

THS sensor humidity calibration process

18.2.2015 Arto Kuivanen
15.1.2019 Arto Kuivanen, minor updates

Methodology

- **Verification process is according to ASTM E104-02 standard**
- **Calibration is made utilizing constant humidity of saturated aqueous salt solutions**
- **Humidity reference value and measurement uncertainty varies according to used salt and calibration temperature. Seemoto THS measures both temperature and relative humidity. Sensors are first calibrated for temperature, then used to measure temperature during humidity calibration**
- **Sensors are hanged in a closed container with the saturated salt solution**
- **Tightly container is placed to EPP cooler in a room temperature**
- **After the sensors have stabilized readings are taken**

Humidity Calibration Points

- **Calibration is by default made at one humidity point**
 - Used salt Magnesium chloride (MgCl_2) 32.8 % RH ± 0.2 at +25.0 °C
- **Two-point calibration is made on request**
 - Used salt Magnesium chloride (MgCl_2) 32.8 % RH ± 0.2 at +25.0 °C
 - Used salt Sodium chloride (NaCl) 75.3 % RH ± 0.2 at +25.0 °C
- **Additional or other calibration points only according to customer need**

Calibration Certificates

- Humidity calibration is accepted, when sensor reading is within ± 3 % of the reference relative humidity. This is based to uncertainty of the calibrating practice (ASTM E104-02 standard).
- Calibration certificate of the sensor is saved in electronic format and is available in <https://calibration.seemoto.com>
- Printed certificates are delivered with sensors only if requested by the customer