Create Clean Water

Atmospheric Water Generators vs. Dehumidifiers

Key Discussion Points:

- What are Atmospheric Water Generators (AWGs)?
- How is an AWG's process different from dehumidification?
- Why is water collected through dehumidification unsafe?

More people than ever have concerns about their access to clean water.
Whether they live in drought-affected regions, areas that limit water consumption, cities with contaminated water, or have an unreliable well as their primary source,
a considerable portion of the U.S. population is questioning their water security.

A look at your favorite search engine will show many people are asking if they can drink water collected as a byproduct from dehumidifiers.
The short answer is **no**.
There are several reasons why water from dehumidifiers is not safe to drink.
We'll discuss those in detail below.

If you're interested in a sustainable and safe way to create drinkable water from humidity in the air, you're looking for an atmospheric water generator (or AWG for short).
These innovative machines can produce up to 10,000+ liters of clean water per day at an average rate of 9 cents per gallon!

The Environmental Protection Agency (EPA) has stated, "...*recent technological advancements have substantially improved the energy-water ratio—increasing the feasibility of using these systems to help augment the Nation's drinking water resources*."

Since dehumidification and atmospheric water generation both involve condenser and cooling coil technology, consumers can misinterpret the two as interchangeable.

This article will discuss the processes that make dehumidifier water unfit even for plants, while atmospherically generated water surpasses EPA drinking standards.

How Does Dehumidification Work?

Dehumidifiers work by drawing air into super-cooled coils that cause moisture to condensate.
The excess water drips into a tank, and drier air is blown out, causing humidity to decrease.

Benefits

Dehumidifiers can be helpful for indoor use.
They may help reduce symptoms of asthma and certain allergies.
If a space is excessively damp, dehumidifiers help prevent mold and mildew.
Reducing indoor humidity and preventing mold buildup keeps pests away, including dust mites, silverfish, cockroaches, and spiders.

Drawbacks

If the air is too dry, conditions such as dehydration, eczema, and pneumonia can worsen.
If your goal is a high-volume water output, dehumidifiers are inefficient.
Even the largest dehumidifiers only produce around 50 L of water per day.

Remember, none of the water a dehumidifier collects is safe for consumption!

Water collected through condensation isn't sterilized, boiled, or cleaned.
Harmful bacteria and microorganisms flourish in the environment of a dehumidifier.
This is why you shouldn't use this water on your plants. It could kill them!

How Does Atmospheric Water Generation Work?

First, air is pulled through a multi-stage filtration system that removes the dirt and suspended particles.
A series of air and water purifiers, including continuous UV disinfection, eliminate harmful particles smaller than 2.5 microns.

AWGs are optimized to produce the highest volume of water per unit of energy.
[REMOVED FOR PRIVACY]'s AWGs can produce up to 5 liters of drinkable water per kWh of energy.

Besides drinking, you can also use this water on plants intended for consumption, cleaning, bathing, cooking, or any other use of clean water.

Benefits

- AWGs yield clean, drinkable water that exceeds the EPA's standards.
- AWGs are optimized for water output, producing up to 5L per KWH and up to 10,000+ L per day.
- AWGs are environmentally sustainable because outdoor humidity naturally recycles and replenishes every 9 days.
- AWGs are not subject to local water limitations because they are separate from public water lines.
- AWGs produce water safe from PFAS, algae blooms, runoff, and other local contamination.
- AWGs only require electric connection, no drilling or major construction.

Drawbacks

AWGs are housed in compact outdoor units.
Therefore, the impact on indoor humidity is negligible.
This is where dehumidifiers are useful.

Technology Comparison Summary

Feature	AWG	Dehumidifier
Produces clean, drinkable water	✔	**X**
Filters, purifies, and continuously disinfects water	✔	**X**
Water Output	Up to 10,000+L per day	Up to ~5L per day
Location	Outdoor unit housed in metal box	Indoors
Purpose	Maximize output of clean water	Reduce humidity of surrounding area
Uses cooling coils and condensation	✔	✔

How Do I Start Getting Clean Water from Air?

If you're interested in learning more about how Atmospheric Water Generators (AWGs) can supplement or replace your current water source, please contact [REMOVED FOR PRIVACY]'s expert staff to start a discussion.

We have options suitable for small families up to large businesses.