fire for cleaner processing and emissions.

It achieves this by the shape, slope and depth of the container and by the rim shield, which acts as windshield but also creates a convection current by heating the air between it and the cone. Ironically, the smokeless result of all this makes it hard to notice the vortex current, but if you look closely, you can see the odd wisp of smoke and even the flames curl inwards.

Adding feedstock and building the mass

Start by tossing on a few smaller sticks that you know will burn well. ***Important: try to arrange the sticks so that they are NOT aligned in parallel and close to each other.*** Stack them crosswise using the same technique as when you built the raft. This creates space all around the feedstock and helps keep the fire from smothering. Gradually keep adding more feedstock until the flames decrease.

Now wait until the flame recovers a bit and then try evening out the layer by filling in the uncovered gaps. Let the flame fully recover and wait until the entire layer has caught fire. When a light layer of ash appears on a good portion of it, start adding the next layer immediately.

Use the smaller, thinner and/or drier feedstock for the first few layers. If you've sorted your feedstock, you can mix in some of the thicker pieces in the middle (they need the higher heat to cook). Always have some small kindling or light tinder on hand to keep the flames going if the fire is struggling or there is excess smoke. If need be, add some oxygen by agitating the char slightly to allow better air flow. You can also remove the drain cap temporarily to let some air in from the bottom. Be sure to cap it quickly when the flame recovers.

Some portions of the char mass may seem to be cooking hotter and have more ash. This may be due to ambient wind currents and is corrected by rotating the CharCone as needed. You also may notice a section (near the top of the mass) where no burning seems to be taking place. Agitating this area slightly and adding thinner feedstock directly over it on the next layer will help even this out.

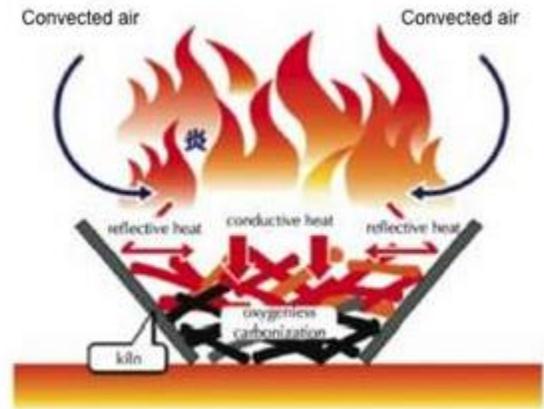
Repeat the layering process until you are ready to end the burn. We recommend stopping when the bowl is no more than three-quarters full. After that the structural elements that help control the flames will not work as efficiently.

Finishing the burn

The burn ends when either you run out of space in the cone, run out of feedstock, or run out of time. You can stop the burn at any time by following the procedure below.

As you get close to the end of the burn, there are a couple of things you can do that will make for a better result. Since the flames will be diminishing (you will not be adding more feedstock), there is much less time for the topmost layers to complete the pyrolysis process. To compensate for this, you can add some very small, dry kindling or even dried leaves to keep the flames going without creating another true layer.

Let the last layer ash more than usual to ensure that it is burned through and that the lower layers have had time to "finish." Have your water ready for the quench.



The quench

Finally, you quench the fire and all of the charcoal to end the process. There are both dry and wet quenching techniques.

The dry quench - In dry quenching, you must seal the entire vessel so no air can get in. Without any oxygen, the entire system will extinguish. This has its advantages in that when cooled, the charcoal will be dry and ready for further processing or its next use. It also eliminates the need for water, a processed resource that adds to the carbon cost of the operation. However, ***we do not recommend the dry quench method***. Dry quenching has one very strong disadvantage - safety. Charcoal in the center of the kiln, even though not visibly on fire is still "burning". If even just a little oxygen is present (a small leak in the system or ending the quench too early), the coals would not be fully extinguished and could easily reignite when exposed to oxygen after emptying. There have been numerous cases of this exact thing happening with backyard kettle grills. Think of the "ashes" in your home fireplace able to reignite a fire the next morning. You can never be sure that a dry quenched fire is completely "out".

The wet quench - If you want to be sure that the fire is completely extinguished, soak it with water. This can be done in two ways; 1) quenching from the top - simply adding water from a hose or watering can, or 2) quenching from the bottom by attaching a hose and letting it fill from the bottom up. There are advantages and disadvantages to each method but either way, you are assured of a complete quench. This disadvantages of wet quenching, in general, is the use of water and fact that the char now is a bit soggy and may have to be dried before further processing. The CharCone is fitted with a drain at the bottom, and a hose adapter is available for bottom quenching. After the wet quench is complete, the drain can be opened and the excess water drained off. Capture it if you can and use it for watering your plants. The pH will be quite high though (10-12) so be sure your soil or plants can tolerate it.

Sorting (optional)

At this point (after the quench) you can sort your batch in a couple of ways and for a couple of different reasons. First, you will want to separate any pieces that are not fully "charcoaled" (pyrolyzed). You can test this, if it is not obvious visually, by trying to break it. If it doesn't snap apart easily, it is probably not fully cooked. Set it aside for inclusion in the next burn or put it on the "fuel pile".

This is the optional part. If you want to reserve some of the charcoal you have just created for use as fuel this, these pieces would be a good choice. The smoked or wood flavoring associated with charcoal cooking usually comes from incompletely burned charcoal like this. Pick out any larger pieces as well if you need it. Larger pieces are more convenient to cook with and less convenient to process (crush) further.

Crushing (optional)

While the charcoal is still in the cone, you have a great opportunity to crush it. If you are intending to mix it in with soil for growing plants or vegetables, this is an important step and will need to be done eventually. Of all the steps in making biochar, this is one that does not have too many easy options. You need to get the particle size down to a uniform 1/8" or less ideally, and that is not easy at all. So while you have it in the cone (think mortar), get an old baseball bat (think pestle) and pound away. It can be tedious work, but it doesn't take that long, is great upper body exercise, and I actually think it's fun.

Removal and storage

After quenching, draining and optionally crushing the charcoal, you are now ready to remove it from the cone. First, unlock the rim shield and remove it. Method #1 - lay out a 9' x 9' tarp in front of the cone. Carefully tip the cone so that it spills out onto the tarp shovel out all of the charcoal onto the tarp. Spread it out for drying, cover it up for later processing or remove it to another container. Method #2 - simply shove the charcoal out of the cone and into a metal pail (you will need a 10-20 gallon pail) with a tight closing lid. This is excellent long-term storage but also you will now be 100% sure that the fire is OUT, and the container or anything else will not catch fire.

Testing

If you are planning to use your charcoal as a soil amendment, then you should consider testing it before you add it to anything that you want to grow (or eat). There are some simple field tests for biochar (what charcoal is called if it is intended to be sequestered or for agricultural use) and some more complex tests if the use will be more critical to health or safety. If your feedstock was good, clean woody stuff and it was burned at a high enough temperature and for a long enough time, most harmful components will have been removed. If you are not sure, have it tested or just put it

in the trash and send it to the landfill. There is more information on testing and testing resources [here](#) (Biochar) and [here](#) (Resources).

Charging or conditioning your charcoal

If you've made sure that your charcoal is good to go and it's crushed up nicely, you may consider "charging" it before it goes into the soil. Charging charcoal is the process of conditioning it with additives that both utilize its unique structural properties and maximize the benefits it can bring to the soil and what grows in it.

Charcoal has a very distinct and important structural property. It has a microscopic honeycomb structure that vastly increases its surface area and creates a huge potential for absorbing minerals and nutrients and providing shelter to tiny bacteria, fungi and other life forms that create healthy soil and help plants grow.

Processed charcoal is like an empty vessel waiting to be filled. If added directly to the soil, it might take in existing nutrients and water and inhibit plant growth. Charging the char with compost or other ingredients (even fertilizer) lets it start giving back to the soil much quicker. There are hundreds of articles, studies, and tests of doing this and it is a fascinating topic indeed. [Here is a good one.](#)

You can simply add your crushed charcoal to some high-quality compost and let it "cure" for a couple of weeks. Or you can get fancy and add things like rock dust, sea minerals, beneficial microorganisms, root fungal cultures, etc. All have been used successfully as biochar enhancements. In this way, you can create a "designer biochar" tailored for your specific needs or preferences.

More about using charcoal as a soil amendment to enhance plant growth <http://charcone.com/biochar/>.

Cooking with the CharCone

Fire and food

Cooking is an opportunistic benefit of using the CharCone. The primary intended use is to make charcoal. However, there is something about an open, contained wood fire that inspires cooking. It may be a primal instinct to make full use of a rare resource, or a real need to prepare or preserve food. Either way, cooking with a live (wood) fire is still widely practiced and enjoyed in the modern world.

When using the CharCone, the opportunity to cook is all too obvious, and it only takes a simple tool and a little practice to take advantage. So why not make the most of it (if you have the instinct)?

If you're cooking, you're not burning

There are two good reasons to cook something while making charcoal with the CharCone:

1. To enjoy some delicious fire-roasted food
2. To comply with local burning ordinances

Open burning ordinances (usually at the municipal level but more and more regional and statewide as well) are the main reason there isn't more brush and yard waste burned. And for good reason. Besides the obvious danger of fire spreading, there is usually a lot of nasty smoke blowing wherever the wind takes it. It's a nuisance for the neighbors, and the inefficient low-temp fire creates lots of gasses and particles that end up as pollutants in the atmosphere.

However, if you use the CharCone (or something else like it) you can create a very hot (1500F) *smokeless* fire in a safe container and that will cause a lot fewer problems. What's more, if you cook even the smallest thing (e.g. a hot dog or marshmallow) you can say you were having a barbecue, not burning brush and most local officials would agree. So, no smoke + no danger + a little food = a lot fewer problems.

The recipe:

Take some food like a hot dog or marshmallow or a pepper and fasten it to a stick (from your brush pile?), a skewer, or a specialized tool and hold it to the fire until cooked.

Cooking tools & accessories

There are three basic methods of CharCone cooking:

1. **Campfire style** - using long-handled tools to cook directly over the fire.
2. **Accessorized** - using built-in accessories such as a grill, rotisserie, or hanging pot.
3. **Conversion** - converting the CharCone to a charcoal fuel cooker, either a grill or smoker

Tools for campfire style cooking

Campfire style is the simplest and easiest, and there are a surprising amount of tools available (even for baking bread!). Direct cooking has to be done carefully though as the CharCone produces a very hot fire and there are a lot of sooty particles in the live flames (these particles get recirculated into the fire and burned). Examples of campfire style cooking tools are long-handled grill baskets, popcorn poppers, and chestnut roasters, hot dog, and marshmallow forks, and pie irons. Go to our online store for a complete list of campfire cooking tools and where to buy them.

Custom cooking accessories

The CharCone comes with a built-in port that accepts cooking accessories. The [Auspit](#), a battery-operated rotisserie system is available from one of our sales partners. A swing-out grill that we are producing will be available soon. We have more new products under development that will continue to extend the utility and cooking possibilities of the CharCone.

Converting the CharCone

To a grill

Although it is not the primary function of the CharCone, it was designed to be used as a charcoal burning cooker as well. There are custom brackets available that make the conversion to a grill very easy.

To a smoker

The same configuration can be adapted to use as a low-temp smoker as well. Please see the section below for more details.

Using the CharCone as a charcoal grill

To give the CharCone more versatility, we designed it so that it could be converted into a charcoal grill. Since the dimensions of the CharCone are very similar to a Weber-style kettle grill, it is possible - with a set of conversion brackets that we sell - to use both of the grill grates and cover from a Weber 22" kettle grill in the CharCone. You won't be able to control the temperature as well (kettle grills have a built-in damper system for that) or remove the ash as easily, but otherwise, it will perform the same.

There are two methods for using the CharCone as a converted grill. Place the optional conversion bracket set in the cone and use one of the following methods:

1. **Semi-burn.** Put the charcoal grate (bottom) in place on the lower bracket and build a raft on top of it. Light it and let it burn down like normal (go here for details and instructions), put the cooking grate back in place and grill away.
2. **Classic.** Simply use the converted CharCone like a normal grill. Place coals on the charcoal grate and light them. If possible, use some (dried) coals from a previous burn.

Also, all after-market grill cooking grates plus some other Weber-ready accessories (such as a pizza oven and rotisserie system) will work great in the CharCone. See details on the grill conversion here.

Using the CharCone as a smoker

Smoked meat is the essence of true barbecue. It's not just the smoky flavor (that is a minor factor) but the way in which it's cooked that makes it so distinctive and delicious.

More important is time and temperature. "Low and slow" - low temperature (225-300F) and long cooking times (up to 12 hours) are the real pillars of smoked barbecue. You can do this anywhere (even in your home oven) but the results seem to be better when cooked outdoors, using live fire, in a specialized piece of equipment.

Using the Weber conversion kit (described above) you only need to use a different fire management technique and add a water pan to turn your CharCone into a smoker. It will work a lot like the Weber Smokey Mountain cooker or a Big Green Egg (Kamado style cooker). One advantage of using this method of cooking is that it uses very little charcoal. In fact, you would start out by burning down a "raft" just like you were doing a charcoal burn so you wouldn't even need any charcoal to start.

Directions:

Remove the drain cap from the bottom of the cone. Build a raft and conduct a normal burn for 1/2-1 hour until you have built up enough coals for your needs (this depends on what you will be cooking). Install the grill conversion brackets and put the cooking grill in place. Place your meat on the cooking grate, place the cover on the cone and monitor your temperature as you would for any other cooker. Note: the CharCone was not designed primarily as a smoker and may not attain and maintain ideal cooking temperatures as well as other systems. We recommend [this accessory](#) for better performance.

Maintenance

Care of the CharCone 24 is simple and inexpensive but should be done regularly to ensure maximizing the product life.

Cleaning

The CharCone 24 comes to you with all surfaces either painted or lightly coated with mineral oil (only the inside surface of the cone) and no initial cleaning or other preparation is necessary.

After each use and before extended storage:

1. After removing all of the charcoal or ash from your burn, hose down the inside of the cone and dry thoroughly with a paper or cloth towel. You may coat it lightly with mineral or vegetable oil to prevent oxidation between uses.
2. Wipe any dirt or other debris from all surfaces with a soft cloth.
3. If you used the drain, make sure that the threads are dry on both the cap and drain pipe before replacing the cap. It is a good idea to coat the threads lightly with mineral oil as well.
4. Place the included cover over the cone and shield to prevent water from accumulating in the cone between uses.

The CharCone can be stored outdoors if covered properly although we recommend bringing it indoors for long-term storage or long intervals between burns.

Touching up the paint

The CharCone comes to you fully protected with a high-quality powder coating finish for the legs and shield and a high-temperature powder coating or specialty high-temperature paint treatment for the cone. If you need to touch up any of the parts, please contact us to find the right product and color.

Rust

Most of the parts on the CharCone 24 coated to resist rust. The inside of the cone (not treated or coated) might show small rust spots (this is the nature of the metal) that can be buffed out easily with some light Scotch-Brite pads or steel wool or lightly sanded. Be sure to cover the cone between uses and rub untreated surfaces with mineral oil to help prevent rusting

Specifications

Cone diameter (top): 24"

Cone height/depth: 15"

Cone material: Mild steel - 12 gauge

Cone coating: High temp powder or paint

Cone volume: 22.5 gallons

Leg height: 15"

Leg material: mild steel - 12 gauge

Leg coating: powder coat

Drain: 3" of 3/4" steel pipe

Shield diameter: 25.5"

Shield height: 12"
Shield material: mild steel
Shield coating: powder coat

Total weight with shield: 60 lbs.

Hardware required: 8 each ¼-20 ¾" bolts and nuts

Drain cap: steel ¾ cap

Assembled width with shield: 26.5"
Assembled height without shield: 26.5"
Assembled height with shield: 28.5"

Shipping weight: 69 lbs.
Shipping location: Easthampton, MA

Tools required for assembly: two wrenches, pliers or

Supporting Documents

These documents have been created to make your charcoal kiln experience easier, more effective, safer and more enjoyable. Please check our website for updates and recent additions: <http://charcone.com/documentation/>

Safety precautions

The CharCone 24 is a product that will be used outdoors in conjunction with live fire and high heat. Safety awareness and proper safety procedures should be followed at all times while in use.

Fire, heat and burn hazard:

Since you will need a large heat source to use the CharCone 24, special precautions must be taken to prevent harm to yourself, other people, the environment, property, and the equipment.

1. Make sure you have properly prepared your “pit” area where the fuel will be burned. There should not be any easily combustible material either directly under the burning area or in nearby proximity. Keep all combustible material a safe distance from the fire at all times.
2. Use only appropriate fuel sources (as described in this manual) for your heat source. Use only approved starter fluid (or other methods) to start the fire only. Do not add starter fluid, gasoline or any other highly flammable material to the fire once it has started.
3. Tend the fire continuously and carefully. Never leave sight of the live fire. Do not add more fuel than needed.
4. Be aware of fat dripping from any food cooking. Hot fat can easily ignite if it comes in contact with a live flame. If you have a fat collection device or system, make sure collected or excess fat is removed periodically and not let to sit hot by the heat.
5. Do not wear very loose fitted clothing such as a long dress or robe while tending the fire.
6. Keep a properly rated and sized fire extinguisher handy for emergency use.
7. Use care when handling any part of the CharCone 24 or anything that has been close to the heat source.
8. Make sure the fire has been completely extinguished before storing or processing charcoal that has been created. Do not leave unextinguished charcoal unattended for more than 15 minutes.

Warranty, Replacement, Liability

LIMITED WARRANTY. Rasa Incorporated, d/b/a/ SpitJack (the “Company”) warrants that (a) its CharCone 24 (the “Product”) will perform substantially in accordance with the accompanying written materials for a period of one year from the date of receipt and (b) that the components of the Product will be free from defects in materials and workmanship under normal use and service for a period of one (1) year. In the event applicable law imposes any implied warranties, the implied warranty period is limited to one year (365 days) from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to you. This warranty is valid only for Product (s) purchased directly from CharCone or one of its authorized dealers.

CUSTOMER REMEDIES. The Company’s and its suppliers’ entire liability and your exclusive remedy shall be, at the Company’s option, either (a) return of the price paid for the Product, or (b) repair or replacement of the Product that does not meet this Limited Warranty and which is returned to the Company with a copy of your receipt. This Limited Warranty is void if the failure of the Product has resulted from accident, abuse, or misapplication. Any replacement Product will be warranted for the remainder of the original warranty period or thirty (30) days, whichever is longer.

NO OTHER WARRANTIES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THE COMPANY, AND ITS SUPPLIERS DISCLAIM ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE PRODUCT AND ANY RELATED OR ACCOMPANYING WRITTEN MATERIALS. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION.

NO LIABILITY FOR DAMAGES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL THE COMPANY OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES FOR PERSONAL INJURY, LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT, EVEN IF THE COMPANY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY CASE, THE COMPANY’S AND ITS SUPPLIERS’ ENTIRE LIABILITY UNDER ANY PROVISION OF THIS AGREEMENT SHALL BE LIMITED TO THE AMOUNT ACTUALLY PAID BY YOU FOR THE PRODUCT. BECAUSE SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.