



Sensing Technology

WeatherStation® Instrument Calibration Certificate

Model:

ID:

Calibration Date:

Manufacturer :

Test Procedure:

The WeatherStation® Instrument passes testing for IPX6 heavy seas water standards (excepting units equipped with RH sensors, which meet IPX4) and the IEC 60945 standards for exposed units¹. All units are calibrated in an onsite wind tunnel².

Unit Test Results:

Test Performed	Logged Value	Test Requirement
0 Knot Wind		Less than 1 Knot Max
50 Knot Cal ₄	PASS	Within 2 Knots RMS
Humidity		Within ±5 % RH
Temperature ₅		Within ±1.1 °C
Pressure		Within ±2 mBar
Rate Gyro – Dynamic ₆		Under 4 deg/sec average error
Rate Gyro – Static		Within ±40 Deg/min
Pitch		Within 1°
Roll		Within 1°

Ambient (Local) Test Conditions³:

Humidity:

Temperature:

Pressure:

Equipment List

- **Wind Tunnel Calibration**
 - **United Sensor Corp. Pitot Tube – Calibrated to NIST traceable pitot tube**
 - **MKS Instruments Pressure Sensor**
 - **BK Precision® 5491A Multimeter**
- **Ambient Temperature Readings (Temperature, humidity and pressure)**
 - **Vaisala® PTU200**
- **Rate Gyro Testing**
 - **SEI A2 Absolute encoder**
 - **US Digital R164 Motor Controller**

- 1 – After multiple heat cycles above 65° C (149°F) wind anemometer performance may require recalibration to remain within specifications at wind speeds above 50 knots (92.6 km/h) .
- 2 – The on site wind tunnel is calibrated with a pitot tube, which in turn was calibrated with a NIST traceable pitot tube.
- 3 – Ambient conditions measured with a Vaisala PTU300. Temperature, humidity and pressure readings compared to Vaisala PTU300. The temperature, pressure and humidity readings from the Vaisala® instruments were calibrated by Vaisala® against instruments calibrated to NIST traceable instruments.
- 4 – Units are calibrated at knots with a 75 point correction curve.
- 5 – Unit temperature and humidity recorded with 4+ knots of wind present.
- 6 – Test conducted at a rate of turn of 70 degrees per second.