



## StanCo Scientific, Inc.



We have extensive experience with closed loop cooling systems in other instrumentation types. We took that knowledge and applied it to carburetor cooling issues of octane engines. To further meet the ASTM requirements, a heavy-duty vaporizer was introduced to ensure that the air stream to the engines is within the required 25-50 grains per pound of dry air. To measure this humidity, a chilled mirror hygrometer is installed to provide constant and accurate readings.

### Refrigeration & Carburetor Cooling:

- A 4,000-milliliter cooling system used to control operating temperature of carburetors and heat exchangers. Its semi-sealed design minimizes microbial growth within the cooling system due to no introduction of air after initial setup.
- Powerful and easily maintained coolant pump
- Cooling system monitored, and temperature controlled through use of solid-state relays.
- Integrated brass bypass valve to isolate carburetors when cooling is not required.
- Temperature monitoring of tower's output air-humidity mixture

## SSD5000 Humidifying Air Intake Tower

ASTM D2699 | ASTM D2700

## Vaporizer:



- Automated vaporizer with 6-liter reservoir
- Reservoir has integrated auto-fill valve for ease of use. Simply attach to existing water line
- Lifespan of vaporizer factory-rated at 5,000+ hours if maintained properly. Quality of tap water and neglecting maintenance procedure every 3-6 months will reduce vaporizer's longevity.
- No LED design on vaporizer ensures zero-leak operation and limited algal growth. All vaporizers are TUFF coated for increased reliability and carry a 2-year warranty
- All units come with 3 replacement discs for preventative maintenance procedures
- 500 milliliters per hour water consumption potential through vaporization of 5-micron sized droplets.
- Higher consumption vaporizers available for specific needs of ASTM requirements
- Swirled air vanes in outlet to promote homogenous air-humidity mixture to engine

## Humidity Control:

- The Edgetech Instruments DewTrak II-MO™ dew point / humidity transmitter is an optical chill mirror hygrometer designed to continuously measure the moisture content in gases.
- The DewTrak II-MO™ uses the chilled mirror dew point temperature condensation principle to determine the water vapor concentration in gas mixtures, and a platinum resistance thermometer to accurately measure that temperature.
- NEW! Model DX primary method chilled mirror dew/frost point sensor with an integral PRT temperature sensor. Offers a wide operating range and improved temperature stability.
- 4 wire PRT measurement for Dew Point and AT (optional)
- $\pm 0.2^{\circ}\text{C}$  Accuracy for both Dew Point and Temperature
- Long term stability and repeatability
- RS232, bi-directional, Serial Output for ease of reprogramming
- Electronics housed in IP65 enclosure (Wall Mount)
- 2 analog outputs (4-20mA / 0-5Vdc to 0-10Vdc selectable)

## System:

Controls for humidity and temperature—24 volts DC

Cooling and vaporizing systems—110 volts AC



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