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**Hydrofogger Model 100HH/150HH
Minifogger Model 200HH/250HH
Hydrofogger Humidistat Model 300H
Hydrofogger Humidistat Model 315HH
Water Installation Kit**

Instruction Manual

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Table of Contents

Hydrofogger Model 100HH/150HH Minifogger Model 200HH/250HH

Introduction.....	1
Technical Data	2
Hydrofogger Parts & Diagram	3
Minifogger Parts & Diagram	4
Safety & Warnings	5
Installation.....	6
Choosing a Location.....	7
Connecting Water and Power	8
Controlling the Fogger	9
Operating the Fogger	9
Maintaining the Fogger	10
Accessories.....	11
Troubleshooting.....	12

Hydrofogger Humidistat Model 300H

Specifications.....	13
Installation	14
Warnings	15
Troubleshooting.....	15

Hydrofogger Humidistat Model 315HH

Instructions for Use	17
Specifications.....	18
Installation.....	18
Warnings	19

Connecting Water to your Fogger

Saddle Valve Connection.....	20
Gravity Feed Connection.....	22
Garden Hose Connection	22
Connecting Tubing and Installing Water Shut Off Valve.....	22
Water Shut Off Valve.....	23
Disconnecting Tubing	23

Warranty & Terms	24
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Hydrofogger Model 100HH/150HH Minifogger Model 200HH/250HH

Introduction

READ COMPLETE INSTALLATION INSTRUCTIONS BEFORE USING.

Thank you for purchasing your Hydrofogger or Minifogger. This manual serves as instructions for both units since the installation and maintenance of the Hydrofogger and Minifogger are essentially the same.

With proper installation and regular maintenance, your fogger should give you many years of service. Please keep this manual at hand during installation and also keep it as a handy reference for maintenance, operating tips, and troubleshooting. Additionally, we have maintenance instructions and other support you can download off of our website, print and attach directly to your fogger as a quick reference. Finally, we are always available to help any way we can. Please do not hesitate to contact us at info@hydrofogger.com.

Both the Hydrofogger and the Minifogger are centrifugal humidifiers. Their operating principles are quite simple: Water that has been fed into the reservoir pan is drawn upward through a pump cone and onto the discs, which are spinning rapidly. The water, getting thinner and thinner by the centrifugal force, then strikes the metal combs of the atomizing screen, which then creates a fine vapor. The fan, under the discs, then blows the vapor up and outside of the humidifier resulting in a fog that is quickly absorbed into the air. Please note that both the Hydrofogger and Minifogger are not steam or heat based.

Both foggers are designed to be fed water directly. They are not designed to be filled manually. There are three basic ways to feed water to our foggers:

- 1) Tapping into an existing pipe using a saddle valve,
- 2) Connecting a $\frac{3}{4}$ " garden hose to the fogger, or
- 3) Connecting the fogger to an elevated water reservoir (gravity feed).

The foggers will operate on most types of water including basic tap water, reverse osmosis filtered water (RO), and demineralized water (DI). **We strongly recommend the use of reverse osmosis (RO) filtered water with our foggers.** RO water will prolong the life of your fogger as well as remove any minerals that can settle in the area surrounding the fogger.

REVERSE OSMOSIS

Both the Hydrofogger and the Minifogger are only as good as the water that feeds them; therefore the better the water quality and filtration, the less unwanted particles such as calcium and other minerals that will be atomized along with the water. In many cases with hard water, reverse osmosis filtered water (RO) is highly recommended to avoid a white, mineral dust from settling in the area surrounding the fogger.

TECHNICAL DATA

Hydrofogger Specifications

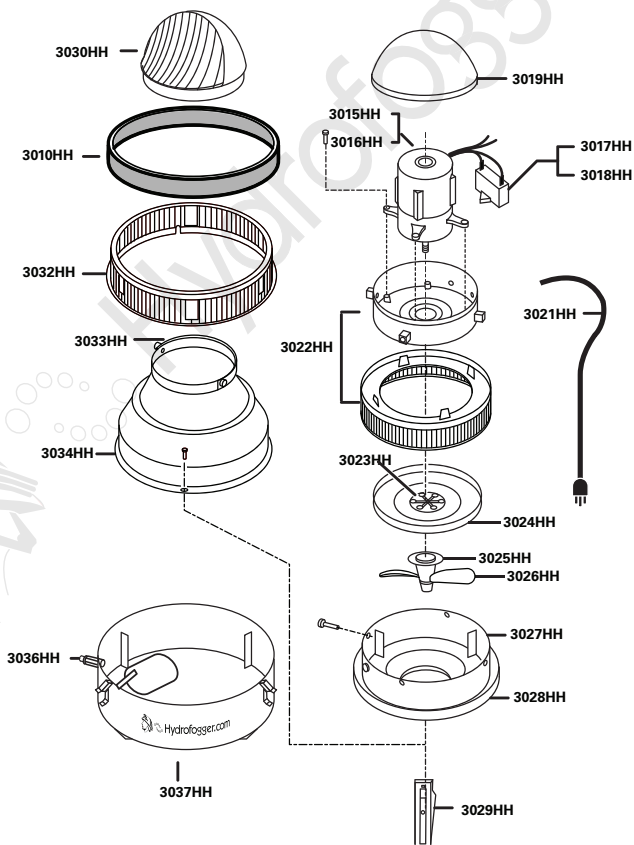
Dimensions:	14.25" tall without fogging head 17.25" tall with fogging head 14" diameter
Dry Weight:	15.25 lbs (reservoir pan empty)
Wet Weight:	19.75 lbs (reservoir pan full)
Reservoir Pan Capacity:	2.1 quarts/2 liters
Atomization Capacity:	Approx. 1.05 gallons/hour
Working Temperature:	35°F -95°F
Working Relative Humidity:	0%rH-99%rH non condensing
Power Supply:	115V/60Hz (100HH model) or 230V/50Hz (150HH model)
Amps:	0.33 under full load

Minifogger Specifications

Dimensions:	12.5" tall without fogging head 15.75" tall with fogging head 11.75" diameter
Dry Weight:	12.75 lbs (reservoir pan empty)
Wet Weight:	16.50 lbs (reservoir pan full)
Reservoir Pan Capacity:	1.8 quarts/1.75 liters
Atomization Capacity:	Approx. 0.4 gallons/hour
Working Temperature:	35°F -95°F
Working Relative Humidity:	0%rH-99%rH non condensing
Power Supply:	115V/60Hz (200HH model) or 230V/50Hz (250HH model)
Amps:	0.33 under full load

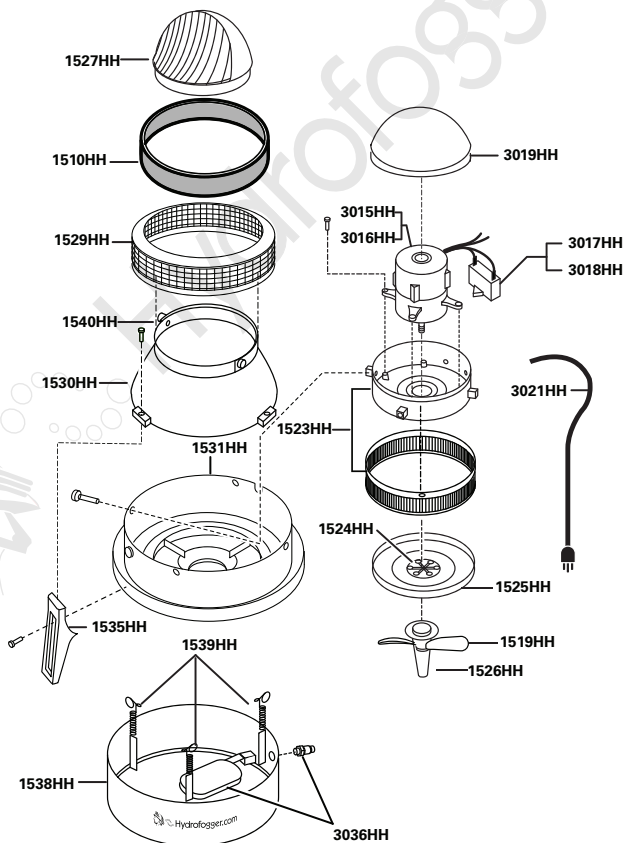
Hydrofogger Parts & Diagram

PART#	DESCRIPTION	QTY
3010HH	AIR FILTER	1
3015HH	MOTOR (115V/60Hz) North American	1
3016HH	MOTOR (230V/50Hz) Foreign	1
3017HH	CAPACITOR (115V/60Hz) North American	1
3018HH	CAPACITOR (230V/50Hz) Foreign	1
3019HH	MOTOR COVER	1
3021HH	CORD	1
3022HH	ATOMIZING SCREEN + MOTOR SUPPORT	1
3023HH	HUB ASSEMBLY	1
3024HH	DISK	2
3025HH	PUMP	1
3026HH	FAN BLADE	1
3027HH	MID PAN	1
3028HH	LOWER PAN	1
3029HH	LEG	3
3030HH	FOGGING HEAD	1
3032HH	SCREEN	1
3033HH	HANDLE	1
3034HH	HOUSING	1
3036HH	FLOAT VALVE KIT	1
3037HH	RESERVOIR PAN	1



Minifogger Parts & Diagram

PART#	DESCRIPTION	QTY
3015HH	MOTOR (115V/60Hz) North American.....	1
3016HH	MOTOR (230V/50Hz) Foreign.....	1
3017HH	CAPACITOR (115V/60Hz) North American.....	1
3018HH	CAPACITOR (230V/50Hz) Foreign.....	1
1519HH	FAN BLADE.....	1
3019HH	MOTOR COVER.....	1
3021HH	CORD.....	1
1510HH	AIR FILTER.....	1
1523HH	ATOMIZING SCREEN + MOTOR SUPPORT.....	1
1524HH	HUB ASSEMBLY.....	1
1525HH	DISK.....	2
1526HH	PUMP.....	1
1527HH	FOGGING HEAD.....	1
1529HH	SCREEN.....	1
1530HH	HOUSING.....	1
1531HH	MID PAN.....	1
1532HH	LOWER PAN.....	1
1535HH	LEG.....	3
3036HH	FLOAT VALVE KIT.....	1
1538HH	RESERVOIR PAN.....	1
1539HH	SPRING.....	3
1540HH	HANDLE.....	1



SAFETY & WARNINGS

CAUTION!

Read these instructions thoroughly before installing this unit. Do not hesitate to contact us at 800-936-3502 or info@hydrofogger.com with any questions or issues. Keep these instructions close to your fogger for future reference. This manual is also available for download on our website: hydrofogger.com/support_downloads

DANGER-RISK OF ELECTRIC SHOCK!

Before cleaning, servicing, replacing parts, or any other maintenance, the unit and any related accessories **must be disconnected completely from all sources of electricity.**

WARNING!

The fogger should be connected to an electrical supply that complies with local regulations. In most cases, ground fault receptacles are strongly recommended and may be required by local code.

WARNING!

The foggers **MUST** be adequately maintained and serviced in order for them to run efficiently and cleanly. Poorly maintained humidifiers can compromise your health. Units should be inspected and maintained every 30 days at a minimum. Failure to properly maintain and clean the fogger may result in bacterial and mold growth inside the unit.

WARNING!

Improper installation, adjustment, modification, alteration, service, or maintenance may cause property damage, injury, or death. This appliance must be installed according to these instructions. Read and understand these instructions thoroughly before installing or servicing the unit.

WARNING!

Failure to install this unit in a position that is level and plumb may impair the unit's ability to function properly. Damage to property may result.

WARNING!

Installation in freezing conditions may result in unit failure.
Damage to property may result.

CAUTION!

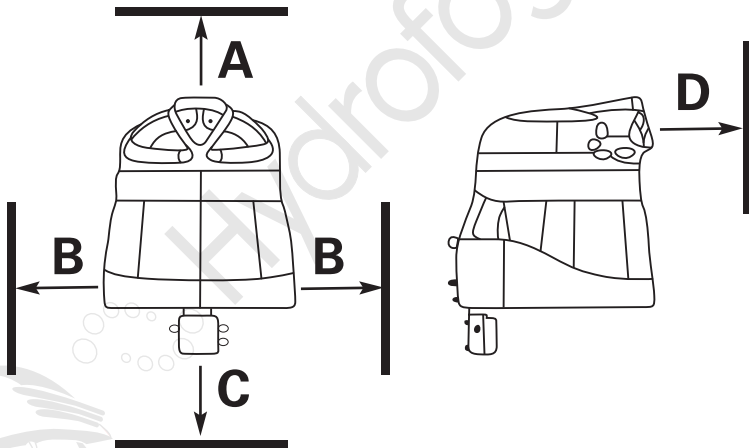
The fogger has been designed to atomize only water. Any use different from this one is considered improper and may be harmful. Never use the fogger for atomizing flammable, toxic, or corrosive liquids. Using the fogger to atomize any liquid other than water voids the warranty.

CAUTION!

Do not operate the fogger without water in the reservoir pan.
Damage to the unit and property may result.

INSTALLATION

(For both Hydrofoggers & Minifoggers)



Recommended Minimum Distances for Installation

	Hydrofogger	Minifogger
A. Top of unit to ceiling	3.5 feet	2.5 feet
B. Sides of unit to walls	5.5 feet	4.5 feet
C. Not Applicable	N/A	N/A
D. Front of unit to wall	12 feet	10 feet

CHOOSING A LOCATION AND PLACEMENT OF THE FOGGER

- Choose a location that will best allow the fog to expand throughout the room and not be obstructed in any way. It is important to choose a spot where there is no chance of the fogger's humidity to strike any solid object and create condensation and therefore dripping. **General rule of thumb regarding location—usually the higher the better, but leave at least a few feet from the ceiling. See Recommended Minimum Distances for Installation.**
- Be careful not to place the fogger too close to the ceiling as condensation can occur. Typically a few feet of space between the top of the fogger and the ceiling should be allowed for adequate absorption of the fog into the air. This distance will also depend on the ambient temperature in the room. **The cooler the room, the less moisture the air can hold, therefore the more distance needed between the fogger and the ceiling. See Recommended Minimum Distances for Installation.**
- Since every room is different, it is often best to try a few different locations in the room to see where the humidity will be best projected. **You may want to do this before making a permanent installation such as building a shelf, etc.** Also, placement near an outgoing air vent or fan may help disperse the humidity throughout the room.
- Often times the best location for the fogger is off the floor several feet and on a wall-mounted shelf or stand. If placing your fogger on a shelf, make certain the shelf has sufficient strength to hold the fogger complete with water in the pan. **Consult the specification page, Page 2, for weights and dimensions of your fogger.**
- Do not place items in the fogger's immediate path as condensation may occur. Also, aiming the fogger's output at cool or chilled surfaces may also result in condensation.
- Make sure the fogger is placed **fully and completely horizontal. If the unit is not completely flat, water will not be properly distributed in the reservoir pan and damage and possible leaking/flooding may result.**
- Do not place multiple foggers within less than six feet of each other. If foggers will be facing each other, keep a minimum distance of 20 feet.
- Do not install the fogger in areas where freezing conditions can occur.
- Do not place the fogger under tables, benches, or chairs. Likewise, do not place the fogger in tight, cramped spaces that will restrict both airflow as well as the fog.
- Finally, place the fogger in a location where regular maintenance and monthly cleaning can be performed. The fogger should be readily accessible and be easy to disconnect from its water source.

CONNECTING WATER AND POWER TO THE FOGGER

Electrical

- Disconnect all electrical power supplied to the fogger before beginning installation.
- **Ground fault receptacles are *strongly recommended* and may be required by local code.**
- If using a controller such as a humidistat or timer, plug the fogger directly into either the controller itself or the piggy back plug (Hydrofogger.com Humidistat).
- Unplug the fogger if the water level inside the unit will run dry. If the fogger is run dry for long periods; damage may result.

Water

- **The Hydrofogger and Minifogger are not designed to be manually filled with water.** Both units have a water inlet valve where ¼" tubing is inserted on the outside of the reservoir pan. **NOTE:** *If present, remove the grey plastic insert from water inlet hole before inserting ¼" tubing. To remove the insert, gently press the collet or ring around the grey insert and wiggle the insert. It should come loose and slip out easily.* The water inlet is now ready to be connected to ¼" tubing. **(See Connecting Water to Your Fogger, Page 17, for more detailed instructions.)**
- Consider splicing in a shut off valve on the ¼" tubing a couple of feet from the fogger to make removing the fogger for maintenance easy. Shut off valves come with all of our Water Installation Kits.
- On the inside of the reservoir pan, there is a float that maintains the correct water level inside the unit. **Foggers come with the float level preset; there is no adjustment for it.**

THE FOGGER CAN BE CONNECTED TO WATER IN ONE OF THREE WAYS

(WATER CONNECTIONS PURCHASED SEPARATELY):

- 1. Connect directly to an existing water supply.** This is the most common installation. Often the same as connecting water to a refrigerator with an ice maker or water dispenser. Consider using our Saddle Valve Water Installation Kit.
- 2. Connect water using a garden hose.** A standard garden hose can be used to feed the fogger if a reducer is used to reduce the ¾" hose down to ¼". Be sure to reduce water pressure as to not overflow the reservoir pan of the fogger. Typically minimal water pressure (approx. 30 psi) is enough to adequately feed the fogger. Consider using our Garden Hose Water Connection Kit.
- 3. Connect to a water storage tank.** A water reservoir such as 5 gallon bucket or household rubber tub can be positioned higher than the fogger to allow gravity to bring water to the fogger. Consider using our Gravity Feed Water Kit.

CONTROLLING THE FOGGER

THE FOGGER CAN BE CONTROLLED IN ONE OF THREE WAYS:

- 1. HUMIDISTAT (PURCHASED SEPARATELY).** Plug fogger into a humidistat for automatic control. Consider using either the Hydrofogger.com Humidistat or the Digital Plug-In Humidistat, both of which work very well with the Hydrofogger and Minifogger. Note our Humidistat 300HH is accurate +/-15% and may not be suitable where much more accurate humidity control is needed. In this case, choose the 321HH Hydrofogger.com Humidistat for accuracy +/-2%.
- 2. TIMER.** Plug fogger into a timer for specific fogging intervals.
- 3. CONSTANT OPERATION.** Plug directly into ground fault receptacle for constant fogging.

WARNING

Humidistats generally are not very good indicators as to the exact humidity level and should be used more as a "reference" whether to increase or decrease the overall humidity level. A hygrometer should be used in conjunction with the humidistat in order to more accurately determine the humidity level.

NOTE

The Fogger and Humidistat should be monitored through at least a few initial cycles to determine that the settings and connections are correct, the humidistat is shutting off the fogger appropriately, and the system is functioning properly. Additionally look for condensation occurring on windows, ceilings, or equipment to determine if humidity level is set too high.

OPERATING THE FOGGER

- Once the fogger is connected to water and has water in the reservoir pan, it is ready to begin humidifying. If using a humidistat or timer, adjust the settings of either to a level that will start up the fogger and begin producing humidity.
- Both the Hydrofogger and the Minifogger come with a fogging head. The fogging head is designed to help aim and control the direction of the fogger's output of vapor. Keep in mind that using the fogging head is completely optional. Both fogger types can operate perfectly **WITHOUT** a fogging head. The difference is the vapor will simply billow straight up out of the fogger when operated without a fogging head. In many applications, this is preferred to using a fogging head.
- Optional air filters can be used to filter out dirt and dust particles from the air coming into the fogger. The filters are custom-cut foam rings that slip on over the fogger's screen to help reduce dust in the air. **The air filters do not address in any way any type of water filtration such as removal of calcium or other minerals. Additionally, the air filters do not suppress bacterial or fungal growth inside the fogger.** They will however, help filter dust particles out of the air in the area in which the fogger is operating. Air filters are reusable;

they can be gently washed and reused many times. A package of air filters for either fogger includes six filters. Keep in mind that using air filters will just slightly reduce the fogger's output because the airflow through the fogger is being slightly reduced.

- **BioCubes are strongly recommended for both the Hydrofogger and the Minifogger humidifiers.** They are unique in that they help slow bacterial and fungal growth in the reservoir pan and thus spreading throughout the unit. Place all six BioCubes at one time around the inside perimeter of the reservoir pan like numbers on the face of a clock. Do not place cubes under or adjacent to the float mechanism as to impede the float's up and down movement. **Although BioCubes work well to inhibit growth inside the humidifier; they are not a substitute for the monthly cleaning and maintenance of your fogger.**
- Inserting a shut off valve a couple of feet away from the fogger is highly recommended. This allows the fogger's water supply to be easily shut off (as well as controlling water pressure to the fogger) and simple removal of the fogger for cleaning and maintenance purposes. It also makes it easy to remove the fogger when it will be stored over long periods of time. **All of our Water Installation Kits come with a water shut off valve.**

MAINTAINING THE FOGGER EVERY 30 DAYS

REGULAR CLEANING AND MAINTENANCE OF YOUR FOGGER IS NEEDED IN ORDER TO KEEP THE UNIT RUNNING EFFICIENTLY, CLEANLY, AND AT ITS HIGHEST OUTPUT LEVEL.

- Regularly clean the fogger **EVERY 30 DAYS** to remove dirt, sediment, and algae that may occur. Pay particular attention to the Reservoir Pan, Pump Cone, Fan Blade, 2 Spinning Discs, and Atomizing Screen.
- **Unplug Hydrofogger or Minifogger from its power source (usually humidistat, timer, or grounded outlet). Do this before performing any maintenance or cleaning.**
- Turn off water supply (usually at saddle valve) and shut water off to fogger (usually at shut off valve spliced into water line). Disconnecting the water line may not be needed if there is enough slack in the water line to adequately clean the reservoir pan and float.
- Remove upper motor assembly from reservoir pan. For a Hydrofogger, unbuckle and detach the three clips holding the screen 3032HH to the side of the reservoir pan 3037HH. For a Minifogger, lift up on the grey screen 1529HH. Then unclip the three spring hooks 1539HH holding the motor unit inside the reservoir pan. Then remove the upper motor assembly from Reservoir Pan. Empty water from Reservoir Pan.
- Clean Reservoir Pan thoroughly with a soft brush and gentle household cleaner. A solution of 50/50 water/white vinegar works well as do some cleaners with a small amount of bleach. **Do not clean the fogger with straight bleach.** Make sure to rinse Reservoir Pan out completely to avoid soap foaming during use. If calcium has accumulated, use a calcium dissolving agent to remove calcium buildup.

- Using a soft brush and cleaning solution, clean off the Fan Blade, Pump (cone), and both Spinning Discs on the bottom of the upper assembly. Make certain the tip of the Pump is open and clear of any buildup or debris. Check also for calcium buildup and remove that as well.
- Inspect Float Valve Assembly to make sure it is able to move up and down freely. Calcium can easily build up on the hinge and make the float sticky and not allow the correct amount of water into the pan.
- **Confirm that the float is positioned to move only up and down and not side-to-side in any way. If the float assembly is not positioned straight up and down, an incorrect water level is possible in the fogger resulting in erratic humidification or damage to the unit.**
- Remove Fogger Housing with three screws. Using the cleaning solution, gently clean off the fins of the metal Atomizing Screen inside upper assembly with easy, up and down strokes. A long toothbrush works well for this. Be gentle as it is easy to damage the fins of the Atomizing Screen.
- Remove Motor Cover (dome) and visually inspect Motor and Capacitor for any signs of damage or excessive wear.
- Reassemble fogger; turn water back on at saddle valve, open water shut off valve. Plug unit back in to electrical connection (humidistat, timer, or grounded outlet). Turn on unit and test to assure proper operation.
- **When unit will not be used for more than a week, drain reservoir pan and wipe dry. This is the best way to maintain your fogger and keep it clean, safe and hygienic!**

ACCESSORIES

These accessories are available for either your Hydrofogger or Minifogger. You can purchase them directly at www.hydrofogger.com

- Water Connection Kit
- Anti-Microbial BioCubes
- Humidistats
- Air Filters (6 Qty)



TROUBLESHOOTING

There is a puddle of water in front of my fogger.

- Check temp in immediate area surrounding fogger. If below 70°, the air has reduced ability to absorb moisture, therefore condensation and puddling can occur. Keep in mind there is a 2% rH change for every 1 degree temperature change. This means cool air cannot hold as much humidity as warm air—it reaches “dew point”—where instead of being absorbed, the water condenses into droplets.
- Check humidity level. As humidity level rises (65%+), the ability of the air surrounding the fogger to quickly absorb additional humidity decreases, therefore condensation and puddling can occur.
- Make certain nothing is obstructing output of the fogger. **Check Recommended Minimum Distances for Installation.**
- If needed, a small fan placed behind the fogger will often help carry the fog out into the room where it can be absorbed more quickly. If there is airflow through the room, the fogger’s output should be pointed with the direction of the airflow, not into it.

There are water droplets forming on the ceiling or something in front of the fogger.

- Either lower fogger from ceiling or move further back from item. Check Recommended Minimum Distances for Installation.
- Lower humidistat setting.
- Raise temperature in room. (Dew Point)

The amount of mist coming from my fogger is lower than it used to be.

- Clean the unit following the maintenance instructions above. Likely either the tapered pump cone is blocked or the atomizing screen is clogged up.
- Check water level. Is there sufficient water (about one inch) in the reservoir pan? If not, check incoming water pressure and also check to make sure that float valve is able to move up and down freely. Also check fan blade.
- Too much calcium or other mineral in water supply. Either install a reverse osmosis (RO) water filter or a water softener. Using either distilled or deionized (DI) water will also remedy this.
- Check that motor is operating correctly. If motor is either not running, or rotating very slowly, a new capacitor or motor maybe needed.

There is a white dust settling in the room.

- Too much calcium or other mineral in water supply. Either install a reverse osmosis (RO) water filter or water softener.

Water is overflowing the reservoir pan.

- Check incoming water pressure. Reduce water pressure at source.
- Check float valve is able to move up and down freely and is not compromised. Turn water off and remove fogger from reservoir pan. Towel dry and gently hold float in up position. Turn on water and observe if water enters the pan. If it does, float valve needs to be replaced.

Fogger will not turn on.

- Turn up humidistat (or check timer).
- Check power connection.
- Check motor and capacitor.

Hydrofogger.com Humidistat Model 300H

Instructions for Use

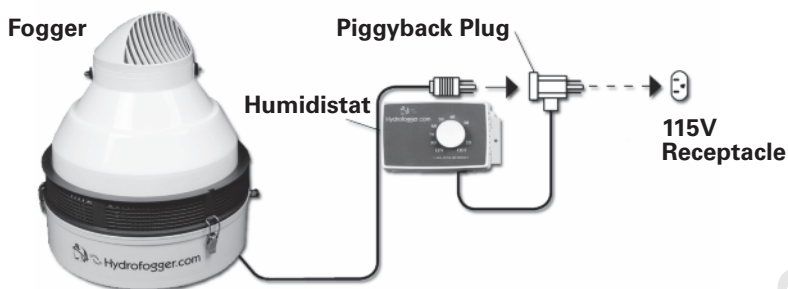


**READ COMPLETE INSTALLATION INSTRUCTIONS
AND TEMPLATE BEFORE STARTING.**

Specifications

Dimensions	4.5" x 3" x 2.625"
Mounting Plate:	5" x 2.5"
Cord Length:	90" (7.5 feet)
Weight:	1.08 lbs including cord
Input Voltage:	100-200
Amps:	5.5 FLA 6.5
Minimum Humidity Control:	20% (Non-condensing environment)
Maximum Humidity Control:	80% (Non-condensing environment)

Installation



- Disconnect all electrical power supplied to the equipment before beginning installation.
- Plug the Humidistat's piggyback power cord directly into a properly grounded receptacle. **Ground fault receptacles are strongly recommended and may be required by local code.**
- Plug the Hydrofogger or Minifogger into the female side of the piggyback power cord. Place the humidistat in a location that utilizes the overall length of the extension cord. Find a spot away from any spray/water/mist and also away from any registers. **It is strongly recommended NOT to use an extension cord to increase the distance between the Humidistat and the Fogger.** Doing this will substantially decrease the accuracy of the humidistat and may result in the fogger either running continuously or not at all.
- To set the humidistat, simply dial the control knob to the desired humidity level. When the humidity level is reached, the Humidistat will turn off the power supply leading to the Fogger. When the humidity level drops substantially below the setpoint, the power will be restored and the Fogger will then run again. Turn the knob to a higher number for more moisture or a lower number for less moisture. **Turning the knob all the way to "ON" will result in non-stop continuous operation of the attached fogger.**

Humidistats generally are not very good indicators as to the exact humidity level and should be used more as a "reference" whether to increase or decrease the overall humidity level. A hygrometer can be used in conjunction with the humidistat in order to more accurately determine the humidity level.

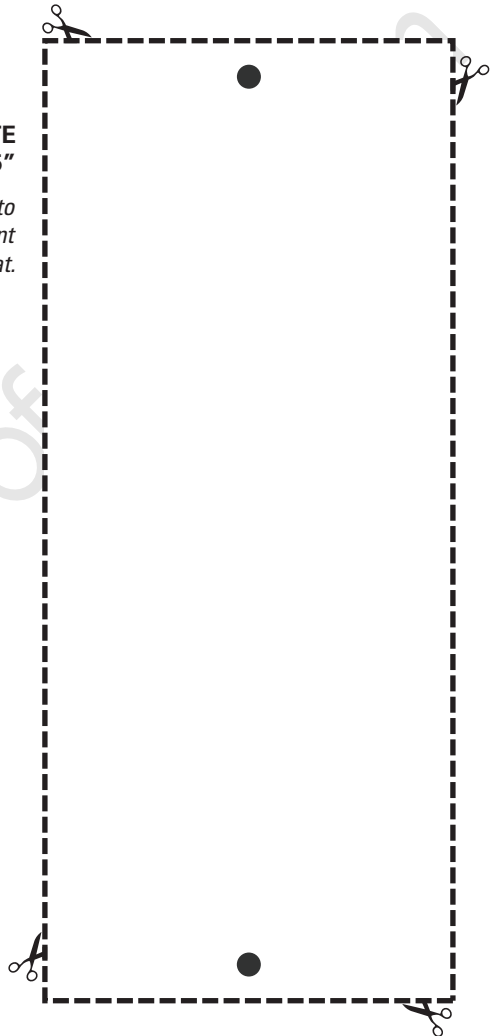
Note: The Fogger and Humidistat should be monitored through at least a few initial cycles to determine that the settings and connections are correct, the humidistat is shutting off the Fogger appropriately, and the system is functioning properly. Additionally look for condensation occurring on windows, ceilings, or equipment to determine if humidity level is set too high.

Tips

- Before permanently mounting the humidistat, try a few different locations in the area where the humidistat will be placed. Keep in mind the humidistat should be placed in the area that will best represent the “average” temperature and humidity level in the area. Often, the best location will be 5-6 feet above the floor.
- Do not mount the Humidistat in the path of the Fogger’s output. This will result in inaccurate operation. Additionally, be sure to mount the Humidistat away from any other water, mist, vapor, etc.

MOUNTING PLATE 5" X 2.125"

*Cut out the template to
the right to help mount
your humidistat.*



Warnings

- Read all instructions before operating humidistat.
- Do not place humidistat in an area where it can get wet, saturated, or sprayed.
- Mount humidistat securely using hardware provided.
- Do not use chemical sprays around humidistat.
- Avoid placing humidistat near heat generating sources.
- Keep humidistats free from obstructions to allow humidistat to function properly.
- Adjusting the setpoint too high may cause condensation resulting in possible damage. Monitor closely the humidistat and fogger to ensure that the output and humidity level is not too high for the surrounding area.
- There are no serviceable parts in the humidistat. Do not attempt to repair the unit.
- Do not put paperclips, tools, etc into humidistat. Possible electrocution may occur.
- Verify power source prior to plugging humidistat into outlet.
- Humidistat should only be used with Hydrofoggers or Minifoggers that are 115 voltage.
- Humidistat is designed only for indoor use.
- Use caution when operating humidistat in extremely humid environments.
- Monitor humidistat and fogger for initial cycles to ensure correct operation.
- Do not use humidistat for purposes other than the unit were designed to function.
- Use humidistat within defined environmental specifications.

Troubleshooting

If humidistat is not performing as expected, try the following:

- Check all supply voltage connections.
- Turn the control knob up and down to ensure the humidistat is responding. (The relay should switch on and off when the setpoint is adjusted above and below the humidity level being sensed.) Note: The humidity in the duct must be within the 20 to 80% range before the humidistat responds.
- Verify humidistat is completely dry. This may require letting the unit sit in a dry environment overnight.
- If the troubleshooting suggestions fail to remedy the problem, replace the unit.

Hydrofogger.com Humidistat Model 315HH

Instructions for Use

315HH Hydrofogger.com Humidistat controller is a humidity control device. This Controller is ideal for controlling humidification systems in both industrial and commercial applications.



Features

- Large Graphic Display showing humidity and setpoints.
- Humidity sensor with extraordinary performance.
- User friendly setup routine with control buttons on the front panel.
- Programmable humidity and hysteresis set points.

Specifications

Measurement Range:*	0 to 99% RH
Operating Range:	0°C to 55°C
Control Range:	10 - 95% RH
Hysteresis Range:	2 - 5% RH
Operating Voltage:	120V AC
Accuracy @ 25°C:**	±2.0% RH from 20-80% RH
Repeatability:	±0.1% RH
Relay Contact:	15A Max @ 125V AC
Sensor Stability:	< 0.5% RH/year
Sensor response time:	8 Sec.
Temperature effect:	None (Factory calibrated)
Extension cable:***	15 Feet Standard

* non-condensing

** options are available per request

*** max 50 feet per request



Installation

The humidistat has 2 cords attached: 1) a Grounded 6-foot power cord and 2) a Relay Cable to control the humidistat.

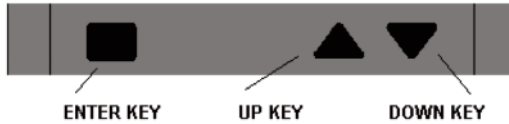
Attach both ends of the cable to the H-H contacts of the humidistat located inside the power box. (See enclosed sheet.) Make certain NEVER to attach the power connections to the H-H contacts — they are designed ONLY as low voltage relay contacts. Make certain to properly thread the power cable through the cap and then orifice/hole of the control box. Remove the grey spacing pin that is currently closing the hole.

Operating Mode

The controller becomes operational immediately after plugged in the power. In operating mode, the RH is displayed on the LCD display.

When the ambient humidity is less than RH set point, the relay will be energized until the ambient humidity reaches the RH set point plus hysteresis.

Programing Mode



Press ENTER key to enter the setup mode.

Press UP or DOWN keys to change the RH set point. When done, press to ENTER key to confirm the changes.

In order to make changes on the hysteresis set point, follow the same convention explained in previous step.

Select sensing method internal (I) or optional external (E) by pressing UP or DOWN keys.

When done with the setup, pressing ENTER key sets the operating model.

Factory Default Settings

Humidity: 45% RH
Hysteresis: 3% RH

Note: During the setup mode, RH measurement and relay output are disabled.

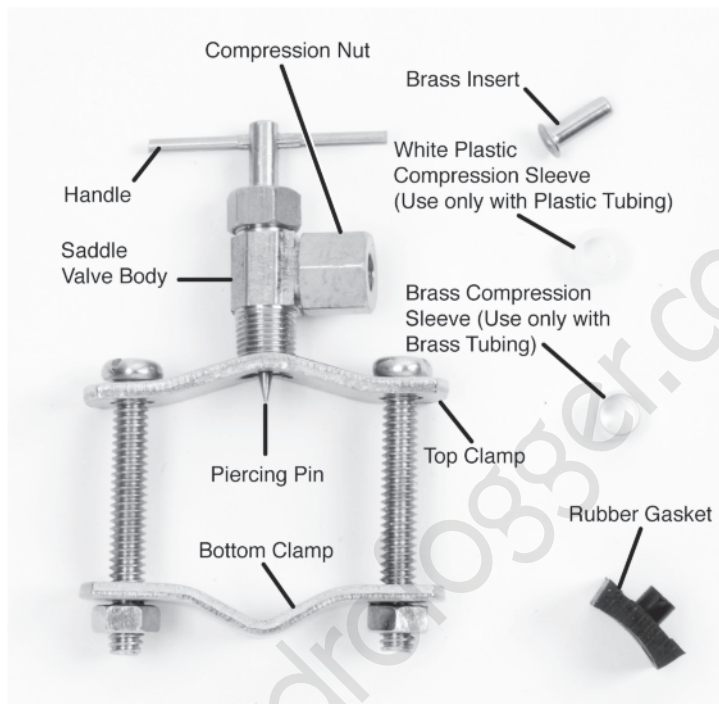
Hysteresis: This is the dead band or delta around the set point where the status of relay remains unchanged.

Warnings

- Not a fault tolerant device nor intended for use as online control equipment in hazardous environments, medical, nuclear, avionics fields and such requiring fail-safe performance.
- Do not place the unit in an area where it can get wet, saturated, or sprayed.
- Do not use chemical sprays around this unit.
- Avoid placing the unit near heat generating sources.
- Keep free from obstructions to allow to function properly.
- Adjusting the set point too high may cause condensation resulting in possible damage.
- There are no serviceable parts in this unit. Do not attempt to repair.
- For indoor use only.
- Do not use this unit for purposes other than it is designed to function.

Connecting Water to Your Fogger

Instructions for connecting water to your humidifier by way of Saddle Valve, Gravity Feed, or by Garden Hose



Saddle Valve Parts

Tools Needed

Phillips Head Screwdriver

1/2" or Adjustable Wrench

Drill with 1/4" Bit (if installing on galvanized or plastic pipe)

Make a Saddle Valve Connection

Choose this connection when an existing cold water pipe will feed water to your fogger. Same method as connecting a refrigerator or icemaker to a water pipe.

- Select a cold water pipe located in near proximity to the fogger. The saddle valve works best when installed on copper pipe, but can be installed on both plastic (PVC) and galvanized pipe. Pipe should have an outside diameter of either 1/2" or 3/4". Anything smaller and the saddle valve will have a tough time seating properly.
- Close the water shutoff to the selected pipe and open a faucet located below the area where the saddle valve will be installed to relieve water pressure.

- Clean the section of pipe where the saddle valve rubber gasket will be placed. Paint, corrosion, and dirt can prevent a watertight seal and should be removed from this small area. Use a piece of fine sandpaper or a kitchen scrub pad. Wipe off any remaining debris.
- If installing on PVC or galvanized pipe, drill a 1/4" hole to accommodate the saddle valve piercing pin. Place the hole either on top of the pipe, or on the side. Do not place the hole underneath the pipe.
- Be certain the saddle valve body is firmly screwed into the top clamp (**Figure 1**).
- Back the piercing pin fully up inside the valve body. Do this by turning the valve handle counter-clockwise.
- Place rubber gasket over point of piercing pin. Make sure curved side of gasket will rest snugly on pipe's surface (**Figure 2**).
- Place saddle valve assembly on pipe with rubber gasket directly over cleaned area. If hole has been drilled, extend piercing pin so it will line up with drilled hole. Tighten down assembly with Phillips Head screwdriver. Be sure to tighten both sides evenly. When rubber gasket is slightly compressed, **stop turning as it does not take much force to crush the pipe.**
- Turn valve handle clockwise. If penetrating copper pipe, some resistance will be felt. Turn handle all the way until it reaches the end. This is the "closed" position. Close any faucets that may have been left open.
- To connect 1/4" tubing to saddle valve, first slide compression nut onto tubing. Second, slide on white plastic compression sleeve, and third, push small brass insert into the tubing's end (**Figures 3 and 3A**).
- Now insert all of that into the saddle valve body and use a 1/2" wrench to tighten the compression nut onto the saddle valve assembly (**Figure 4**). Do not over-tighten. Note: The brass compression sleeve is only used for connecting brass tubing. For plastic tubing (what is supplied in this kit), the brass compression sleeve is obsolete!
- Test the connection by putting end of tubing into a bucket, open any water shut offs that were closed for the installation, and turn the saddle valve handle counter-clockwise. Water should begin to run from the tubing end. Control water flow by turning the valve handle. Finally, close water off in order to attach tubing to fogger. Proceed to section on ***"Connecting Tubing and Installing Water Shut Off Valve."***



FIGURE 1



FIGURE 2



FIGURE 3



FIGURE 3A



FIGURE 4

- If you see leaks, they are likely:

Around rubber gasket. Adjust gasket position and verify clamp bolts are tightened on each side of the saddle.

Where the valve screws into the top clamp. Carefully re-tighten with an adjustable wrench.

Make a Gravity Feed Connection

Choose this connection when using a reservoir, bucket, or basin to gravity feed the humidifier. Keep in mind the reservoir should be elevated.

- Select a water reservoir tank that usually holds a minimum of five gallons. A big plastic container is ideal. A 5 gallon paint bucket will work, but since the sides are curved, a little silicone caulk may be needed to prevent leaks at the bulkhead fitting. When possible, have the bulkhead fitting against a flat edge.
- Use a 3/4" boring bit to drill a hole towards the bottom of the reservoir. Ideally, the hole should be at the bottom where the side meets the bottom of the reservoir.
- Place bulkhead fitting through the hole, placing one black washer inside the reservoir, and one outside. Tighten the bulkhead fitting evenly on both sides, taking care not to overtighten.
- Connect the 1/4" tubing between the reservoir (See Connecting Tubing and Installing Water Shut Off Valve) and the fogger. Elevate reservoir above fogger, fill with water, and gravity will take of the rest!
- Use silicone caulk around washers if leaks occur.

Make a Garden Hose Connection

Choose this connection when using a standard 3/4" garden hose to feed the humidifier. This is very common in greenhouses and agricultural applications.

- Screw garden hose connector onto the male end of a standard 3/4" garden hose. Turn until hand tight.
- Connect the 1/4" tubing between the garden hose connector (**Figure 5**) and the fogger.
- Slowly and gradually open the garden hose. **Start with minimal water pressure to feed the fogger.** It takes surprisingly little water pressure to fill the fogger's reservoir pan. Take care not to over pressurize as flooding may result.



FIGURE 5

Connect Tubing and Install Water Shut Off Valve

The Water Shut Off Valve will allow you to turn water off to the humidifier when the fogger will be cleaned, moved or turned off.

- Make sure ends of the tubing are cut squarely and smoothly. (90 degree angles and no burrs or ragged edges).
- **For Foggers with BRASS CONNECTORS:** (Foggers sold before 2013) Push blue collar or sleeve in until it stops. Simultaneously insert tubing into

the blue collar. **Insert all the way until the tubing stops/bottoms out.**

Tubing should go in about $\frac{1}{2}$ "- $\frac{3}{4}$ ". Release collar and it will lock the tubing in place (**Figure 5**). Gently push/pull tubing to test connection. Monitor initially to make sure no leaks occur.

• **For Foggers with PLASTIC CONNECTORS:**

Insert $\frac{1}{4}$ " tubing into white collar hole. **NOTE:** *If present, remove the grey plastic insert from water inlet hole before inserting $\frac{1}{4}$ " tubing. To remove the insert, gently press the collet or ring around the grey insert and wiggle the insert. It should come loose and slip out easily.* Insert tubing all the way until it stops/ bottoms out. Tubing should go in about $\frac{1}{2}$ "- $\frac{3}{4}$ " (**Figure 5A**) and be locked in place. Gently push/pull tubing to test the connection. Monitor initially to make sure no leaks occur.

Install Water Shut Off Valve

With no water in tubing, select a spot about 8-12" from the humidifier (**Figure 6**). Cut tubing cleanly and squarely. Insert $\frac{1}{4}$ " tubing into both connection holes of shut off valve (**Figure 7**). Insert tubing all the way until it stops/bottoms out. Tubing should go in about $\frac{1}{2}$ " and be locked in place (**Figure 8**). There are stainless steel teeth inside both ends which hold the tubing firmly in position while an "O" ring provides a permanent leak proof seal. Gently push/pull tubing to test connection. Monitor initially to make sure no leaks occur. Simply turn handle on valve to turn water flow on and off.

Disconnect Tubing

- Ensure system is depressurized before removing tubing. Do this by shutting water off at its source and allowing tubing to drain into fogger's reservoir pan.
- Gently push in collar (either blue or white depending on connector) and simultaneously remove tubing. Tubing should slide out. When re-inserting, make sure that tubing is cut flat and smooth. It is often a good idea to re-cut a smooth edge when reinserting tubing. Know that each time tubing is removed and inserted, the chance of compromising the seal increases. Be sure to monitor the connection for any leaking that may occur.



FIGURE 6



FIGURE 6A



FIGURE 7



FIGURE 8



FIGURE 9

ONE YEAR LIMITED WARRANTY

Humidifiers and related accessories are warranted to the original purchaser against defects in material and workmanship under normal use for one full year from date of purchase. Any part determined to be defective and returned to the manufacturer, shipping costs prepaid, will be repaired or replaced at Hydrofogger.com, LLC's option without charge. Proof of purchase date and an explanation of the problem must accompany the returned portion of the item in question.

TERMS

Hydrofogger.com, LLC reserves the right to verify the legitimacy of the claimed defect(s). The provisions of this warranty do not apply to damage resulting from direct or indirect misuse, negligence, accident, lack of maintenance, unauthorized repairs or alterations which affect the machine's performance or reliability.

Unless a statement in this Agreement is specifically identified as a warranty, the statements made in this Agreement by Hydrofogger.com, LLC relating to humidifiers and related accessories are not warranties and do not form part of the basis of the bargain, but are merely made in the course of the negotiations of the parties.

Except for warranties made in writing, Hydrofogger, LLC makes no warranty concerning the goods or any other matter, except that the items described in the website are the items being purchased under this Agreement.

The goods subject to this contract are not warranted as suitable for any particular purpose particular to buyer. The suitability of goods for any purpose particular to buyer is for buyer, in buyer's sole judgment, to determine. Hydrofogger.com, LLC assumes no responsibility for the selection or furnishing of goods suitable to the individual needs and purposes of any particular buyer.

HYDROFOGGER.COM, LLC MAKES NO WARRANTY OF MERCHANTABILITY OF THE GOODS OR OF THE FITNESS OF THE GOODS FOR ANY PURPOSE.

Unless Hydrofogger.com, LLC makes a warranty in writing, it makes **NO WARRANTY OF MERCHANTABILITY** concerning the property and **NO WARRANTY THAT IT IS FIT FOR A PARTICULAR PURPOSE**. A warranty of merchantability is a warranty that property is fit for the ordinary purposes for which property of the same sort is used.

NO WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, HAVE BEEN MADE BY HYDROFOGGER.COM, LLC IN REFERENCE TO THE GOODS UNLESS EXPRESSLY INCLUDED IN THIS AGREEMENT BETWEEN BUYER AND HYDROFOGGER.COM, LLC.

This warranty does not cover consequential damages, and Hydrofogger.com, LLC's liability is limited to repairing or replacing humidifiers and related accessories in accordance with the stipulations contained in this warranty. No other warranty, express or implied, is made.

In accepting the terms of this Agreement, buyer agrees and understands that the terms of this Agreement are governed by the laws of the State of South Carolina. Buyer understands and accepts that all provisions of this Agreement are made in Greenville County, South Carolina and that venue and jurisdiction for all matters in dispute shall also be in the Court of Common Pleas, Greenville County, South Carolina, USA.

The sole and exclusive warranty of Hydrofogger.com, LLC under the terms of the Agreement is that the goods sold pursuant to the Agreement will be as described in the Agreement and be free of any defects in parts and workmanship for a period of one (1) year from the date of delivery to buyer, if used under normal circumstances and in accordance with the operations manual enclosed with the goods.

HYDROFOGGER.COM, LLC EXPRESSLY DISCLAIMS ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSES OF BUYER AS PROVIDED BY THE UNIFORM COMMERCIAL CODE AS ENACTED IN THE STATE OF SOUTH CAROLINA.

The sole and exclusive remedy of buyer under Agreement is Hydrofogger.com, LLC's obligation to repair or replace parts or the entire article at no cost to purchaser for the indicated period, provided buyer shall notify Hydrofogger.com, LLC in writing of such defect within ten (10) days of the discovery of the defect, such writing to be mailed to Hydrofogger.com, LLC at PO Box 31281 Greenville SC 29608-1281. In absence of such timely notice, buyer shall be barred from this or other remedies.

The remedy here provided buyer as to parts and replacement shall be buyer's sole and exclusive remedy under this Agreement and is made in substitution of any and all remedies otherwise provided under the Uniform Commercial Code as enacted in the State of South Carolina.

The goods that are the subject of this Agreement may be returned by purchaser if they are not satisfactory, but Hydrofogger.com, LLC's liability is limited to accepting a return of the goods and refunding the purchase price paid. Hydrofogger.com, LLC's liability shall not extend to interest charges or damages of any nature.

Hydrofogger.com, LLC shall not be liable for consequential damages resulting from any breach of warranty.



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