

## WALL MOUNTED HUMIDITY CONTROL SYSTEM

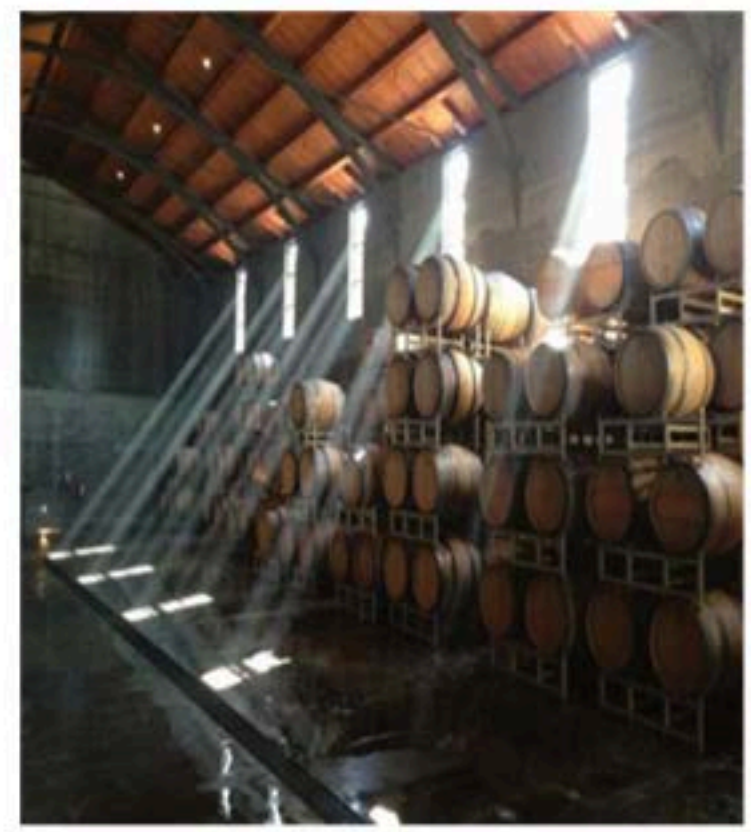
**INDUSTRIAL HUMIDIFICATION:** using advanced Ultrasonic technology develops ultra fine mist below 5 micron, allowing for instant and complete evaporation within a very small area, no chance for anything to get wet or damp. .82GPH. Common 110-120v electrical uses less than 1 amp of power when on maximum, virtually silent operation with simple self wall mount and built in sensor/humidistat which you can adjust to the required rooms set point 0-99% Rh.

**INTELLIGENT AUTO-CONTROL & SAFETY SHUT OFF:** water feed is full time delivery with connected supplied 1/4" flex water line, no need to re-fill unit, water feed is automatic and 24/7 with Intelligent Auto-Stop when water is low or supply stops.

**ANTIBACTERIAL TECHNOLOGY:** water chamber uses silver ion antibacterial technology for always clean, fresh, and hygienic mist vapor.

**SIMPLE INSTALLATION:** wall mounted installation and push/pull connectors make for a simple self installation without the need of a professional plumber or electrician. All systems are pre-tested and plug in ready to operate.

**SIMPLE MAINTENANCE:** dust-proof air intake screen is removable and washable, water chamber allows for periodic water drain keeping scale build up to a extreme minimum. Suggested chamber maintenance and dust screen maintenance cycle time is every 6 months.



Ultrasonic humidifiers use ultrasonic vibrating discs. These discs vibrate at an ultrasonic frequency. The water that is stored in the unit is then disrupted and broken up by the discs powerful, supersonic movements. This then creates extremely fine water droplets that leave the humidifier (usually by a tiny fan) as a visible, less than 5 micron mist. The humid air is then pushed around the room to create balanced humidity. Ultrasonic humidifiers usually have a greater level of sophistication, and you can adjust the settings of it more easily to suit your needs.

Humidity Control System Units are designed to be expandable, you simply just add units as room size or humidity demand needs change

# ULTRA-MIST 24/7 HUMIDIFIER

**ESTIMATION OF EVAPORATIVE LOSS FROM BARRELS (% PER YEAR)**

Temperature °C	°F	Relative Humidity											
		40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
10.0	50	4.79	4.42	4.04	3.66	3.28	2.9	2.52	2.15	1.77	1.39	1.01	0.63
10.5	50.9	4.96	4.57	4.17	3.78	3.38	3.00	2.62	2.23	1.83	1.43	1.03	0.63
11.0	51.8	5.12	4.71	4.31	3.91	3.51	3.11	2.72	2.31	1.89	1.48	1.07	0.63
11.5	52.7	5.29	4.88	4.45	4.04	3.62	3.22	2.82	2.38	1.95	1.53	1.11	0.63
12.0	53.6	5.47	5.04	4.61	4.18	3.75	3.31	2.91	2.45	2.02	1.58	1.15	0.63
12.5	54.5	5.65	5.21	4.76	4.31	3.86	3.42	2.99	2.52	2.08	1.64	1.21	0.63
13.0	55.4	5.84	5.38	4.92	4.45	4.01	3.54	3.09	2.62	2.15	1.69	1.27	0.63
13.5	56.3	6.02	5.56	5.08	4.60	4.13	3.64	3.18	2.71	2.22	1.74	1.32	0.63
14.0	57.2	6.21	5.74	5.25	4.75	4.26	3.75	3.28	2.79	2.29	1.79	1.37	0.63
14.5	58.1	6.41	5.92	5.42	4.91	4.40	3.87	3.38	2.89	2.38	1.84	1.41	0.63
15.0	59	6.61	6.12	5.60	5.08	4.55	4.02	3.51	2.98	2.45	1.90	1.45	0.63
15.5	59.9	6.81	6.32	5.78	5.24	4.69	4.14	3.61	3.07	2.52	1.96	1.49	0.63
16.0	60.8	7.01	6.52	5.96	5.40	4.84	4.27	3.72	3.18	2.59	2.02	1.53	0.63
16.5	61.7	7.21	6.74	6.16	5.58	5.00	4.41	3.84	3.26	2.68	2.09	1.57	0.63
17.0	62.6	7.41	6.95	6.35	5.76	5.18	4.58	3.96	3.34	2.77	2.16	1.61	0.63
17.5	63.5	7.61	7.17	6.57	5.96	5.34	4.71	4.10	3.48	2.87	2.24	1.65	0.63
18.0	64.4	7.81	7.40	6.77	6.13	5.49	4.84	4.21	3.58	2.96	2.31	1.69	0.63
18.5	65.3	8.01	7.63	6.98	6.32	5.67	5.00	4.37	3.72	3.06	2.39	1.73	0.63
19.0	66.2	8.21	7.86	7.21	6.53	5.85	5.16	4.51	3.84	3.14	2.45	1.77	0.63
19.5	67.1	8.41	8.13	7.43	6.73	6.03	5.32	4.65	3.94	3.22	2.52	1.81	0.63
20.0	68	8.61	8.38	7.66	6.94	6.22	5.49	4.80	4.07	3.33	2.60	1.85	0.63
20.5	68.9	8.81	8.53	7.89	7.15	6.41	5.66	4.95	4.20	3.44	2.68	1.89	0.63
21.0	69.8	9.01	8.79	8.13	7.37	6.61	5.84	5.11	4.34	3.56	2.76	1.93	0.63
21.5	70.7	9.21	9.05	8.37	7.59	6.81	6.02	5.27	4.48	3.68	2.85	1.97	0.63
22.0	71.6	9.41	9.32	8.62	7.82	7.02	6.21	5.44	4.63	3.81	2.93	1.99	0.63
22.5	72.5	9.61	9.59	8.87	8.05	7.23	6.41	5.62	4.79	3.95	3.06	2.04	0.63
23.0	73.4	9.81	9.87	9.13	8.29	7.45	6.61	5.80	4.95	4.09	3.17	2.13	0.63
23.5	74.3	10.01	10.26	9.39	8.53	7.67	6.81	5.98	5.11	4.23	3.28	2.22	0.63
24.0	75.2	10.21	10.55	9.66	8.78	7.90	7.02	6.17	5.28	4.38	3.40	2.32	0.63

■ HIGH MOISTURE CONDITIONS ■ DRY STORAGE CONDITIONS ■ OPTIMAL STORAGE CONDITIONS



## Humidity Determines Wine Evaporation

Even though both water and ethanol evaporate through the barrel, they do so at different rates. Several factors determine the relative evaporation rates, including the differing molecular weights, the concentration-gradient effects of the relative humidity of the cellar, and the concentration of ethanol in the cellar atmosphere.

Surprisingly, little actual research into the kinetics of the relative evaporation rates of the water and ethanol content of the wine has been published. The research that exists seems to indicate that water and ethanol evaporate at roughly the same rate when the cellar humidity is about 70 percent. When the cellar is drier, water evaporates more quickly from barrels than ethanol. This is reversed in a more humid cellar. As a consequence, the ethanol concentration increases in wine in barrels with cellar humidity below 70 % Rh while the ethanol concentration decreases in cellar humidity above 70 % Rh

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