

# Hydrobuilder

complete garden center

## Grow Tent Package Setup Instructions



### *Need Assistance or Have Questions?*

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We want you to enjoy using your new grow equipment and are available for help  
Monday thru Friday 9-5PST at:

**888-815-9763 and [Support@Hydrobuilder.com](mailto:Support@Hydrobuilder.com)**

## Thank you for purchasing a Hydrobuilder grow tent package!

You are well on your way to growing your best yields yet in your new grow tent. This guide will help you get everything set up and provides some helpful tips for using your equipment. If you need help or have any questions about the best way to use any part of this package don't hesitate to give us a call or send us an email. We want you to succeed in your garden goals and are here for you!



888-815-9763



support@hydrobuilder.com

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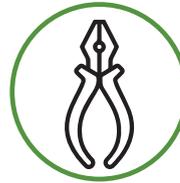
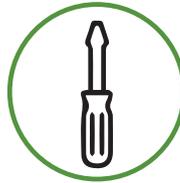


Keep an eye out for helpful gardening tips and links like this and learn even more by visiting our guides on [hydrobuilder.com/learn](https://hydrobuilder.com/learn) today!

## Preparation

### Tools You Will Need:

- Flat-head Screwdriver
- Pliers with Wire Cutter
- Utility Knife or Scissors
- Measuring Tape



### Step 1 - Un-box and Take Inventory of All Products

Before you start to assemble, it's a good idea to remove all products from the shipping packages to ensure you received everything you ordered. Depending on the tent package you purchased you may have different products than are shown in this guide. Most packages include at least the following products:

- Grow Tent
- Lighting Equipment
- In-line Fan
- Carbon Filter
- Ducting
- Nutrient Package
- pH Control Kit
- Accessories (Trellis Netting, Thermometer, etc.)



Grow Tent



Lighting



Ventilation



Nutrients and pH

## Tent Assembly

### Step 2 - Assemble Grow Tent by Following the Included Instructions

It is helpful to have someone to help you when setting up a grow tent. You also want to ensure you have enough room to position the tent in your desired location after it is fully assembled. Be sure to read the instructions carefully and ensure each tent pole is seated firmly into the connecting joints. You will build the tent frame first, un-zip each zipper, and then wrap the canvas cover around it before zipping it all back up. Larger tents will have a heavier canvas, use caution when lifting and wrapping it.



First set up the tent frame



...then install the canvas and spill tray!



You'll want to position your tent so your vent ducting will exhaust easily to your desired location through one of the top ducting ports. The mesh vents near the bottom of the tent will be used only when your plants are in the vegetative stage. During the flowering stage you will close them to prevent light pollution causing issues with flower growth. During flowering you can install a short piece of the ducting through a bottom duct port and shape it into a "U" to create a light-proof intake!

## Setting Up Ventilation Equipment



You've got options! Below we show you the most common and recommended method of setting up grow tent ventilation but there are alternatives. Check them out at: [hydrobuilder.com/learn/vent-tips](http://hydrobuilder.com/learn/vent-tips)

### Step 3 - Prep the Carbon Filter

Unpack the carbon filter and ensure that the fabric pre-filter is completely surrounding the mesh area of the filter and is secure. A small amount of loose carbon particles in the packaging is normal.



### Step 4 - Install the Carbon Filter

Determine the direction of airflow and which port you will exhaust through. You will point the flange of the carbon filter towards this port.

Loop and secure both of the adjustable fabric straps around the desired roof cross bar. Be careful to thread the strap through the buckle correctly so it will hold weight and allows adjustment. Loosen the straps so that the loops are larger than the circumference of the carbon filter.

Pick up the carbon filter and insert the non-flanged end through the loops. Lower the carbon filter so that the straps hold its weight. One-by-one, adjust the straps until the carbon filter is hung level and secure. It's helpful to have help when installing large carbon filters.



## Step 5 - Install the Inline Fan

Unpack and inspect the inline fan taking note of the hanging bracket and the label showing the direction of air-flow.

You will install the fan so that the air will flow away from the carbon filter and outside the tent. You can slide one of the roof cross bars through the one side of the hanging bracket on the fan and connect to another with zip ties. Adjust the carbon filter hanging height and position it so the flange lines up with the in-line fan flange.



Note the direction of airflow on the fan



Hang the fan over a cross bar in the tent

## Step 6 - Install the Fan Speed Controller

Pass the power cord of the in-line fan through a duct port or electrical port. Plug the in-line fan into the socket on the fan speed controller. Set the dial to medium initially.



You may want to run your ventilation only while the lighting is on by plugging your fan speed controller into a timer. However if signs of excess humidity appear, it is OK to run the fan 24/7 at a lower setting to keep your tent dry and plants free from mold and mildew!

## Step 7 - Measure and Cut Ducting

Be careful when working with ducting, the inner wire coil can be sharp! Measure the lengths of ducting you need to complete your ventilation system. You will need one piece between the filter and fan, and another from the fan through your exhaust port and to the final exhaust location. Give yourself a couple of extra inches to account for the ducting sliding over the flanges of the fan and filter.

Once you have determined the lengths you need, cut the ducting with a blade in the flexible part of the ducting around the circumference. Then snip the internal wire to separate the two pieces with wire cutters.



Measure twice, cut once!



Slide the ducting over the flanges and secure

## Step 8 - Install Ducting with Duct Clamps

Slide the ducting over the flanges and secure with a duct clamp. Do not over-tighten. Run your exhaust ducting to a desired location. If ducting to the exterior of a building consider installing a screen or grate to prevent pests or animals from entering the ducting.

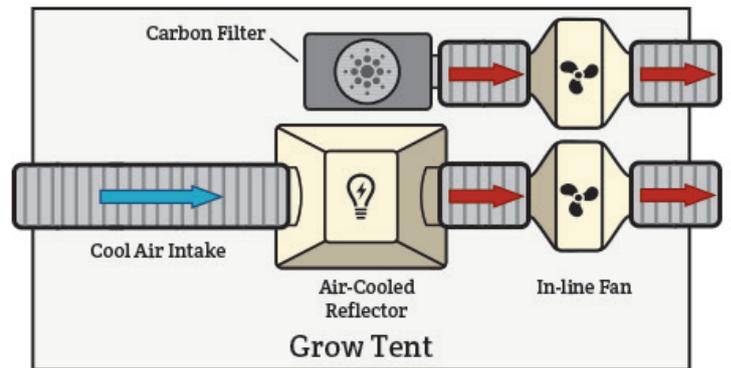
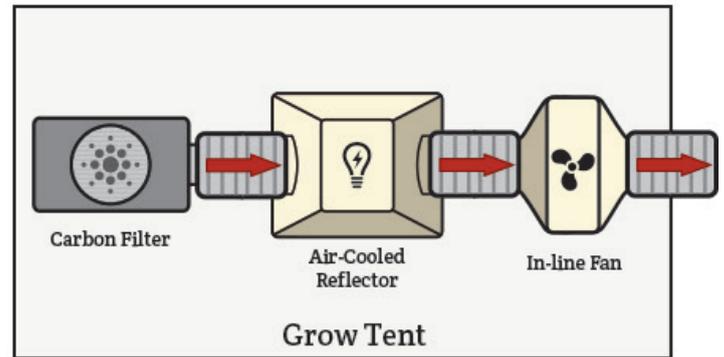
## Special Ventilation Setups

### Air-Cooled Lighting

Air-cooled HID light fixtures have duct flanges you can easily connect a fan and ducting to. You can see an example setup in the diagram to the right. This setup pulls air through the carbon filter, then through the light fixture and finally out of the tent.

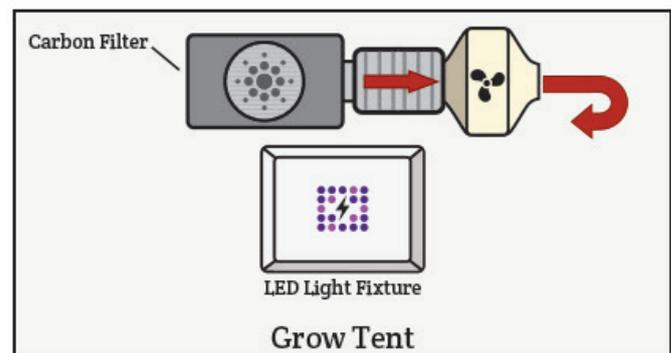


A great upgrade for air-cooled lighting is to use a separate in-line fan just for the lighting ventilation. This will make both your light cooling and your carbon filter work more efficiently. Review the diagram to the right to see an example.



### Closed Loop CO<sub>2</sub> Ventilation

When using CO<sub>2</sub> producing equipment inside of a tent, you want to avoid allowing that CO<sub>2</sub> to exhaust from the tent. Therefore you want a “closed loop” system which will filter the air of odors by recirculating the air in the tent through a fan and filter. It is recommended to utilize LED or air-cooled lighting to avoid heat build-up in the tent. Air conditioning is recommended for larger tents using CO<sub>2</sub>



## Installing Lighting and Timer



If you have purchased a LED light fixture you can skip to Step 10. Some LED lights have built-in timers which can be programmed with the included instructions.

### Step 9 - Install the Light Bulb and Ballast

Wear gloves when handling HID light bulbs as the oils from your hands can damage the bulb! Ensure the bulb is seated firmly in the socket before use. Your light fixture's cord will plug into a matching socket on the ballast. Wait to plug the ballast into a power source until you can let the bulb stay lit for at least 30 mins to ensure proper "burn-in." It's best to place the ballast in a safe dry place outside of the tent.



Double-ended HID lights require special care when installing and can easily be installed incorrectly. Go to [hydrobuilder.com/learn/de-tips](http://hydrobuilder.com/learn/de-tips) to learn how.



### Step 10 - Hang Light with Light Hangers

Loop the ends of the light hangers without the adjuster around a roof cross bar. Install the light brackets on the light fixture and attach the other ends of the hangers to these. Adjust the lengths of both hangers till the light is level and at the specified height for your light fixture.



### Step 11 - Program and Install Timer

Program the timer using the included instructions, then plug it into a wall socket. You can now plug in your lighting into the timer.



During the vegetative stage of growth your light should be on for over 12 hours. 18 hours works best. Switch to 12 hours on/12 hours off during flowering.

## Testing Equipment

Plug all equipment in and ensure everything is working properly. When starting HID lighting (HPS, Metal Halide, or LEC) for the first time you need to let it run for at least 30 mins to ensure proper time for the bulbs to “burn-in.” This process is important to achieve the proper spectrum and ensure the maximum lifespan for the bulb. Check your ducting connections to ensure proper sealing and clamp tightness. Zip up your tent and close any duct or electrical ports completely. Check for any light leaks.

## Installing Accessories

### Thermometer / Hygrometer

The thermometer should be placed in the tent either in the wall tool pouch or hung from a top cross bar.

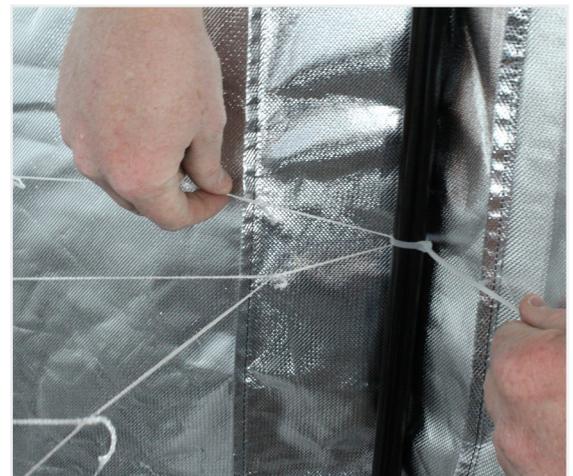
### Clip On Fan

The clip-on fan can be clamped onto one of the vertical or roof tent frame poles. Duct tape or zip ties can help to keep the fan in place.



### Trellis Netting

Trellis netting is a great way to train plants to grow wider. This can increase canopy size and yield. Simply trim a section of the netting to fit between the all four of the vertical tent frame poles and attach with zip-ties or tape. As plants grow, carefully bend and position the branches to grow around sections of the netting.



## Growing Methods and Media

### Growing with Pots and Soil or Soil-less Mixes

Soils will initially provide nutrition to the plants from the organic material they contain, while soil-less mixes like coco-coir contain no organic material and must immediately be used in conjunction with nutrient feeding. Soils will eventually need to be supplemented with nutrients after about 2 weeks to one month.

It is best to not use dirt from your yard, but instead find a bagged potting soil or soil-less mix that will help you avoid pests and contaminants. A good potting soil will be loose, retain moisture and promote healthy root growth.

Do not overfill or tightly pack soil into your pots. You want to keep it loose and easy for new roots to develop and to avoid spill-over when feeding and watering. Before transplanting plants from smaller container to larger ones, make an appropriately sized hole in the soil of the new pot and moisten with a spray bottle.



### Hydroponics

Each hydroponic system is different, but most will utilize a “net pot” which will hold the plant root structure. You will fill each pot with a growing media like clay pebbles or growstones to support the root structure. Be sure to rinse and stabilize the pH of any media you plan to use. Learn how to do this at [hydrobuilder.com/learn/media-tips](http://hydrobuilder.com/learn/media-tips)

Hydroponic gardening requires careful monitoring of pH levels. Fluctuations in pH can harm your plants and stunt their growth. PH probes and pens need to be cleaned and calibrated regularly. Follow the manufacturer instructions and be sure to always have a supply of calibration solution at the ready.

## Measuring pH and Mixing Nutrients

### Why Measure pH?

Most plants prefer pH in the slightly acidic range, 5.5 - 6.5 for plants grown in soil and 5.5 - 6.0 for plants grown hydroponically. When the pH is at the proper level, the plant has an easier time absorbing the nutrients available in the growing media. Nutrient deficiencies and toxicities can occur at both low and high pH. For example, interveinal yellowing on young leaves is a sign of iron deficiency; but it usually caused not from a lack of iron in the soil, but rather from an improper pH level making it too difficult for the plant to absorb it.

Depending on the pH equipment you purchased the procedure for measuring may vary. Follow the manufacturer instructions carefully. Be sure to always measure pH before watering or adding nutrients to your plants to ensure healthy growth.

### Mixing Nutrients

Depending on the stage of growth your plants are in you will need to provide a different mix of nutrients to provide proper nutrition. Be sure to review the nutrient feeding chart of the products you purchased and follow accordingly. For young plants it's a good idea to feed with diluted nutrients at about 75% of the first week's dosage as indicated on the feeding chart. Once strong roots are established you can move to 100% and continue following the feeding chart.

Never add nutrients directly to your plants from the bottle. Instead always mix a batch of nutrients and measure the pH of this solution before applying. If the pH level is out of range, add pH Up or pH Down as needed, but never add both. If you overshoot your pH adjustment it is recommended you throw out that batch of nutrients and start over. So it's important to go slowly and add very small amounts of pH adjusters before retesting.



There are ton of nutrients and supplements available today, each designed to target specific stages of growth or enhance specific growth characteristics. The nutrients provided in your package will provide complete nutrition through all stages of growth; however, you may want to experiment with supplements over time. Learn more about the products we sell at [hydrobuilder.com/learn/nutrients-and-ph](https://hydrobuilder.com/learn/nutrients-and-ph) or contact us if you have any questions about what will work best for your garden!

## Optional Upgrades



Below you will find some of our favorite upgrades to the basic tent package that can help you save time and increase your yields. These are all available on [hydrobuilder.com](http://hydrobuilder.com) and our product experts are happy to help you decide if these products are right for you.

### Digital pH Monitoring

Measuring pH with a liquid test kit is an easy and affordable solution, but digital pH meters or “pens” make checking pH a breeze. There are also automatic pH dosers which can keep reservoirs and hydroponic systems constantly pH stable.



### Electronic Environment Controllers

There are numerous controllers available to help you keep your garden’s environment optimized when you aren’t around. High-heat power shut-offs, humidity sensors and more are a great way to protect your garden from harmful fluctuations.



### Cloning Equipment and Perpetual Gardens

It’s easy to clone your plants yourself to start a new generation with the kits we sell. This is a great way to save money and maintain a supply of new plants from the strains you like best. Perpetual gardening is the process of having two separate grow spaces; one for vegetative growth, and the other for flowering. With a perpetual garden you can dramatically increase the number of harvests per year!



### CO2 Generators and Monitors

Increasing the amount of CO2 in your grow space can increase yields and flower quality. There are numerous methods and tools available on [hydrobuilder.com](http://hydrobuilder.com).

## Pest Control and Troubleshooting

### Spider Mites

The most common infestation that can occur in an indoor garden is Spider Mites. These small mites live and breed on the underside of leaves and can dramatically alter the health of a plant. A bad infestation will involve webs covering parts of the plant. It's very important to identify spider mite infestations early by routinely inspecting your plant's leaves. Quarantine any infested plants and treat the whole garden with a miticide.



### Powdery Mildew

Powdery mildew will appear on the top side of affected leaves as a white powdery film. High humidity is the most common cause. Treat affected plants with a fungicide and address the humidity problem with increased ventilation or by installing a dehumidifier.



### Nutrient Deficiencies and Lock-Out

When a plant is deficient of a specific nutrient there are often tell-tale signs on the coloring of the leaves. Refer to the guide at [hydrobuilder.com/learn/nutrients-and-ph](http://hydrobuilder.com/learn/nutrients-and-ph) to see examples of possible deficiencies. Over-dosing your plants with nutrients can also cause an issue called "nutrient lock-out" where the plant's roots are unable to absorb the available nutrients due to an excess level of salt in the soil. Follow feeding charts and measure nutrients carefully to avoid this. Flush your plants with pure water if you believe they are locked-out.



### Leaf Burn and Stunted Growth

When lights are placed too close to the plant canopy the tips of the leaves may yellow and brown. Be sure to keep your lighting at the recommended height to avoid this. Too much light can stunt and slow growth resulting in poor yields.



## Growers Checklist

- Spill Tray Installed Correctly**
- Lighting Equipment Wired Properly**
- Lighting Height Adjusted Properly**  
Adjust height to manufacturer recommendation for stage of growth.
- Lighting Timer Functioning and Set Properly**  
Over 12 hours for vegetative growth, 12 hours or less for flowering.
- Ventilation and Tent Ports Sealed for Light Leaks**
- Ventilation Equipment Functioning**
- Temperature and Humidity in Proper Range**
- Nutrients Mixed Properly**  
Following manufacturer feeding schedule for stage of growth.
- pH Level of Water and Nutrient Mix in Range**
- Plants Watered Properly**  
Soil should be moist not soaking. Hydroponics should be topped-off.
- Plants Pruned and Supported Properly**  
As plants grow make sure the branches are supported and foliage on lower branches trimmed. Add trellis netting as needed.

### Questions? - We are here to help you succeed!

If you have any questions on how to properly use your tent package, just contact us by phone or email:



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