

VAISALA

Vaisala soundings: High accuracy & proven reliability

Solutions Brochure



Vaisala: a sound decision

Atmospheric sounding technology formed the heart of Vaisala more than 85 years ago, when Professor Vilho Väisälä put the finishing touches on his first commercial radiosonde in 1936. Today, most atmospheric soundings around the world are performed with Vaisala sounding equipment.

With a solid foundation in technology innovation, we have built a reputation for accuracy and reliability. And we do our utmost to provide our customers with the very best tools for the job—from meteorological organizations to defense forces and specialty users who rely on Vaisala equipment every day.

Better weather prediction

In today's world, weather has far-reaching socio-economic impact. High-quality atmospheric observations provide the data critical for accurate forecasting to anticipate and prepare for weather events. Meteorological institutes need to optimize their observation systems and networks in order to maximize their benefit to society.

Weather observation and forecasting is a collaborative effort that spans the world. This effort is guided by the World Meteorological Organization (WMO) together with the International Telecommunications Union (ITU). Vaisala collaborates closely with meteorological institutes and research organizations all around the world so we can better respond to customer needs.



Radio Soundings

The WMO Global Observing System network releases more than 1,400 radiosondes every day. Radio soundings form the backbone of atmospheric profile data from the earth's surface up to altitudes of about 30 km. This data is essential for both local forecasting and Numerical Weather Forecasting models to predict weather a few days ahead.

Climatologists, universities, research groups, environmental agencies and defense services also use radio sounding data for a variety of purposes. Our core concentration is on quality of observation, as demonstrated in all WMO radiosonde comparisons.

We push the boundaries of what is possible—resulting in better weather prediction—day after day.

Value for money

Vaisala radiosonde systems are accurate and durable. They provide excellent observation quality and a high rate of data availability. As WMO regulations and guidelines evolve, we work to ensure that systems are updated and running continuously.

Hundreds of users have already discovered that purchasing a Vaisala product is an investment in reliable future performance.

Meeting pertinent standards

As a leader in the field of radiosonde systems, we pay special attention to meeting standards and complying with associated regulations. The sensors used in Vaisala radiosondes are calibrated against internationally traceable reference standards. In addition, all Vaisala products meet ISO 14001, ISO 9001, and AQAP 2110 standards.

Our radio soundings expertise makes life more predictable. And that makes the world an easier place to live in.

Radiosonde

Radiosondes perform PTU measurement using sensors designed to cover all atmospheric and weather conditions in every climate zone. The sensors are individually calibrated against reference standards traceable to international standards.

Wind data is computed from radiosonde movements during flight. The movement is measured utilizing satellite navigation signals.



Meet the sounding family

Vaisala radiosondes

Since 1936, Vaisala radiosondes have offered evolutionary improvements in pressure, temperature and relative humidity measurement, and wind finding. We offer several radiosonde models and the newest models combine high-quality atmospheric sounding data with innovative, biodegradable materials to help reduce plastic waste originating from sounding operations.

Vaisala sounding systems

Vaisala offers sounding systems for

- Manned and unmanned stations
- Mobile
- Shipboard

The Vaisala sounding system integrates sounding control, data processing, and output in customer-required formats. The system uses industry-leading security measures, protecting against data threats and unauthorized access.

Meteorological message generation follows the latest WMO regulations, including BUFR coding.

Vaisala autosondes

With 30 years of experience in sounding automation, Vaisala autosondes have become the world standard for automatic sounding systems for their efficiency and reliability.

Our automatic sounding systems provide:

- Superior data quality and availability
- Dependable operation in harsh environments
- Independent data gathering – no onsite staffing required
- Lower labor and facility costs

The Vaisala AUTOSONDE® upper-air observation system has been developed for synoptic and adaptive use. The system provides a safe working environment since gas lines are never fed inside the container, and only requires reloading once

every four weeks. The Vaisala Observation Network Manager platform also enables remote control and configuration.

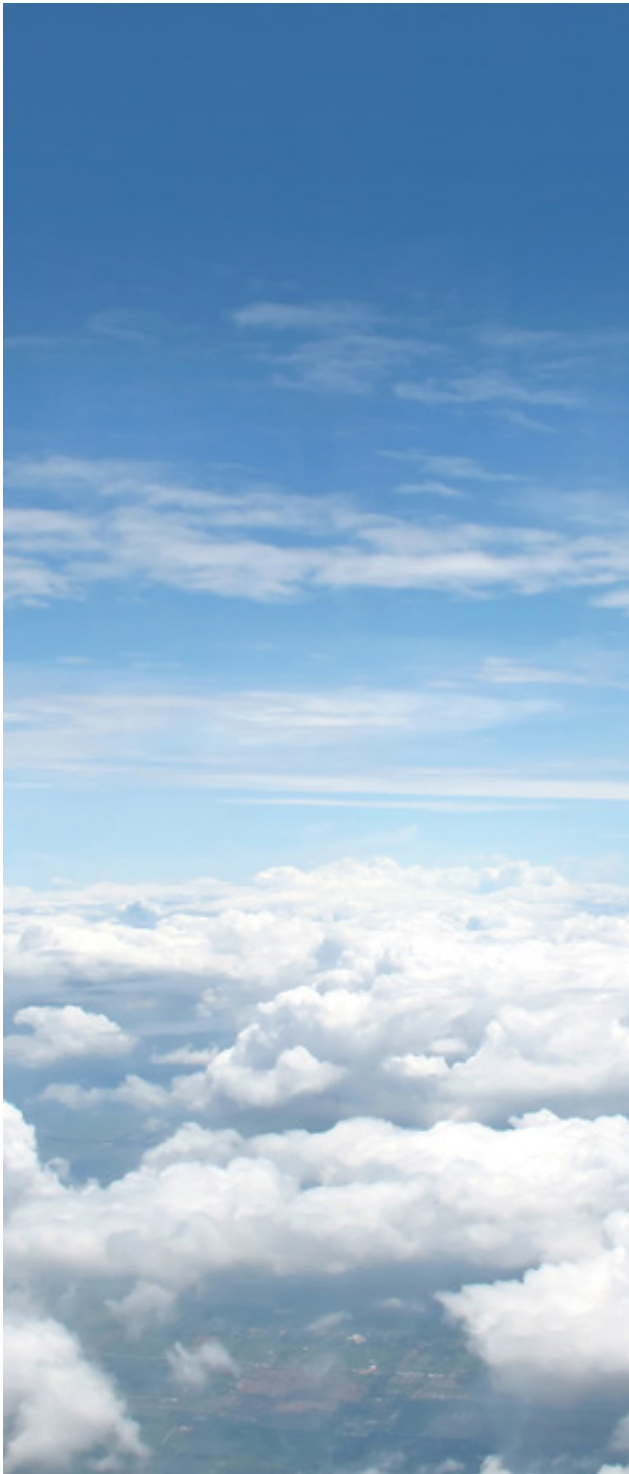
Dropsondes

A dropsonde is released from specially equipped aircraft and descends to the surface with a parachute. Data is used to track and predict the trajectory and intensity of severe storms, such as hurricanes.

It provides a high vertical resolution atmospheric profile from height of the drop to the surface. Data are transmitted to atmospheric research centers, the National Hurricane Center, or dedicated data centers of the World Meteorological Organization.

The dropsonde, aircraft data system hardware and software are designed by the Earth Observing Laboratory of the National Center of Atmospheric Research in Boulder, Colorado, USA and built by Vaisala under license from UCAR.





Why Vaisala?

As the global leader in weather and environmental measurements, Vaisala provides trusted weather observations for a sustainable future. With over 85 years of experience and customers in 170+ countries, from the North and South Poles to Mars, we help provide the most reliable and accurate weather and climate information for better and safer daily lives.

Our instruments and intelligence are known as the gold standard for precision and reliability. As a sustainability leader we enable meteorology professionals to better understand, forecast and explain climate change. We continue to channel our curiosity into climate action and new ways of enabling a better planet for all.

