



Oxygen Concentrator Important - Read First

Read provided instructions before using any Puppywarmer® products
Puppywarmer® products are instruments in the care of your puppies.

Your ability to monitor the puppies' conditions and response to their environment are essential to their health.

Video setup instructions <https://www.youtube.com/watch?v=Rh6yGWT-dzM&t=98s>

Or search Puppywarmer (all one word) on YouTube

Concentrator best practices:

- **Clip zip tie (protects unit during shipping) located in the bottom, black panel, of the concentrator before use**
- The Puppywarmer oxygen concentrator has a fuse and should be plugged directly into a wall outlet for best results. **Do not use a surge protector with the Puppywarmer Oxygen Concentrator.**
- **Check the filter** (white, circular object with "H" embossed on the back of the unit) **is present, seated properly, and not discolored before each use.**
- Replace filters every 2 litters (breeders) or monthly (veterinarians and rescue). Often the discoloration will show as a faint brown or gray, but any discoloration is an indication that the filter must be immediately replaced. *Failure to replace the filter properly will void the warranty and cause permanent damage to your concentrator.*
- **Always use distilled water** in the humidity vessel of the concentrator. Other water can leave calcium deposits which can impair performance. The bottle must read "Distilled Water." No other water will perform as well.
- **DO NOT OVERFILL** the humidity vessel. The "Max Fill" line is on the front of the compartment in the blue area. Refill every 6-8 hours for optimum performance.
- Oxygen line is routed from the oxygen output of the Oxygen Concentrator/Supply through one of two round holes in the rear corners on the top of the incubator. The small cup should be kept at a height about 1" above the puppies heads. **Make sure the oxygen line is pointing away from the sensor.**
- Refer to blog articles on www.puppywarmer.com for more information. Contact us at 269-568-3450 with questions.

Recommended Starting Oxygen flow rates:

Puppywarmer® recommends the use of Puppywarmer® Oxygen Concentrators with our incubators, to create proper air exchange.

Puppywarmer® Incubator Size	Initial Flow Rates (Liters Per Minute)
12x12	1
18x18	1.3
18x24	1.6
350x350x350 ProSeries Transport	1.1
325x450x350 ProSeries Transport	1.3
500x500x500 ProSeries	1.6
550x550x550 ProSeries	2.0

As puppies grow, and are better able to regulate temperature, you can gradually raise the flow rate to increase the rate of air exchange in the unit.

To change the flow rate to the nearest round number (*.0), tap the Flow +/- buttons. To change the flow rate to a tenth of a liter per minute, hold the Flow +/- buttons.

"SOS" button controls the light at the top of the concentrator by holding it down.

Puppywarmer® concentrators have an audible alarm that alerts when the unit is on (rocker switch in the on position) and the unit is separated from power. Switching the rocker switch to off or reconnecting to power will silence the alarm.

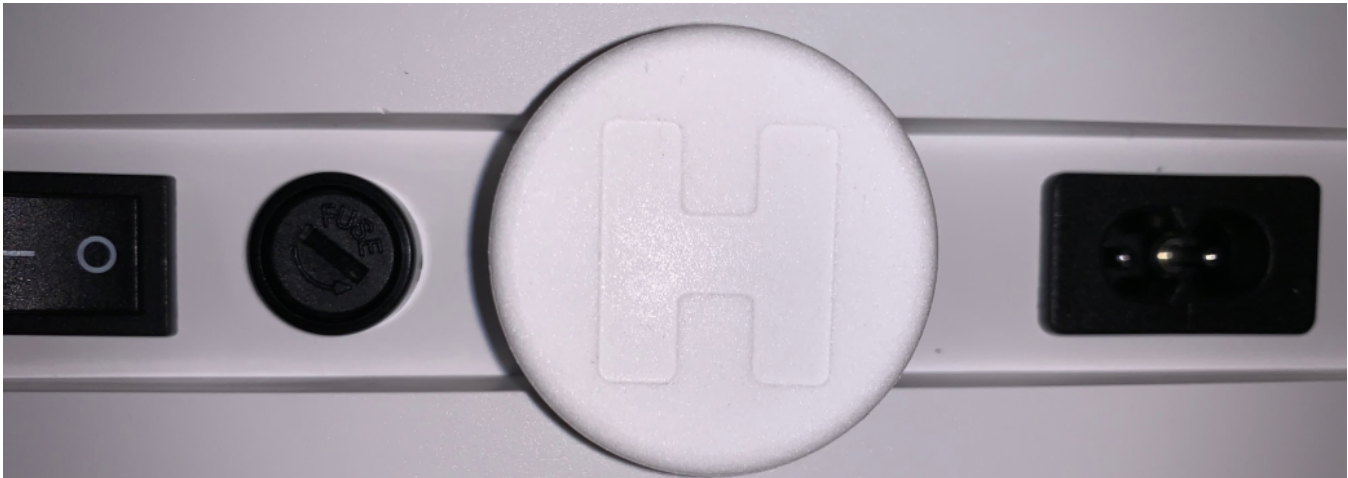
Puppywarmer® is a registered trademark of Warmer3
Contact us at 269-568-3450 (text/call) or customercare@puppywarmer.com



Thank you for purchasing the **Puppywarmer® Oxygen Concentrator**. The Puppywarmer® Oxygen Concentrator is a versatile tool in the effort to save puppies. To maximize performance, it is best to pair the Oxygen Concentrator with a Puppywarmer® incubator.

- Core features: Ability to deliver 2L per minute at 90% oxygen concentration (Pro Series) or 1L per minute at 90% oxygen concentration (Standard Series)
- Ability to adjust in 0.1 Liters Per Minute (LPM) increments between 1 LPM and 3 LPM (standard) or 5 LPM (Pro Series)
- Real time display of oxygen level output
- Ability to switch between oxygen port and nebulizer (ambient air) port

To get the best performance and life of your system:



- 1) **Check the incoming air filter (the circle with the "H" on it in the above photo) before each use.** If it is even slightly discolored, replace it. Otherwise replace it every 500 hours of use, or three litters. The oxygen concentrator is a sophisticated device. The oxygen concentrator separates Nitrogen from oxygen in your ambient air. It employs a molecular sieve. The air filter protects the molecular sieve. If the air filter is discolored, it has trapped contaminants in your ambient air. There is risk of clogging the air filter, which can damage the molecular sieve and the air pump. We ship the oxygen concentrator with 5 replacement filters. We offer 6 packs of replacement filters on puppywarmer.com. They are much less of a cost than purchasing a new oxygen concentrator. The filter pulls off and pushes on. It is that easy to maximize performance.
- 2) **Always use distilled water.** Never fill above the maximum water level fill line.
- 3) Empty the distilled water reservoir and run at the highest oxygen setting for 30 minutes prior to storage to remove water residue.

Set up

The Oxygen Concentrator ships with a zip tie in the bottom to protect it from shipping damage. Cut the tie with scissors or wire cutters and pull gently but firmly to remove.

Setup for the oxygen concentrator is easy and straightforward. Attach the power cord to the back of the unit, attach the provided oxygen line to the upper oxygen port and/or add the nebulizer line to the nebulization port. Plug the concentrator directly into the wall outlet.

To add distilled water to improve humidity, on the front of the unit, there is a black rectangular button with the word “push” above it. Pushing this button releases the distilled water vessel. The fill line is clearly noted on the front of the vessel. On the back of the vessel, there is a black rectangular plug that must be removed to add distilled water. If you fill above the fill line, simply pour some of the water out.

- Always use distilled water--this is best for the puppies and for the life of the oxygen concentrator
- **Never overfill the distilled water vessel--this can create back pressure on the flow system**
- Puppies can thrive in a relatively wide range of humidity 40-60%. The humidity level near the puppies is about 8 percentage points higher than where it is sensed on the unit. At the sensing point humidity should read between 32 and 52%. The humidity level in the incubator is somewhat dependent on ambient room humidity. The number of puppies in an incubator can also affect humidity levels. The greater the number of puppies, the higher the humidity level. Placing a cloth or fleece in the incubator can reduce the humidity level by as much as 10%.
 - If you are having trouble reaching or maintaining minimum humidity level, we have options available to augment humidity further. (please note we recommend against the evaporative cloth or fiver methods due to the possibility of bacteria growth over time. We do not offer devices that utilize these methods)
 - If you are consistently exceeding recommended humidity levels, reduce the distilled water level. The unit can run fine without any distilled water in the distilled water vessel.
- Why is humidity important
 - Lower than 25% humidity can be a major contributing factor to dehydration. (If the air is dry, the puppy is losing a little hydration with each breath)
 - Humidity above 80% can lead to respiratory issues
 - If you have dehydrated puppies, elevating humidity to 60-70% can assist in their recovery

Drop the cup end of the oxygen line into the Puppywarmer incubator. This cup can be placed directly in front of the snout of a gasping puppy. Make sure the puppy is cleared out and apply the cup to the puppy's snout. Most gasping puppies “pink up” in 45 to 90 seconds.

We strive to make our systems simple to operate and intuitive to use. The Oxygen Concentrator is a sophisticated device. We have made an effort to have the control interface be as intuitive as possible.

A quick note about incubators

For best results, pair the oxygen concentrator with a Puppywarmer® incubator. Puppywarmer® incubators set the standard for precisely controlling heat, deploying a heating method that heats puppies deeper into their bodies and creating the thermal gradient puppies need to regulate their temperature.

Operation

1. **Puppywarmer recommends you plug the unit directly into a wall outlet.** Some surge protectors can interfere with operation or damage the unit.
2. Flip the rocker switch on the back of the unit to “on”.
3. You will see a **green** (Models prior to 2022 **red**) power button light up on the front of the unit, press it to turn the unit on.
4. The unit is set to stabilize at two liters per unit (Pro Series) or one liter per minute (Standard) and 90% oxygen. The unit will stabilize in about two minutes and a green light will come on. You can now adjust oxygen rates.
5. To raise the oxygen level by 1 LPM at a time tap the “Flow +” button. To lower the oxygen level by 1 LPM at a time tap the “Flow -” button. Hold either the “Flow +” button or the “Flow -” button to adjust by 0.1 LPM.
6. **Recommended flow rates**
 - 12x12” unit at 1 LPM
 - 18x18” unit at 1.3 LPM
 - 18x24” unit at 1.5 LPM
 - If you have an oxygen deprived litter, or several oxygen deprived puppies, raise the oxygen level 0.5 LPM higher than the above until about 30 minutes after delivery of the last puppy
 - Please note that the oxygen delivered is close to ambient room temperature. If you are delivering higher flow rates than above there are two strategies to improve puppy safety
 - Raise the oxygen line a couple inches to allow the oxygen to mix with warmer ambient air
 - Split the oxygen line in two and deliver oxygen to opposite sides of the incubator.
 - Proper temperature is essential to neonatal puppy health. We understand there will be scenarios where oxygen is temporarily the most critical to deliver of Heat, Oxygen and Humidity. The above strategies help meet the immediate need and mitigate a potential secondary problem.
7. Nebulization--tapping the nebulization button switches the flow from the oxygen line to the nebulization line. The nebulization line delivers ambient air in a manner that can atomize liquid medicine. The application of nebulized medicine should always be applied strictly following the protocol instructed by a veterinarian. Tapping the nebulization button again returns to the concentrated oxygen delivery from the oxygen port.
8. Timer--When the oxygen concentrator is turned on, it is set for continuous operation. This is the recommended operation mode. We believe it is rare that the timer should be deployed. In the case of setting the timer, tap or hold the “Timing +” and “Timing -” button to raise or lower the timer setting in 20 minute increments.
9. SOS/Help button--the SOS/help button provides an audible signal if an individual has multiple puppies needing urgent care. Tap the “SOS/Help” button and the oxygen concentrator delivers the message “Help Me” until it is tapped again. It allows the person to focus on the puppy while alerting others to the need for assistance. Holding the help button down will turn the LED light ring on and off.
10. **Turn the unit off with the rocker switch on the back. If you disconnect from power without first turning off the rocker switch, an alarm will sound. The purpose of the alarm is to notify of a power outage.**

Maintenance

External filter. The incoming air filter should be changed about every 500 hours of operation or when you see discoloration in the filter--whichever comes first. For breeders, where several dogs are present, the filter will likely need to be changed more frequently--every two litters is a good guideline. The purpose of the incoming filter is to keep larger particles, such as dust and dander, away from the functional components of the oxygen concentrator. **Do not operate without the external filter.**



Running your oxygen concentrator with a discolored, clogged, or missing incoming air filter will impair performance and damage the unit.

The Oxygen Concentrator has a fuse protection circuit. It is best to have the Oxygen concentrator plugged directly into the wall. Replacement fuses are provided. The fuse is located next to the rocker panel on the back of the unit.

Store dry. It is best to store the unit with the distilled water vessel dry. To dry the vessel, empty the distilled water and run the unit at 3 LPM.

Cleaning is best to use cleaning materials that evaporate and leave no residue. For this reason, alcohol or eyeglass wipes can be used for cleaning. Making sure the oxygen line is not stored with trapped water is also key to hygienics.

Replacement oxygen lines and incoming air filters are available through Puppywarmer®

Closing thoughts

At Puppywarmer® we try our best to focus on doing what is essential well, and developing products that help you simply save puppies.

In our history, we have helped Veterinarians, Breeders, Rescue Groups and Service Dog Organizations save puppies at risk and give all puppies the best start in life. Because of the diversity of medical conditions and genetic issues that exist, we cannot claim to be able to save them all. Rather, we can confidently state Puppywarmer® can help you save more at risk puppies and give all puppies the best start in life.

If there is something you think we can do to make these instructions clearer, or make our products stronger--we will readily listen to your input. There have been cases where a user's experience led us to make changes to strengthen the product. The oxygen concentrator you purchased is limited to a 3L(Standard) or 5L (Pro series) per minute output. Higher flow rates than 3 lpm are not beneficial to neonate puppies. Oxygen Concentrators deliver a lower concentration at higher flow rate, and the higher flow rate directed toward a puppy can lower the puppies internal temperature. We strive to limit options to only good choices for the operator and the puppies. We feel strongly that a customer's experience with Puppywarmer® and our products is essential to our continuous improvement efforts and maintaining performance leadership.

We have a closed Facebook group "Team Puppywarmer" to create a way that our customers can exchange ideas and share success stories. We also use it to get input on ideas we have for future products. Welcome to Team Puppywarmer!