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# Sentinel 5850

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## BARREL ROOM HUMIDIFICATION

Designed for winery barrel rooms, the Sentinel™ 5850xxH offers effective humidification without wetting, and no need for water softening or other treatment before fogging. It's a complete solution to barrel room fog needs.

The Sentinel 5850 system has three components:

■ A **nozzle** which atomizes water into tiny droplets for evaporation. Fogmaster's unique vortex nozzle uses turbulent low pressure air (3 psi) to do the "slicing and dicing". It has no tiny orifices to clog, and is highly tolerant of poor quality water.

The nozzle materials (acetyl polymer, vinyl and stainless steel) are chemically inert and resist solids build-up in wineries with hard water. Moreover, a slow accumulation of lime will not degrade performance appreciably, judging from this nozzle's successful operating history in such dirty or dusty environments as odor control at landfills and solid waste transfer stations.

■ A **control module** which regulates the flow of water to the nozzle and maintains humidity at the setpoint. It connects to your water supply, reduces pressure to 3-5 psi at the nozzle, and controls water flow and droplet size with a precision needle valve. You can adjust pressure, flow and humidity setpoint independently as required. For example, use a high flow to quickly humidify a dry room, then shift to low flow/small droplets to maintain humidity.

An LED on the control module displays the relative humidity continuously; when a button is pressed, it shows the humidity setpoint. To change the setpoint, hold the button and turn the adjustment knob. The deadband (the limits around the setpoint where the fogger turns on and off) is 4% RH. [Other control module options for the Sentinel 5850 include interval and countdown timers, and 4-20 mA sensors.]

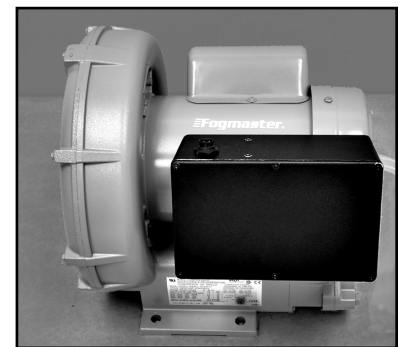
■ A **blower** to supply air to the atomizing nozzle. The Sentinel 5850 uses a totally enclosed fan cooled (TEFC) motor and direct drive regenerative blower. Power options are 120 and 240 V 50/60 Hz, single phase, and 240 and 480V, three phase.

The blower and controller may be placed wherever convenient. The nozzle should be positioned as high as possible in the barrel room to maximize "hang" time for fog droplets to evaporate. The nozzle can be adjusted 90° axially, and 360° radially by turning the union at the air line.

The humidity probe comes with a 25 ft cable. You can hang it in one spot or move it as desired. The probe is accurate to 3 points RH and can be calibrated against a reference NaCl solution.

Designed for "do-it-yourself" installation, the Sentinel 5850xxH includes: hose bib connection and 100 mesh screen filter; water tubing (hose bib to control module, and control module to nozzle); humidity sensor and cable; blower control cable; liquid fittings; air intake and discharge fittings; intake air filter; and vortex nozzle with 2"

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slip union. (The 2" PVC air line from the blower to the nozzle must be supplied locally.) The standard length of the blower control and sensor cables is 25 ft; longer cables are available on special order.

System maintenance is straightforward: clean the blower intake air filter (a light on the control module illuminates when the filter is dirty), and remove dirt from water screens and the blower cooling fan as necessary.

### SPECIFICATIONS (Model 5850xxH)

Components	Control module, blower, blower control cable (50 ft each), Fogmaster® nozzle with 2" PVC slip union, hose bib connector, water supply screen (100#), 50 ft water supply line, air filter, blower fittings to adapt to 2" PVC pipe. (Air piping is not included.)
Nozzle	Counter-rotating vortex design. High turbulence in nozzle shears feed liquid into fog-sized droplets. Non-clogging design (no small orifices).
Fogging Liquids	Unit can dispense both oil- and water-based liquids at a rate of up to 5 gal/hr [315 ml/min], adjustable. When applying chemicals, follow label instructions.
Fog Properties	Typical droplet size is 3-10 micron VMD. Droplet size distribution depends upon liquid viscosity, surface tension and flow rate.
Blower	Single stage cast aluminum ring compressor with direct drive squirrel cage TEFC motor and pilot duty thermal cutoff. 1 Hp, 120V, 50/60 Hz, 1ø, 9.8A (585010H) or 240V, 1ø, 4.9A (585020H). 230/460V, 3ø configurations by special order. Maximum output 90 cfm. Noise: 64 dBC (1000 Hz); 57 dBC (2000 Hz).
Control Module	Power and Auto/Manual switches. Liquid pressure and flow controls. Blower status lights (start, run, service filter alert).
Controller Options	<ul style="list-style-type: none"> <li>• <b>Humidistat:</b> LED readout, adjustable set point (10-90%RH), 4%RH deadband. Sensor accuracy +/- 3% RH. 25 ft sensor cable.</li> <li>• Countdown timer: 1-1023 seconds, set with dip switches.</li> <li>• Repeat cycle timer: Independently adjustable ON and OFF cycles (1-1023 seconds each), set with dip switches.</li> <li>• 4-20 mA sensors (consult factory).</li> </ul>
Control Enclosure	Weathertight (NEMA 4X), corrosion resistant fiberglass with stainless steel hardware.
Materials	Nozzle housing - vinyl w/ stainless clamps; Tubing - nylon, vinyl; Fittings - stainless steel, brass, nylon, acetal; Nozzle - Celcon® acetal copolymer.
Dimensions (HWD)	Control module: 16.5 x 14 x 9 in [42 x 35 x 23 cm] Blower: 14 x 15 x 14 in [35 x 38 x 35 cm]
Shipping Weight	2 cartons: 36, 55 lbs [16, 25 kg]
Warranty	One year limited warranty on materials and workmanship.

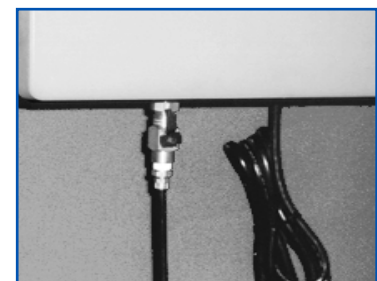
*NOTE: Options used in 5850xxH (winery humidification model) shown in **bold**. Specifications subject to change without notice.*



Humidity controller with continuous RH display and set point adjust.



Control module features rainproof NEMA 4X enclosure, see-thru cover with lockable catches, environmental cable connectors.



Liquid port shutoff valve with backup screen filter. Not shown: primary filter and hose bib adapter.

DISTRIBUTED BY

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