



VAISALA

HVAC Solutions
Instruments and
Service

Why Vaisala



Demanding measurement requirements across multiple industries, from semiconductor to automotive to HVAC, have always inspired Vaisala to continuously develop measurement instruments and technologies that set the benchmark for quality, accuracy and reliability.

[Want to have a peek inside a Vaisala cleanroom?](#)



Explore



EXPERIENCE

What Makes Vaisala Different



MEASURE

Parameters and Applications



SOLVE

Best Solutions



MAINTAIN

Calibration and Repair Services



WATCH

Informative Video Links



LEARN

Collection of Webinars



INQUIRE

Contact Us and FAQs



Experience

At Vaisala we pride ourselves on staying connected with our customers throughout the lifecycle of their instrument and application. Many of our customers share their experiences with us.

Below is a story of how Siemens integrated a multi-parameter Vaisala weather transmitter into their automation solutions in order to increase building efficiency through precise weather measurement.

“The WXT520 outputs six parameters simultaneously. It is much more efficient than installing a separate instrument for each parameter. And with no moving parts it’s virtually maintenance-free.”

*Ivar Bergdahl,
Project Manager,
Siemens
AB Building
Automation,
Sweden*

CUSTOMER STORY

VAISALA / SUCCESS STORY

CONTROLLED ENVIRONMENT

Integrated weather measurement solution increases building efficiency

Building automation systems regulate temperature, humidity
Siemens integrates a multi-parameter Vaisala
automation solutions

DECEMBER



Industry Experts

Vaisala brings best-in-class value to our customers every day. To ensure we continue to understand your needs, we take customer feedback seriously and cater to your specific requests. Our premium manufacturing facility and our state of the art cleanrooms and laboratories ensure that the instruments we offer meet your requirements in a wide variety of applications.

The high quality of our HVAC products brings major benefits for all your project stakeholders. The transmitters are easy and fast to install, they show correct values immediately after power up, and remain stable without maintenance. Contact our **HVAC team** to find the best solution for you.

*Kimmo Korpela,
Head of EMEA,
Controlled
Environment Group*





Success Stories

Throughout our 80 year history, Vaisala has succeeded together with our customers. From helping with the [preservation of the most valuable painting Mona Lisa](#) at the Louvre Museum in Paris to the invaluable French, English, and American [stained glass windows at St Patrick's Cathedral](#) in New York City, our humidity control instruments are selected because they are simply the best.

“As a normal Louvre visitor you cannot even imagine the complexity of the installation.”

*Wilfried Gesbert,
Climate Engineer
for Cofely Axima*

Vaisala's HMT330 helps preserve the Mona Lisa by measuring the stability of the humidity and temperature environment within its glass vitrine.





Measure

Click on the icons below for information about the parameters we measure.



TEMPERATURE

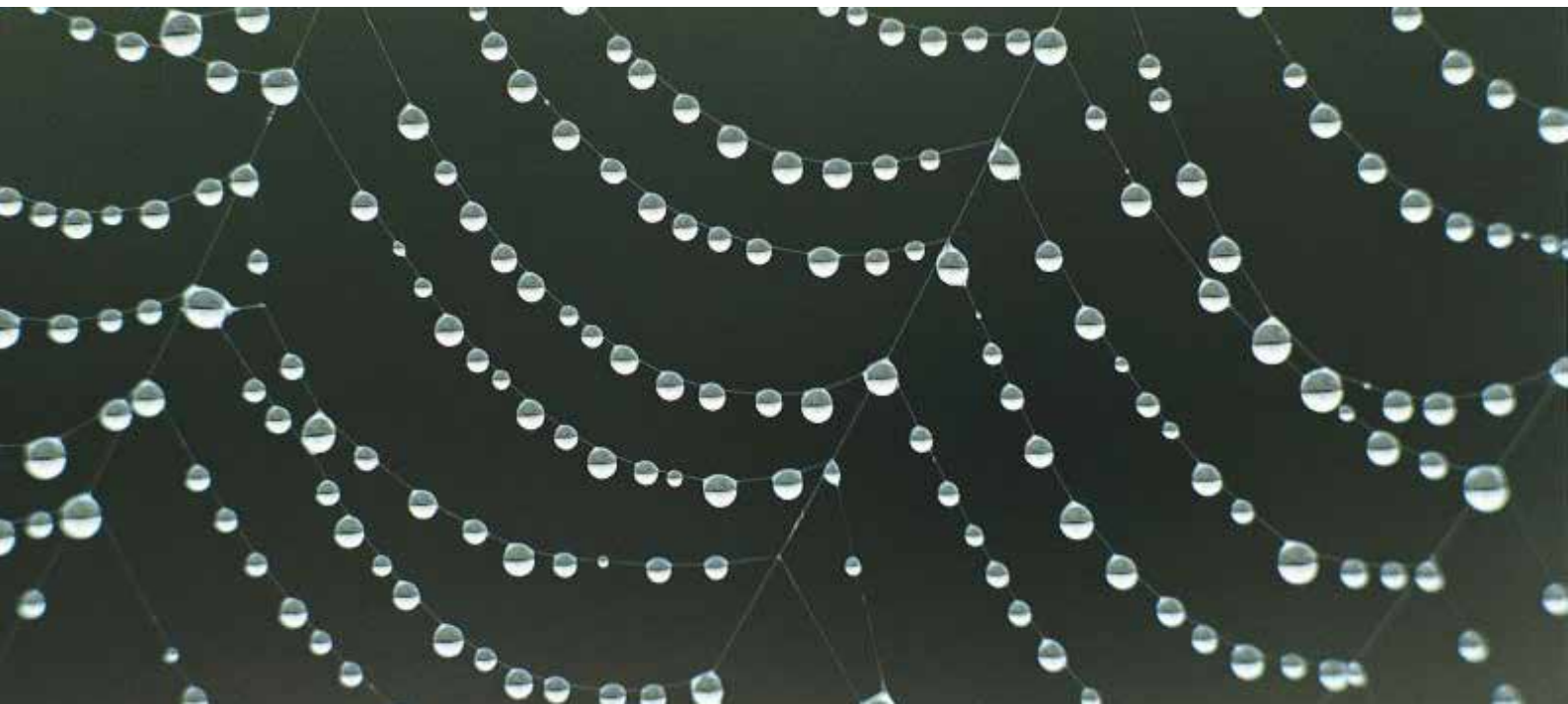


HUMIDITY



CO₂

Scroll to the following pages for a review of our applications.





Overall HVAC

The highest quality measurement instruments are essential when optimizing HVAC controls. Vaisala offers reliable and accurate instruments for measuring carbon dioxide, humidity, temperature and barometric pressure. They can be used indoors or outdoors, and installed on walls or in ventilation ducts.

OVERALL HVAC





Demand Controlled Ventilation

Carbon dioxide level in a space indicates human presence and can be used to control ventilation. In demand controlled ventilation (DCV) the ventilation is adjusted to correspond to the true ventilation need in order to save energy. It has clear advantages especially when occupancy varies widely, such as in schools, conference centers and auditoriums.

DCV





IAQ & Human Comfort

Indoor air quality (IAQ) depends on the building usage, applied ventilation solutions, building location, construction methods and materials, and outdoor conditions. Adequate ventilation and healthy structures are prerequisites for good indoor air quality.

IAQ





Outdoor Measurement

Accurate outdoor measurements are essential for building operations such as free cooling, cooling towers, and highly intelligent building automation systems. Changing weather can make measuring outdoor environmental conditions a challenge.

OUTDOOR HVAC





Solve

At Vaisala, we don't just sell you a product. We provide you with a solution. With a high level of expertise spanning across dozens of applications, we assure that you will be given the best solution to fit your needs. Keep reading to learn more about the right fit for your application and the different parameters we measure.





Maintain

Regular calibration ensures your high-precision instruments continue to provide accurate, high-quality data. Choosing the right calibration laboratory can be as important for lifetime accuracy and reliability as the initial selection of the instrument. Our high-performance calibration laboratories started in 1958 and we continually improve our technology, facilities and capabilities to provide the high quality and scope of services that you expect from Vaisala.

VAISALA

Calibration Maintains and Documents Accuracy

Regular calibration protects against incremental sensor drift over time and verifies units are operating within the manufacturer's specifications.

All Parameters Calibrated

Our global service centers calibrate all parameters and can meet your specific needs.

- Relative Humidity
- Temperature
- CO2 Concentration
- DC Voltage & Current
- Biological Processes
- Dew Point

Manufacturer Neutral

We provide calibration services for Vaisala products and other manufacturer's products for a variety of measurement parameters.

Vaisala Calibration Service Centers

Calibrations for all parameters are available at each of our service centers. Our standard calibrations meet ISO9001 and are traceable to the SI through National Metrology Institutes such as NIST. Our accredited calibrations meet ISO/IEC 17025 for selected parameters.

Service, USA	Madrid, Finland	Shanghai, China	Tokyo, Japan
STANDARD CALIBRATION SERVICES			
Relative Humidity	Relative Humidity	Relative Humidity	Relative Humidity
Temperature	Temperature	Dew Point	Temperature
CO2 Concentration	CO2 Concentration	DC Voltage	DC Current
Biological Processes	Biological Processes	Biological Processes	Biological Processes
Carbon Dioxide	Carbon Dioxide	Carbon Dioxide	Carbon Dioxide
ACCREDITED CALIBRATION SERVICES			
Relative Humidity	Relative Humidity	DC Voltage	DC Current
Temperature	Temperature	Temperature	Temperature
Biological Processes	Biological Processes	Biological Processes	Biological Processes

Vaisala Quality at Your Service

Since 1958

Vaisala has operated high performance calibration laboratories since 1958. We continually improve our technology, facilities and capabilities to provide the high quality and flexible service you expect from Vaisala.

Confidence on Day 1, Confidence for Years

Identifying and setting calibration intervals are based on the application, product usage and the company's quality system. Our experts are ready to help with these important criteria.

Learn more and submit your calibration order at: www.vaisala.com/calibration

VAISALA

The World's Calibration Laboratory

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MAINTAIN

Calibration Services

Our global service centers provide a wide range of calibration services to meet your specific needs: [standard calibration](#), [custom points](#) and [accredited calibration services](#) audited by the world's leading accreditation authorities.

VIEW CALIBRATION

Accredited
Humidity Calibration Certificate

Certificate #: TEX 02 01 04007

Procedure #: 1.00008

Asset #: 12740

Model #: HMP101

Serial Number: 8124307

Plant/Dept: Munich 6 Services

Manufacturer: Vaisala

Model #: H1

Calibration Date: January 1, 2016

Calibration No: 095311

AS LEFT DATA

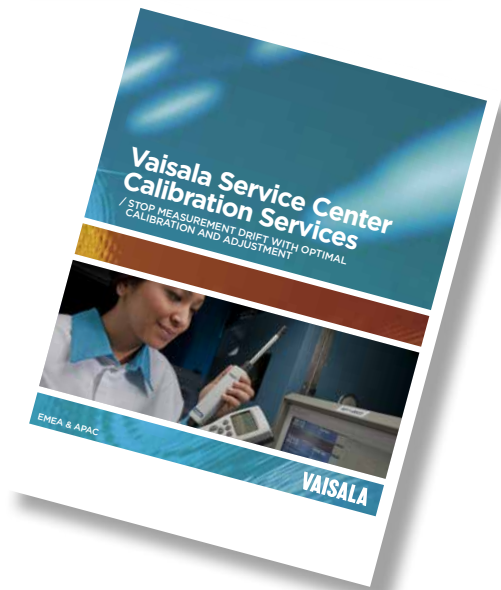
Humidity, "IPM"
Calibration Data "As Left"

Reference	100% RH @ 25°C	Deviation	± Tolerance	± Bias (ppm @ 100% RH)
ME10	99.99	0.01	± 0.05	0.00
ME20	99.99	0.01	± 0.05	0.00
Average Error: 0.01 ± 0.05				

Temperature, "C"
Calibration Data "As Left"

Reference	25.00°C	Deviation	± Tolerance	± Bias (ppm @ 100% RH)
ME10	25.00	0.00	± 0.05	0.00
ME20	25.00	0.00	± 0.05	0.00

Certificate Sample

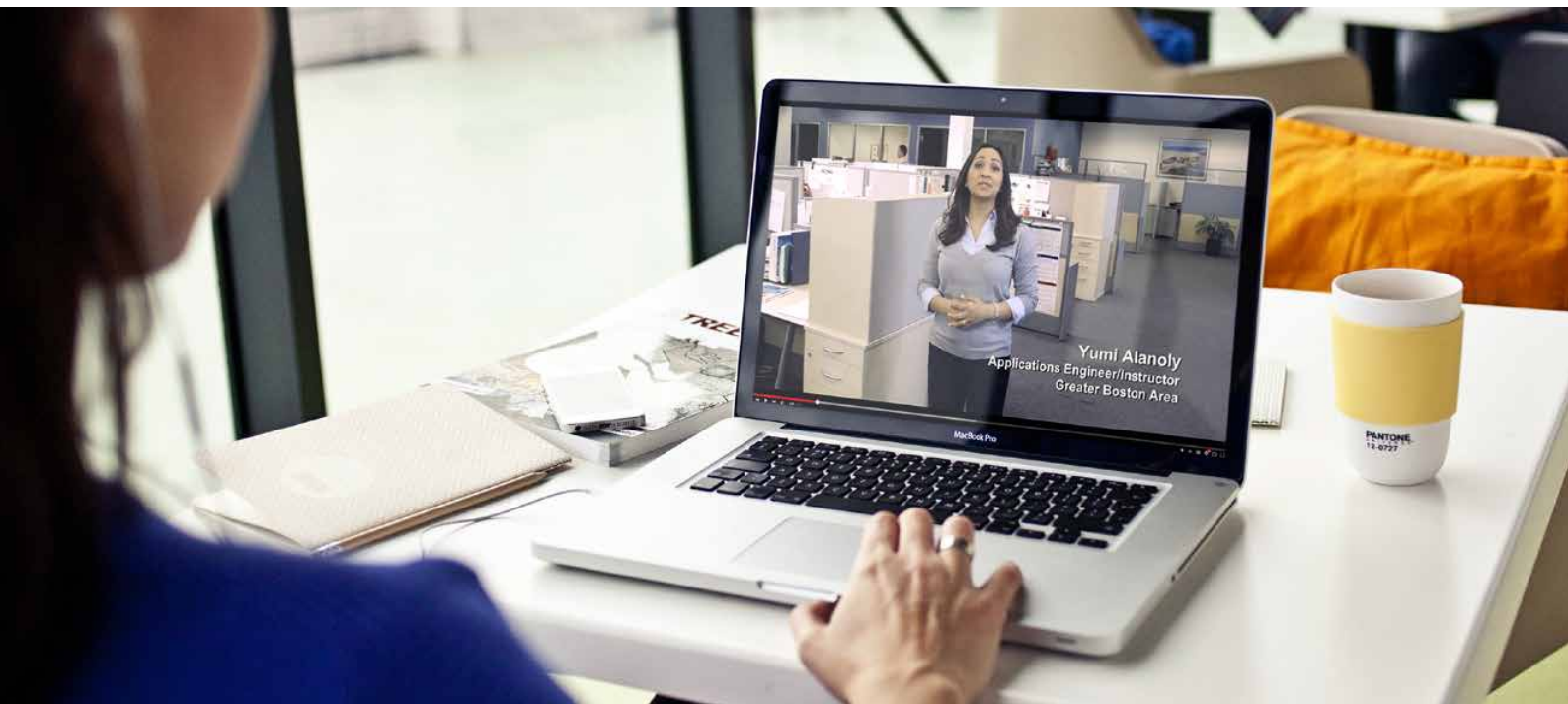




Watch

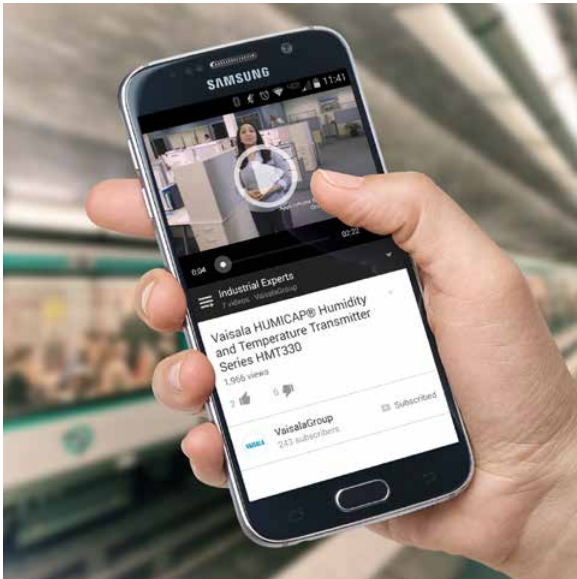
These short 2 minute clips will take you on a virtual tour of Vaisala. We'll also introduce you to our best in class humidity, temperature and CO₂ instruments.

Scroll to the next page to watch our videos.





Videos



[Vaisala Humidity and Temperature Transmitter Series HMT330](#)

Building automation systems that regulate temperature, humidity and air quality.

[Carbon Dioxide Relative Humidity and Temperature for HVAC Applications](#)

A combined carbon dioxide (CO₂), relative humidity (RH), and temperature transmitter is available called the GMW90.





Learn

Our free webinars are a great way to gain valuable knowledge about topics of interest in the field.



Best Practices in Humidity Measurement

How can I make a better measurement in the field?

Calibration of the Hygrometer

All humidity instruments drift to some extent.



Relative Humidity Sensor Technology

What type of sensors are in our market today?

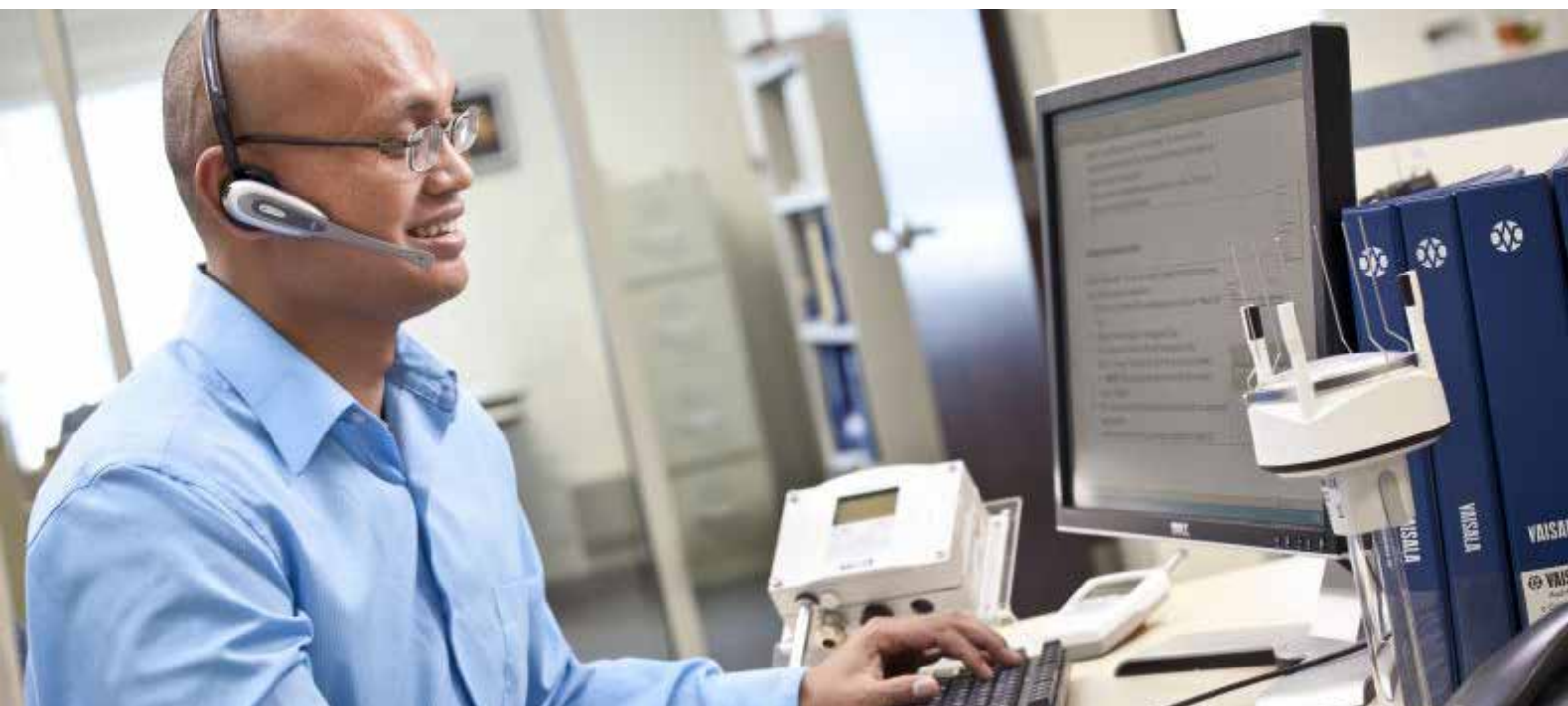


Inquire

Our team brings to our customers 100+ years of combined mechanical, chemical, electrical and computer engineering experience.

Vaisala engineers are on hand to assist you with your product or application questions.

[CONTACT VAISALA](#)





Frequently Asked Questions

QUESTION

Won't a relative humidity sensor mounted on the roof give false readings because of the heat/sun?

ANSWER

This is absolutely true, therefore it is always recommended to use a weather/radiation shield over the sensor to protect it from all the elements. Look for shields that are not only water-tight (designed to fit the sensor/probe you're using) and provide ventilation but also utilize corrosion resistant material - like polycarbonate plastics or anodized aluminum.

QUESTION

My RH and Temp probe is placed in a dirty environment, can the sensor inside the probe be cleaned?

ANSWER

As long as you're using a remote probe you can unscrew the filter, located at the tip of the probe, and gently rinse the sensor with distilled water. After rinsing the sensor you must let the sensor dry completely before placing it back into your process. You can clean the filter the same way. You can also replace the filter from time to time as well and note that in a dirty environment it is recommended that you use a filter with the smallest pore size. Check with your sales team to make sure you are using the best filter. You can find your regional sales contact by clicking [HERE](#).



FAQ's

Continued

QUESTION

What is the difference between the Vaisala HUMICAP® and INTERCAP® sensor for HVAC use?

ANSWER

Although both sensors are thin film polymer capacitive sensors the HUMICAP® will not only provide you with better accuracy but provide higher protection against chemical contaminants. The HUMICAP® also comes standard with a NIST traceable calibration certificate. The INTERCAP® will provide you with a +/-3% RH accuracy and does not come with any calibration certificate, but the INTERCAP® is considered interchangeable in the field without any need for calibration. Although the HUMICAP® can be replaced in the field, a two point field calibration is required to ensure the sensor complies with the specified accuracy.

QUESTION

I would like to measure CO₂ in a building that is occupied 24/7. I don't know how often calibration will happen, how stable will my measurement be?

ANSWER

Carbon dioxide stability for Vaisala's HVAC specific transmitters is $\pm (15 \text{ ppm} + 2\% \text{ of reading})$ over 5 years. In addition our instruments do not require an automatic offset correction, instead our CARBOCAP® sensor maintains its stability by using an internal reference measurement. This not only makes it ideal for buildings that operate 24/7 but the sensor will show correct values immediately when powered on.

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Thank you!

www.vaisala.com

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