



*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 units<sup>1</sup>. All units are calibrated in an onsite wind tunnel<sup>2</sup>.

### Unit Test Results:

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

### Ambient (Local) Test Conditions <sup>3</sup>:

**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 20 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.