

WindCube Offshore

Vertical profiling lidar for Floating Lidar Systems and offshore platforms



Courtesy of DNV Italy

WindCube® Offshore, the reference lidar for all phases of wind energy development and operations, has been engineered with a robust, marinated casing for integration into Floating Lidar Systems and other harsh offshore locations such as lighthouses, substations and vessels.

With offshore wind development accelerating, this is a timely innovation for consistent, reliable, and accurate data, wherever you need it.

WindCube data has been validated by more than 100 independent studies and is accepted onshore and offshore by all international standards and guidelines. Many of the most pioneering and successful wind energy companies today rely on the WindCube lidar to push the industry forward to meet its potential for growth.

Key benefits

Powerful technology built for offshore

Verified in accordance with Carbon Trust Roadmap of acceptance, ideal for Floating Lidar Systems (FLS) and exposed offshore platforms. Solid IP67 casing stands up to harsh offshore environments.

Bankable data, reduced uncertainty formore successful projects

Based on the outstanding metrology of WindCube v2.1, provides highly accurate wind measurements up to 300m over 20 simultaneous heights. This bankable data helps you secure funding, reduce the cost of equity, and minimize risk.

Reliable, efficient and easy to integrate across the project lifecycle

Boasts high reliability and is ideal for demanding offshore Wind Resource Assessments. Autonomous, long-term operations on FLS are enabled by lidar's low power draw of only 45W nominal, which suits a variety of projects for outstanding value over time.

Remote data at your fingertips with WindCube Insights — Fleet software

Includes easy-to-use, secure, cloud-based tool that provides real-time insights, allowing you to access and manage your systems and data for one system or many.

Backed by worldwide service and support

Like all of Vaisala's solutions, WindCube Offshore benefits from an unrivaled, global service network ensuring fast response and maximum uptime.

WindCube® The gold standard

WindCube® is the iconic and trusted gold standard in wind lidar. The turnkey product suite offers innovative, reliable, and highly accurate solutions for thousands of customers across the globe. Borne from a passion to advance the field, WindCube continues to take wind energy ever higher through a commitment to four guiding principles:



Trustworthy, superior metrology



Innovative lidars from a one-stop shop



Unrivaled thought leadership



Easy, reliable global solution

System at a glance

WindCube Offshore supports all phases of a project lifecycle (development, operations, optimization, research), and can be used as a permanent met data for continuous wind monitoring and grid-loss compensation.

Key features

Accurate measurements for growing turbine sizes up to 300m over 20 simultaneous heights

IEC compliance for contractual Power Performance Testing (IEC 61400-12-1 ed2)

Includes WindCube Insights — Fleet cloud-based data management system for remote control and data storage

High reliability increases data collection and reduces maintenance expense

Marine toughened with an IP67 waterproof and corrosion-resistant casing, sunshade, bird spikes and fixed installation kit

Low power consumption (45W nominal) and easily deployed in Floating Lidar Systems and small spaces with a fixed base and more locks

Technical support and services with remote assistance, comprehensive on-site help, and short-term maintenance plus 3-year limited warranty

Specifications

Wind data provided	Wind speed, wind direction, wind speed standard deviation, vertical wind speed
Range	40m to 300m
Speed accuracy	0.1 m/s
Speed range	0 to 49 m/s
Speed uncertainty*	0.6% to 2.6%
Data sampling rate	1Hz
Direction accuracy	2°
Beam geometry	4 inclined beams at 28° and 1 vertical beam
Power consumption	45W between -5°C and 30°C (23°F and 86°F) 110W below -5°C (23°F) 55W over 30°C (86°F)
Data storage	120GB industrial disk (5+ years of data); WindCube Insights secure cloud-based server
Communication	LAN, USB, 4G router, Modbus RTU, Wi-Fi
Temperature range	-20°C to 40°C (-4°F to 104°F)
Compliance	CE, FCC, ICES
Output data	1s and 1, 2, 5, 10min averaged (user-defined); standard deviation; direction; CNR (signal-to-noise ratio); GPS coordinates; data availability
Corrosion resistance	IEC 60068-2-52 (2017), (dry/wet salt spray) 30 cycles
Services	Standard: 3-year limited warranty Optional: 3-year warranty extension; 3-year maintenance
Housing	IP67 with additional locks and belts
Options	FCR, Geofencing for fixed installation, Motion Compensation Software for post-processing

(*) For 10-min averages, as assessed in 2020 according to IEC 61400-12-1 Ed.2. Uncertainty figures are Final Accuracy Class divided by $\sqrt{3}$

Why Vaisala for renewable energy?

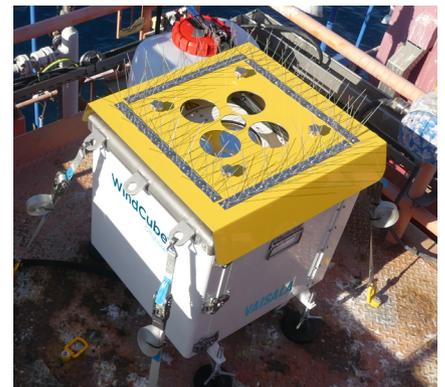
We are innovators, scientists, and discoverers who are helping fundamentally change how the world is powered. Vaisala elevates wind and solar customers around the globe so they can meet the greatest energy challenges of our time.

Our weather and environmental monitoring solutions for renewable energy are guided by several key priorities:

- Thoughtful evolution in a time of change
- Making renewable energy smarter at every stage
- Extending our legacy of leadership

Vaisala is the only company to offer 360-degree renewable energy solutions — from sensors and systems to digital services and actionable intelligence — nearly anywhere on the planet (and even on Mars). Every Vaisala solution benefits from our 85+ years of experience, pioneering deployments in 170+ countries, and unrivaled thought leadership.

Our innovation story, like the renewable energy story, continues.



Courtesy of DNV Italy

VAISALA

windcubelidar.com



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