

# Aquatronics™ Humidity System

Cutting-Edge High Volume Controlled Humidification



## The Aquatronics™ High Volume Humidity Control System

Humidity can affect the color, aroma and taste of wine.

Aquatronics™ smart humidity system efficiently optimizes relative humidity while controlling water and energy consumption. Its patented nozzle technology uses air to precisely atomize water.

Pressured air and water combine in the nozzle resulting in a fine, dry fog. This humidifies the environment without wetting surfaces. Our fully-customizable system can be used for any humidification application.



High volume humidity  
without wetness

Increases humidity  
to specified levels  
with precision

**Our Aquatronic system helps maintain optimal humidity levels in barrel rooms, wine caves, and wine cellars.**

## Aquatronics™ Advantage

- Patented nozzle design evenly distributes fine fog as small as 6 microns
- Customizable to adapt to any sized room or facility
- Low maintenance
- 100% water efficiency - All water evaporates; No drain required
- High-tech control system with touch screen for precise humidity control
- App-based remote access capability via smart phone or computer
- Plug-and-play module that only requires air and water source
- Requires low air (30PSI or 2 bar) and water (45PSI or 3 bar) operating pressures
- Non-clogging large nozzle orifice with basic filtration
- No standing water tanks - No risk of bacterial colonization



The Aguatronics™ system is one of the most cost effective and quality preserving methods for wine storage.

## Humidity can affect the color, aroma, and taste of wine

Our state of the art Aguatronics™ system manages optimal humidity while keeping wine barrels, wine bottle labels and storeroom floors dry. This humidity level provides the perfect aging condition for wine barrels and wine bottles, resulting in consistent wine quality. The high humidity level also reduces loss to evaporation and reduces the need for topping barrels with fresh wine. Our Aguatronics™ system is one of the most cost effective and quality preserving methods for wine storage.

## The Importance of Humidity

Low humidity levels result in evaporation, which is a major problem for wine producers. During the aging process, close to 15% of the wine volume in barrels can be lost through evaporation over a three year period at 60% relative humidity. This evaporation also excessively increases the alcohol content of the wine. Modern methods utilize cooled aging rooms which have even lower relative humidity levels. Wood is susceptible to cracking in dry conditions, resulting in cracked wine barrels and leakage of wine. Low humidity also dries out wine bottle corks, resulting in air seepage into bottles. This allow for oxidation of the wine, resulting in aroma and flavor modifications, and reduced shelf life. Aguar can help preserve your wine's superior quality by reducing evaporative loss and maintaining optimal storage conditions.

High humidity levels are also an issue for the wine industry. Humidity levels above 80% can lead to mold formation in the storage room, barrels, and also on the wine bottle labels and corks.

## Canon Nozzle



**Estimated Evaporated Loss From Barrels**

Temperature		Relative Humidity											
C°	F°	40	45	50	55	60	65	70	75	80	85	90	95
10.0	50.0	4.78	4.42	4.04	3.85	3.28	2.90	2.52	2.15	1.77	1.39	1.01	0.63
11.0	51.8	5.12	4.72	4.31	3.91	3.51	3.10	2.70	2.29	1.89	1.48	1.08	0.68
12.0	53.6	5.47	5.04	4.51	4.18	3.74	3.31	2.88	2.45	2.02	1.58	1.15	0.72
13.0	55.4	5.84	5.38	4.92	4.40	4.00	3.53	3.07	2.61	2.15	1.69	1.23	0.77
14.0	57.2	6.23	5.74	5.25	4.76	4.26	3.77	3.28	2.79	2.29	1.80	1.31	0.82
15.0	59.0	6.65	6.12	5.60	5.07	4.55	4.02	3.50	2.97	2.44	1.92	1.39	0.87
16.0	60.8	7.06	6.52	5.96	5.40	4.84	4.28	3.72	3.18	2.60	2.04	1.48	0.92
17.0	62.6	7.55	6.95	6.35	5.76	5.16	4.56	3.97	3.37	2.77	2.18	1.58	0.98
18.0	64.4	8.04	7.40	6.77	6.13	5.50	4.86	4.22	3.59	2.95	2.32	1.68	1.05
19.0	66.2	8.56	7.88	7.20	6.53	5.85	5.17	4.43	3.82	3.14	2.40	1.79	1.11
20.0	68.0	9.10	8.38	7.66	6.94	6.22	5.50	4.78	4.06	3.34	2.52	1.90	1.18

This table is useful for estimating the % wine loss per year under various temperature and humidity conditions. The table only applies to conditions close to Sterling Vinyards' storage standards: table wine stored in tight-grained, 225 lit. Chateau (thin-staved) barrels in non-windy areas, etc.

- Designed for large applications: 10,000 sq ft or larger; 1,000 sq meters or larger
- Pre-fabricated mounting brackets
- Stainless steel nozzle with a large, clog-free spray orifice (2mm orifice)
- Water discharge: 1.0-1.5 gal/hr; 4-6 L/hr
- Droplet size: 6-10 microns
- No drain required

