

The C-Head® Owner's Manual

Contents of this package

The basic C-Head will include the following items.

Check the contents against this packing list.

1. C-Head housing; includes cabinet, lid and toilet seat.
2. Solid waste collection bucket
3. Common plastic gallon jug (wide mouth jug on international sales)
4. A 12-foot section of plastic ventilation hose and PVC fittings
5. Churn handle
6. Sealing lid
7. Clear pinch-grip jar for measuring medium



Not included are the following items.

1. Active or passive ventilation mechanism (12-volt fan or solar vent or Dorade cowling)
2. Composting medium

The C-Head is heavy and smooth sided. Carry it with care. When moving your C-Head, insert your hand into the front viewing slot or under the front bottom edge of the housing and place your other hand at the back corner with your fingers locked under the lip on the housing lid.

How your C-Head works

Understanding how your C-Head works will help you with the installation. Briefly, the C-Head is comprised of three main components:

1. The housing; cabinet, lid and toilet seat
2. The pee and poo collection containers with the churn handle
3. The ventilation hose and connecting fittings.

Your C-Head toilet separates the liquid and solid waste and then dehydrates and initiates composting of the solid waste by wicking the surface moisture from the solid waste using a dry medium such as sawdust, fine shavings, peat moss or coconut coir. Initially the solid waste is collected inside the C-Head housing unit in a modified plastic bucket where it is processed by being rolled through the medium.

When the collection container becomes full (and this is determined by how difficult it is to turn the churn handle or how moist the contents become), the contents should be emptied directly onto a composting mound or tower, or into a solar dehydrator, or transferred to a separate 5-gallon container for storage until it can be disposed of or managed later. If the waste is disposed of, it should be treated with ½-cup pure chlorine bleach and the bucket capped off with a secure locking lid and disposed of using the local trash disposal system. Cheap, sturdy buckets and locking lids are available at Home Depot.

Locking lid



Snap on lid



Use of the C-Head in a Shower Stall or Wet Bath

If you are installing your C-Head inside a shower stall or where water will be splashed on it from showering and it does not have the shower seal option installed, then it is best to keep it covered while you are showering. A fitted fabric cover made from vinyl or Sunbrella type material is the best option, but a plastic bag can be used also. This is to prevent water getting inside and into the solid waste bucket specifically. If you choose to leave it uncovered while showering, it should be wiped down after getting wet to prevent mildew.



Composting Mediums



There are many substances that are suitable as a composting medium: sawdust, coconut coir, peat moss, wood shavings, pine pellets, corncob cat litter granules or pellets, hamster bedding, etc.

For all *churning versions* of my toilets, my current favorite by far is Aspen Pet Bedding made by Alphapet and is available at Walmart, Petsmart and Petco for around \$3.50. It comes in small bales and a single bale will last a month for two people using the toilet daily. Aspen trees are deciduous and do not inhibit composting as much as coniferous wood.



For *churnless versions*, where you add medium to cover the waste after each use, I recommend fine pine shavings. This is available at Tractor Supply and other farm supply stores. A 2.5 cubic foot bale costs \$6.00 and will easily last a year or more

with daily use. Almost any medium will work with the churnless versions. You should experiment with mediums to find what works best for you.



Pine Pellets

Pelletized pine sawdust is a good medium to have for incidents where the solid waste becomes damp, either from urine getting into it or diarrhea. Add pellets to the mix to dry out the medium so that it can be easily poured out. It is available in small bags as cat litter and it is very inexpensive and easy to store.

Measuring Canister

A 64 oz. clear plastic pinch-grip jar is included with your order. Use three canisters of medium to charge the solid waste collection bucket. Add more medium later if needed. Use a small plastic cup or flour scoop to fill up the quart jars and store them near the toilet. The mouth of these jars fits nicely inside the opening of the collection bucket, minimizing spillage. These jars are available at Walmart or online or as snack or nut jars at your local grocery or big box store if you want to buy more for storing and measuring your medium. I prefer them over using gallon plastic bags, but they work fine too.



Ventilation

How much you intend to use your C-Head and your specific application will help you determine if you should ventilate it.

Weekends– If you are only going to be using your C-Head on week-ends or for just a week at a time, then you almost certainly do not need to install a ventilation system. As a rule, as long as the waste is covered with medium, the smell will be mitigated, and the dehydration and composting process will proceed without active ventilation. It depends on the temperature and humidity of the area you are in, as well. There may be some slightly noticeable musty smell when you open the toilet for use. This can be more noticeable if the weather is very humid or if you must keep the bathroom closed. There should never be any type of sewage smell. Sewage smell is an indication that urine is getting mixed with the solid waste.

Weeks to Months– If you plan on taking seasonal extended trips and using the C-Head on a more consistent basis, then you may need to install a ventilation system. It will depend on how much of a nuisance the buildup of condensation is. If you are using it in an area where there is livestock or a restaurant nearby or you keep fresh fruit and vegetables on the counter constantly, you may find that ventilation helps to control insects.

Full time Liveaboards– If you are going to be using your C-Head daily and continuously, then you may want to install the system in a method that ventilates both the main housing and the disposable container. One method is to daisy-chain the system with the ventilation hose running from the housing to the adapter hood and then to the solar vent. See the section on Ventilation for drawings of variations on venting your toilet.

Installing your C-Head

There are several ways to install the C-Head system. The C-Head should be installed with its back close to or against a wall or a vertical surface, to help support the toilet seat lid when it is open.

Homesteading or “off the grid” living - If you are using the C-Head system at your homestead off the grid, or in a vacation cabin, usually the best way to install the toilet is to use a “docking” cabinet. It can be as simple as concrete blocks and shelving boards or as sophisticated and attractive as the owner desires.

The docking cabinet allows you to anchor the toilet to the wall instead of the floor. It holds needed accessories and canisters of medium and can house the ventilation system, if desired. The ventilation hose

can be run either through the floor on dwellings with basements or of pier and beam construction, or through the wall to the outside, or into a stack going up to the ceiling and out the roof. (Please see the last page of this manual for more information on the docking cabinet.)

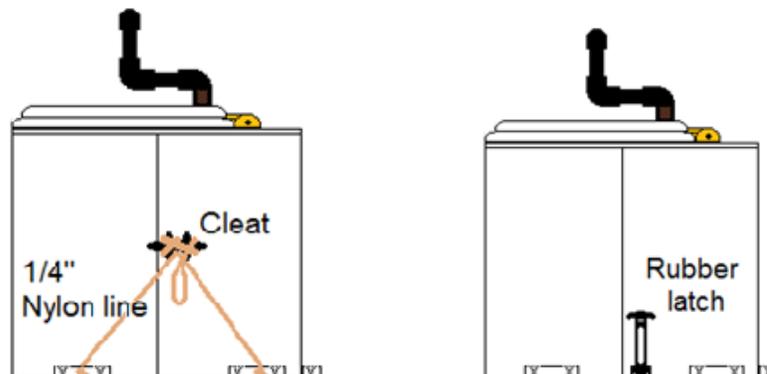


Other Anchoring Methods

By law, even though the C-Head is designed to be portable, it must be anchored when used in a boat to secure it against spills due to heavy seas or collision and it is wise to anchor it in any application. For boats, RVs, tiny houses and other mobile applications, you will usually need to anchor the toilet to the floor however anchoring it to the back wall with brackets will work. Install the C-Head housing first. It will be easier to handle your C-Head by removing the housing lid assembly before installing the housing. Do this by removing the three screws in the *front* half of the two hinges (6 screws total) and carefully lift off the housing lid assembly. Set it aside being careful not to damage the urine diverting funnel. You will first have to determine where your C-Head will fit in your boat, RV, camper, etc.

If you need to remove your C-Head regularly to access some panel or clean or use in some other application, you will want to use some kind of releasing anchoring system. In this case, the C-Head should be secured from shifting laterally with either angle metal, plastic or wood brackets that surround the base of the housing and are attached to the floor. The unit is held down using a tie-down or latch system to prevent it from lifting up and out of the bracketed area. The C-Head comes with six to eight rubber non-skid feet that may suffice instead of using brackets. The installation will dictate whether brackets are needed. A tie-down will still be required. The rubber feet may be easily removed if needed by simply peeling them off the base.

Another method that has more of a nautical appeal would be cleat and line. Here a loop of line is attached to the cabin sole and fed through the hole in a cleat attached to the side of the housing (use a 1/2" back-up block inside) and then tied off with a figure eight. Both are quick and easy ways to detach the entire housing and support the idea of its "portability". Portable toilets, constructed of rigid materials and designed to have the waste manually carried away, do not require certification by the USCG and are an acceptable waste management system by law enforcement on almost all bodies of water in the USA.



You can also bolt the toilet housing directly to the floor where feasible.

Anchoring to fiberglass – Remove the housing lid assembly as described above. Invert the housing and *remove the rubber pads* on the bottom of the toilet so that you have two hard surfaces mating. Drill a 9/32-inch diameter hole in the two back corners. Make them 1 1/2 inches in from

the back edge and 1 inch in from the side. Drill a 9/32-inch diameter hole in the bottom at the mid bend in the side of the housing 1 inch in from the bend. Set the housing in place and saturate the end of a Q-tip with a black marker and insert the Q-tip into the holes marking the location of the holes on the fiberglass surface. Make a circular motion with the Q-tip to make a good indication of exactly where the hole needs to be drilled.

If you cannot determine what is directly under the fiberglass, drill a hole in the four points you have marked on the fiberglass no more than 1/4 inch deep using a 3/16-inch diameter drill bit. With fiberglass, be sure to shave away the edge of the hole with a counter sink bit, just deep enough to remove the *gelcoat only*. This will prevent spider cracks when the bolt taps into the hole. Put a 3/4-inch long, 1/4-inch diameter stainless steel, machine screw or bolt in each of the four corner holes. Self-tap the screw into each hole. Do not overtighten.

If you can access the underside of the fiberglass, drill a 1/4- inch hole through the fiberglass. Use however long of a screw that is needed to back the fiberglass with washers and nuts on the underside.

Anchoring to a Wooden Floor – Follow the directions above but use a 1/4-inch wood screw with a fender washer long enough to anchor the toilet securely to the floor or drill through and anchor from the bottom side if possible, using back up washers and nuts.

Ventilation

Ventilation sucks! *I recommend that you do not vent your toilet until you determine that it is necessary.* Ventilation is a complicated issue; complicated by the immense variation of applications. **Ventilation is not needed for odor control as is the case with non-urine diverting systems.** Ventilation is usually only necessary if you are having problems with the build-up of condensation inside the toilet, or if you want to use a No Pest strip continuously. If condensation is the problem, the simplest solution to control it is to just empty and recharge the solid waste collection container when condensation develops which is normally near the time to empty anyway. Condensation is usually only a problem as the container nears its maximum capacity.

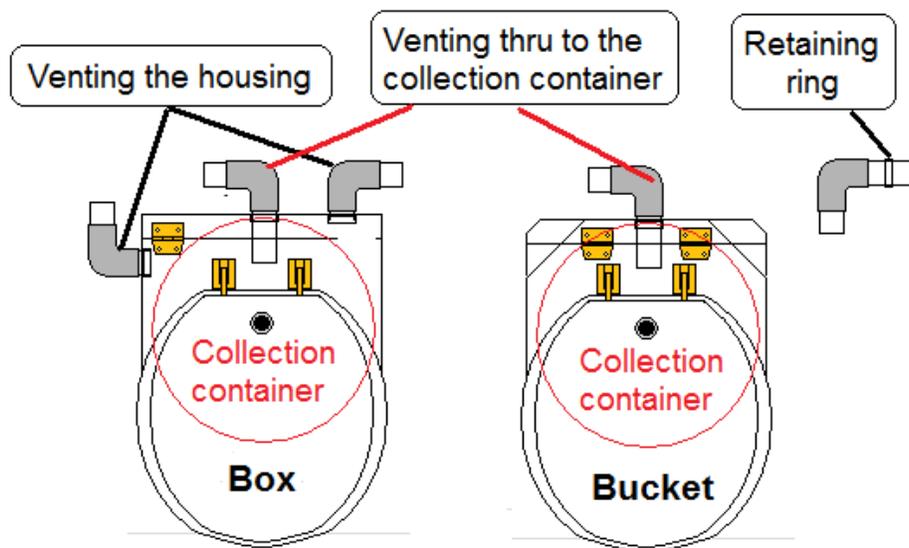
If you are installing your C-Head in an RV, camper or horse trailer, we do not recommend ventilating the toilet. There are several things that can create a negative pressure inside the cabin of an RV or camper and this will pull air into the living space from any source available. If you have installed a ventilation system, then negative pressure may overpower your fan and draw air into the room through the toilet. This will create a musty smell. If you do install a ventilation system, the fan must be powerful enough to withstand a negative pressure situation or some kind of damper must be installed.

You can ventilate the C-Head housing two ways; either through just the housing, or through the housing and into the back of the collection container.

Venting through just the housing - First, remove the liquid and solid waste collection containers. Next remove the housing lid assembly by removing the 6 screws in the front half of the two hinges (3 on each side) and lifting the housing lid assembly off the housing, setting it carefully and safely aside. Now follow these step by step instructions.

1. Determine where you want to attach the ventilation hose on the housing; the back or side. Cut a 1 3/8-inch hole 5- inches down from the top edge of the housing lid and two inches away from any corner.
2. Install the supplied elbow and nipple pipe by inserting it into the vent hole and sliding the retaining ring over the nipple pipe to secure it. The nipple pipe should be cut flush with the retaining ring inside of the housing.) The elbow should rotate as needed.
3. Re-install the solid waste collection containers inside the housing. Insert an empty gallon water jug so that it is centered and the handle towards the back with one of the flat sides visible through the sight window.
4. Reinstall the housing lid assembly by screwing it back in place.

Ventilating through the back and sides



Venting through the housing and into the collection container -

1. Determine the location of the C-Head. The C-Head needs to be installed with its back close to a wall or a vertical surface to help support the toilet seat lid when it is open, but far enough away to allow for the ventilation elbow fixture.
2. To ventilate the system through the collection container, you will have to cut the hole in the back of the C-Head housing *in the center* from the left and right side. In the standard height models (18 inches) cut a 1 3/8-inch diameter hole centered exactly 4 1/2-inches down from the top edge of the housing lid (not the toilet seat lid!).
3. Temporarily install the collection bucket and make sure that it is seated correctly to the back. Close the housing lid to secure the collection container in place. Drill a hole into the back of the collection container using the same 1 3/8-inch hole-saw, using the hole in the housing as your guide. **Do not cut through the collection container bucket, but only allow the 1/4-inch pilot bit to puncture the bucket.**
4. Remove the collection container and using the pilot hole you just made, cut a larger hole in the back of the collection container using a 1 3/4-inch hole saw.

5. Install the supplied elbow (with the long nipple) by inserting the long end into the vent hole from the back and sliding the retaining ring over it to secure it to the housing. The elbow should rotate as needed to align with the vent hose.
6. Re-install the collection containers inside the housing. Insert an empty gallon water jug so that it is centered and the handle towards the back with one of the flat sides visible through the sight window.
7. Close the housing lid carefully.
8. Note: You can install the vent hose in the side of the toilet using the same procedure as described for the back except you will need to leave the retaining ring off and you will need to remove the nipple each time you want to remove the bucket for emptying.

Attaching the Ventilation hoses

1. Attach the ventilation hose onto the elbow that vents the toilet housing.
2. Run the hose to a ventilating mechanism. The location and type of ventilation installation are at your discretion. Contact us for advice if you cannot come up with a system.

Venting outside the vessel or vehicle

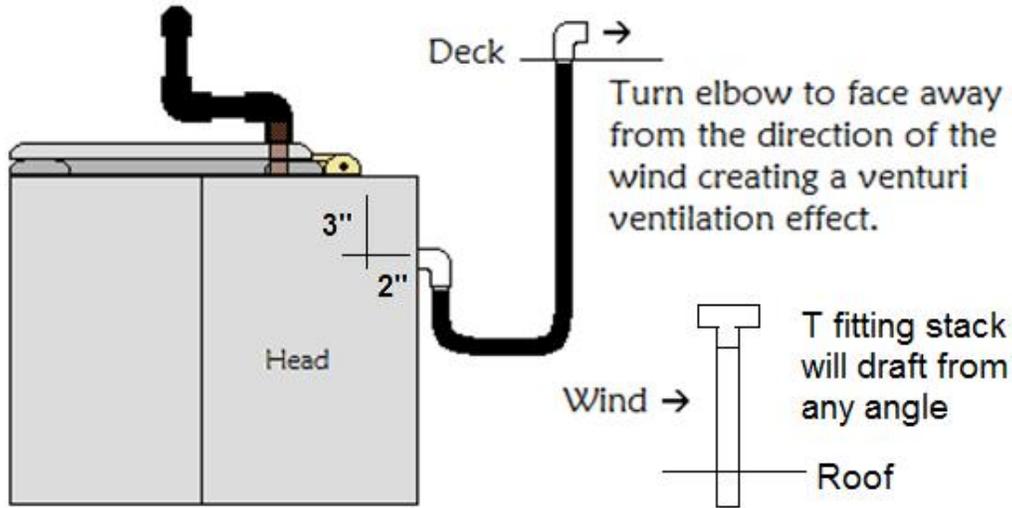
Since every installation is different and every owner has different skills and preferences, each ventilation system will have to be custom designed by the owners. In short, ventilate the C-Head housing by running the ventilation hose from the back or side of the housing to either the inside of an on-deck locker (such as a sail locker) or through the deck or coach roof. If you vent to a locker then you will need to actively ventilate the system using a small 12-volt electric mini fan.

Google “mini 12-volt fans” and several sources will come up. Expect to pay between six and twenty dollars for a fan of this size. For a boat, you shouldn’t need one any larger than 2 ½ inches by 2 ½ inches. It does not need to move a large volume of air so choose one that has low wattage and low noise. If you vent the head through the deck or coach roof, then you have the option of:

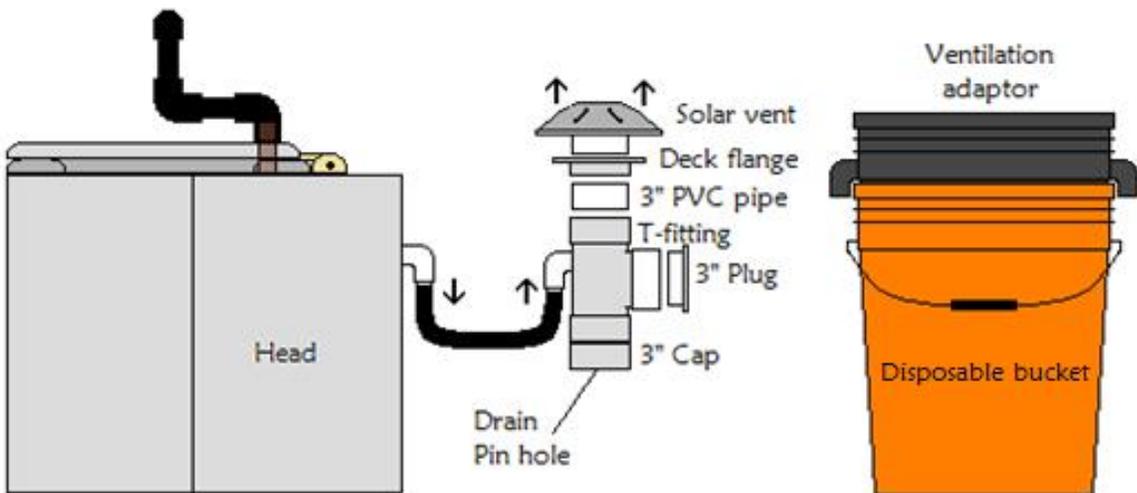
1. Active ventilation using a 12-volt mini fan
2. Active ventilation using a solar vent
3. Passive ventilation using a dorade box or cowling (works best for vessels that are continuously at anchor and have some breezes or wind)

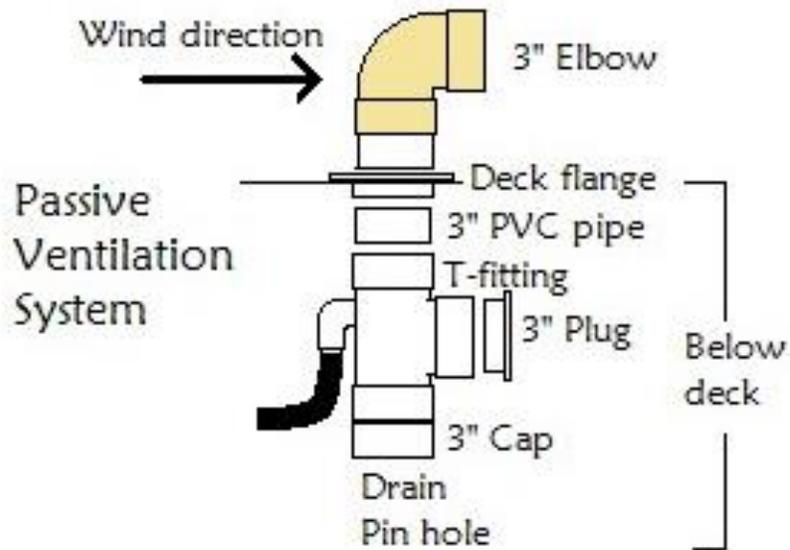
Active ventilation systems force air through the system using a fan. Passive systems use the venturi effect to draft air through the system and require only a slight breeze to operate.

Passive Ventilation System



Personally, I like the solar vent since it is virtually maintenance free and does not contribute to drawing down your batteries. You will however need to replace the solar vent with a cap when off shore in foul weather and you may need to replace it with a cowl when the winds are strong at anchor. Strong winds (30 knots sustained) can sometimes overpower the fan in a solar vent and cause the air to flow backwards, filling the cabin with a musty smell. Replacing it with a deck cap or dorade type cowl or PVC elbow will instantly ventilate the cabin and remove the smell. A standard 3-inch PVC elbow with a short 6-inch section of pipe attached will fit perfectly into the flange provided by Nicro with their solar deck vents. We have used this method successfully for two years.





You do not need to actively ventilate the disposable container to avoid odor. Once the waste has gone through the initial processing in the collection container, it will not smell like sewage after that, but it will smell musty when the container is opened. Simply clip the adaptor hood over the 5-gallon bucket so that it can breathe and that will keep the bugs out and the musty smell in. Accumulated waste from the collection container can be transferred into the disposable container continuously until the disposable container is full.

Example of an Exterior Ventilation System (Home or Cabin)

Photo shows ventilation stack outside home using three-inch PVC sewer pipe and a solar vent on top with battery backup. Flared end at the end of a three-inch PVC sewer pipe will accommodate a Nicro day/night solar vent. One-inch PVC vent pipe exiting the wall of the house at the bathroom, running to the sewer pipe, sloped to drain condensation. Three-inch pipe is set in concrete inside a concrete block with drainage holes in the bottom. The stack is painted black to assist in ventilation but heating the air and causing it to rise naturally to the top.



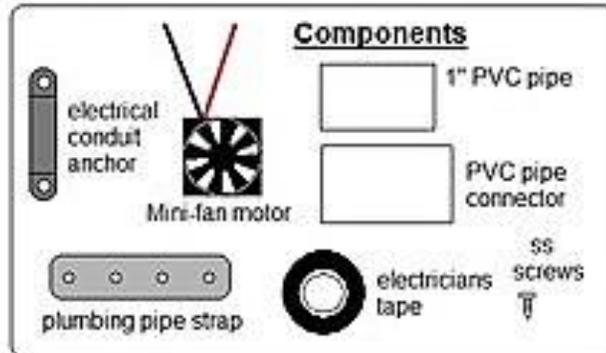
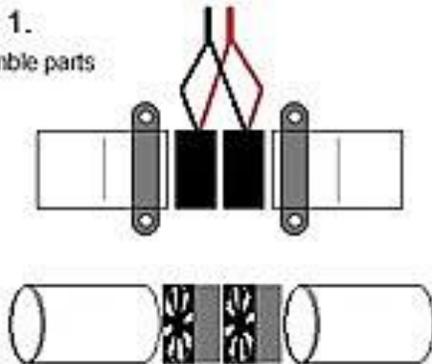
Using an inline 12-volt positive pressure ventilation system

This unit is run using a 12-volt battery that is charged by a solar panel and monitor. The panels and monitors are available from any RV or boating store. The mini fans or muffin fans are available online or at electronics or computer stores. **CAUTION:** Always consult a certified electrician before installing any electrical components in your C-Head ventilation system.

C-Head - Inline 12-volt Positive Pressure Ventilation System

Step 1.

Assemble parts



Step 2.

Make sure that the fans are blowing in the same direction



Align PVC connectors and fan motors

Step 4.



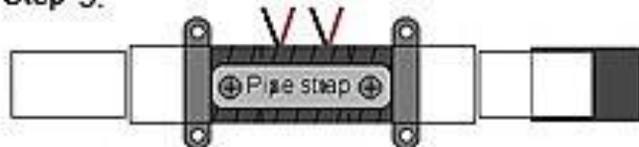
Wrap assembly with electricians tape

Step 3.



Electricians tape on all four sides

Step 5.



Attach pipe strap on one (bulkhead mount) or two sides

Do not screw into mini-fan motors

Can Men Stand to Pee?

As with any composting, moldering or desiccating head, separation of the liquid and solid waste is imperative. The C-Head is designed to make body alignment as easy as possible. For best results, men should always use the C-Head in the sitting position. You can however use the toilet standing if you use a Harbor Freight “Pittsburgh” brand transmission funnel. You can insert the end in the hole in the urine funnel and it will stay in place so that you can use it hands free. Other brands may work as well.

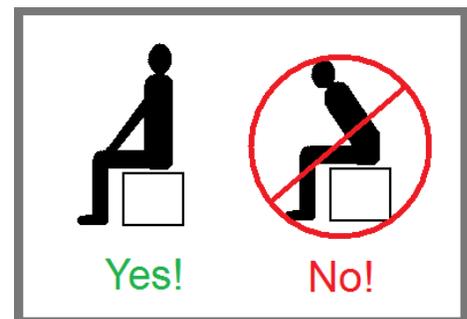
In the case of women, the first uses of the C-Head may require special attention, but after a few uses, you should develop a feel for proper alignment and you will become more comfortable and confident as time passes. If after a time you find that it is difficult to keep urine out of the solids, you may want to use the “Lady’s maid” as we call it. It is an appliance that you hold in place while urinating. You don’t have to hold it against your body for it to work and it does work well. Rinse it off after using and hang it on a hook. It is available on our website or you can make on yourself easily. It is a “Mainstay” brand nylon ladle available at Walmart for 89 cents. Drill a 1-inch hole in the center of the bottom. Easy Peesy!



When urinating (both men and women), you should hear a trickle. If you don’t, be sure to check the level of the gallon jug. The sound diminishes as the jug becomes full!

Always sit upright on the toilet seat. Don’t lean forward. Raise your feet using a stool if you prefer to use a squatting method.

The opening to the collection container is designed for this type of seating arrangement. If some solid waste is left on the sides of the opening, simply wipe it off with a small piece of toilet paper and discard the paper in the hole or a trash receptacle. Spray your favorite non-caustic household cleaner into the funnel and around the rim occasionally to sanitize the surfaces. You may also opt to use a deodorizer such as Zepp or Febreze occasionally. Simply spray a squirt or two inside the funnel prior to sitting down and you will be amazed at how effective it is at making the toilet smell nice.



Toilet paper can be discarded inside the toilet, however this will cause the toilet to fill up faster. If you discard it in the toilet, use the least amount possible. Better yet, use small squares of paper towels or flushable wipes. It is better to discard your toilet paper in a small waste basket lined with plastic grocery bags and covered with a lid just as many people do with a holding tank system. C-Head is the only urine diverting compact toilet that can accommodate flushable wipes.

After using the toilet, put the sealing lid in place, close the lid and insert the churn handle and rotate it relatively quickly in a clockwise direction for about 10-15 full turns. The white arrow head on the churn handle indicates the direction to turn it. **Churning in the wrong direction is difficult and can damage the churn.**

As the collection container begins to fill up, turning the churn handle will meet more resistance. You will develop a feel for when it is time to empty the collection container by the level of resistance. Usually the collection container will be about half full when it needs to be emptied. The C-Head is easy to empty, and you should just empty it anytime you feel you need to. Don't make it a contest to see how much it will hold.

If for some reason, a large amount of urine enters the solid waste collection container, the compost will become wet and smelly. To remedy this situation, add medium (pine pellets work good for this) to the collection container and churn it until the compost is of a consistency that can be poured out into the disposable container. Once transferred, cover the mixture with additional medium. Otherwise, seal and discard the container. Rinse out the collection container bucket before refilling with composting medium.

Disposing of solid waste

Pour the contents of the solid waste bucket into a bag lined bucket for storage. It is preferable to discard the entire bucket once it is full but most people double bag the waste and dispose of it that way. It is helpful to pour one cup of liquid chlorine bleach into the mixture into the bag of waste and then simply snap a locking lid tightly over the top of the bucket using a hammer or heavy item. Discard the container as soon as possible in a secure place (such as a dumpster) or set it out for curb side service at home just prior to pick up.

If you are going to compost the waste further, *do not use chlorine bleach* and use a "snap on" lid instead of a locking lid. Set the storage bucket aside until you can take it ashore to a composting mound or someplace where it can be safely dumped and nature can deal with it. Never dump waste with toilet paper in it. Simple and attractive composting towers can be made for at home and decorated with vines, and this should be the preferred method of dealing with your waste if possible.

Composting solid waste

Whenever possible, you want to move your solid waste to a composting heap or tower, burying it in vegetation and allowing it to compost to completion over several months. For this end, you should consider attracting black soldier flies. Black soldier flies will significantly reduce your waste volume by as much as 90%. In addition, they have the added benefit of driving away house flies by eating their larva in the composted waste. You can attract black soldier flies by building a simple "digester" as follows. Pour the solid waste from the collection container into a bottomless 5-gallon bucket situated in the center of your compost pile or tower. Take a second bucket with

a lid on it and cut off the bottom so that it fits inside the top of the bottomless bucket. Cut holes into the sides of the top bucket to allow the flies to enter and lay their eggs inside. Attach a piece of sponge to the underside of the lid of the top bucket to provide a place for the black soldier flies to land and deposit their eggs above the pit.

Be sure to use a “white” bucket for both parts because a black bucket will generate a lot of heat under direct sunlight. This combined with the thermophilic heat generated from the vegetation can raise the temperature above 150 degrees F for a sustained period and this can be lethal to the BSF larva. If you surround your compost tower with sweet potatoes, the vines, which are fast growing will help shelter the digester from direct sunlight as well as give the BSFs a good place to land and mate.

Make a locking system to keep the top portion of the digester locked to the bottom portion. Simple screen door hooks will work fine. The purpose for this is to keep vermin out of the pit. Raccoons especially, seem to like the taste of the larva and are easily smart enough to remove the lid to access them.



Pour your cut vegetation around the bucket and raise the bucket as you fill the compost tower over time. A four-foot wide, by three-foot front-to-back, by four-foot high tower will take about a year to a year to fill if two people are using the toilet. It is important that the level of the waste and the level of the composting vegetation remain the same. Allowing the surrounding vegetation to rise higher than the waste inside will generate too much heat and will be lethal to the BSF larva. Add vegetation to the waste to bring it up if needed. If you make a scuttle hole at the base of your compost tower, you can remove composted soil from the bottom to keep the tower in continuous use without ever having to empty it.

There are a series of videos about composting waste and gardening on the C-Head website. Go to http://c-head.com/BoonJon_system.html to view them.

Disposing of the urine

The one-gallon urine collection jug or p-tank on the C-head will have to be emptied daily or every other day for a two people. The gallon jug can be capped off and stored to be replaced with a new jug, or the urine can be transferred to another larger container for storage or taken to a bathroom facility and disposed of. In some cases, where legal, it may be dumped overboard. Using one-gallon containers allows the use of small spaces to store it in, until it can be properly disposed of.

The best system for urine odor control, if you are disposing of the urine, is to pour a ½- ounce of Thetford CampaChem (formaldehyde free) down the funnel each time you place an empty urine jug or p-tank into the toilet. This will eliminate any urine odor. Some people say that sugar does the same thing, but it takes a large amount and is more expensive. Controlling the odor makes transferring the urine into a toilet less offensive to bystanders.

If you are boondocking, dig a cat hole away from any water sources and pour it into the ground then cover with the earth you removed. Add CampaChem to the now empty jug (1 oz) and it will eliminate any smell. If you are emptying the jug regularly (every day or two) smell won't be an issue even without the additive.

Unless you use it for gardening, urine should always be emptied out of the gallon jugs into a receptacle designed to accept human waste, if possible, such as a toilet or urinal. The jugs should be recapped before they are discarded, even if they are crushed. Using sanitary practices will insure the popular support for composting toilets as a safe and clean alternative to liquefying waste for disposal.

If you wish to use the urine for gardening, be sure to dilute it 5-10 parts water to 1-part urine. It is a high nitrogen fertilizer that should be applied to the soil, not on the leaves of your plants.

If your C-Head is equipped with an EUD, read the EUD instructions carefully with respect to managing of your urine.

A couple of special and sensitive issues:

Vomiting – vomit overboard, outside or into an empty 5-gallon bucket, not in the toilet. Cover it with medium and discard.

Diarrhea – Diarrhea is a messy problem regardless of whatever type of waste management system you have. With a holding tank system, the frequency associated with diarrhea can cause you to fill your holding tank more quickly than normal due to frequency and the number of flushes to clean the bowl. With other composting systems, chronic diarrhea can cause a mess that will have to be cleaned up. If you are using the C-Head system, the solution is relatively simple. During the time you are experiencing diarrhea, remove and empty the solid waste collection bucket from the toilet and set it aside for the time being. Take a 13-gallon tall kitchen trash bag and open it with air and then use your arm to stuff the bag into the toilet through the opening on the top. Double bag if you are afraid of it leaking. Pull the mouth of the bag around the toilet seat as if it were a trash can and tuck it under the rim slightly.



Take a hand full of medium and drop it into the opening. After using the toilet, put the toilet paper inside the bag and add more medium to cover the waste inside. Replace the sealing lid and close the seat lid.



Continue to use the toilet in this method until the diarrhea has passed. You can urinate in the bag as well; however, you may have to lift the edge of the bag to get the urine to flow out of the urine funnel and into the bag. Add enough medium to absorb the fluid. Remove and replace the bag as needed.

When the illness passes, pour a half-cup of chlorine bleach into the mix, and discard the contents in a sealed bucket as soon as possible. This preparation can be done before hand if you know you are sick and then you will not be caught off guard by urgency.

Pest control

An occasional problem with composting toilets is fruit flies, sewer flies and gnats. All of these pests develop because they use moist fermenting waste to lay their eggs in. Once they become

established, the area must be completely cleaned. It is important to not let them get established. You can control insects the following ways;

1. Empty your C-Head every 7 days or more often. Do not leave solid waste stored in the toilet.
2. If insects are seen flying out of the toilet, empty the waste immediately and rinse out the bucket. If they persist, rinse out the bucket, allow it to dry and then spray the interior of the bucket with oven cleaner. Follow the instructions on the oven cleaner bottle.
3. If you are using your C-Head on a boat, simply empty the collection container, then tie a line to it and drop it overboard to soak for several hours, then allow it to dry and reinstall.
4. *Never dispose of food scraps in a composting toilet. This is a primary source of fly infestation.*
5. If you are using your C-Head in an area with livestock, you may need to use a Hot Shot No Pest Strip placed inside the toilet housing or you can place moth balls (usually 2 will suffice) in the basket in the bucket. Remove after the infestation has abated or leave in place as a preventative where applicable.

Use of Diatomaceous Earth (DE)

If you have livestock or live in an area that is prone to flying insects or you keep a lot of fresh fruit onboard your boat, you can significantly eliminate the prospect of insects migrating to your toilet by adding diatomaceous earth to the mixture. It is usually obtained at any garden or home improvement store in the pool supply section. A twenty dollar 24-pound bag will give you a two-year supply if you add one cup to the collection container mixture each time you recharge it. It also seems to aid in reducing the musty odor of compost. It is non-toxic to humans in anything less than massive doses but lethal to insects. It works mechanically so it does not lose its potency and insects cannot develop a resistance to it. Only use this if they become a persistent problem.

DE is bulky, heavy and dusty and does not break down, so it is around for a long time. Also for gardeners, some insects that it kills are beneficial such as black soldier flies and their larva, which control the housefly population and break down the waste significantly. DE has also been known to kill earthworms.

Use of No-Pest Strip

An alternative method of complete control is by placing a “Hot Shot No Pest Strip” inside the housing of your C-Head toilet. It is not recommended that you leave the No Pest Strip inside the toilet longer than needed. Even though the product is contained inside the C-Head housing, you should also allow some ventilation in the bathroom, where possible. The instructions state that it should not be used in an area where people will be present for more than four hours a day, but this is using the full evaporation rate of the strip inside a house where ventilation is restricted to the interior of the structure. If you live on a boat, chances are that you are getting a lot of ventilation from open hatches, so there should be little concern. The DOT hazard placard indicates 1-1-0-0 which is fairly benign. Read the instructions and use your own judgement. Here is how you do it.



1. Wear rubber gloves or use some other means of avoiding direct handling. Cut the end off of the foil package and remove the strip, which is a plastic tower with holes in it running from top to bottom.
2. You can slide the foil package back over the top exposing *only the bottom area about two inches*, so that you are restricting the evaporation rate of the strip. Raise the cover to expose more of the strip if needed. Secure it in place using a rubber band around it.
3. Simply set it along the inside side of the toilet housing outside the solid waste collection container. You will be able to remove the collection containers without having to handle or move the No Pest Strip.
4. You will see immediate results and after 10 days, the gnat egg population will have been completely eradicated, so remove and repackage the strip inside a plastic ziplock type and place it in a sealable plastic bag for reuse in the future.

The active ingredient is Dichlorvos, an organophosphate. Organophosphates are chemicals commonly used in insect control but they are toxic and can be absorbed through the skin. In addition to killing flying insects, they also kill roaches and other invasive insects. Here are the [MSDS](#) and [CDC](#) links. Humidity found inside the collection container will quickly break down Dichlorvos and render it harmless. Restricting the evaporation by covering most of the strip should have a significant effect in limiting exposure to the chemical. The small space inside your C-Head housing will only require a very small amount of the chemical to be very effective and will contain the evaporation until the humidity breaks it down. The result is an easy, effective and inexpensive means of pest control.

Moth Balls

A third possibility is to put two moth balls or pesticide soaked cotton balls in the small basket located on top of the solid waste collection container. You will need to remove and replace this basket whenever you empty the toilet to prevent it from falling out. Use basically the same precautions with moth balls as you would with organophosphates. In every case, read the directions. Use your own judgment and act responsibly.

Safety Note

Always use good hygienic practices if you are using a composting toilet. Wash your hands each time you handle the contents inside the housing or after using the toilet.

Cleaning your C-Head

Note that there is a square of plastic dual-lock strip that connects the toilet seat to the housing lid. You may separate the two to facilitate cleaning by prying them apart.

You may use any of several standard household cleaners and degreasers that are available on the market. The collection container should be washed occasionally. The collection container is all plastic except for a few stainless-steel fasteners. You may choose to fill it with water prior to cleaning it to soften up any dried-on material. A standard toilet bowl brush should work fine.

Wipe down the inside of the C-Head housing with a light solution of Clorox and water or use Lysol spray with bleach. For best results, spray the inside of the collection container with silicon spray after it has dried. This will make the next cleaning easier and help prevent waste from

sticking to the sides of the container. Use only a mild detergent on the outside of the housing; **never use solvents or abrasives!**

If a urine spill happens from overflowing or a failed container, soak up the urine with a rag or sponge and rinse out the pan with water. Then wipe down the inside of the housing with a light mixture of Clorox and water or a household cleaner.

Happy cruising, camping, vacationing, or homesteading and thanks again for purchasing the C-Head Portable Composting Toilet.

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White Wainscot Docking Wall Cabinet

