



Profile the Wind Up to Tip Height

With a Portable Laser Wind Sensor

REVOLUTIONARY TECHNOLOGY

The Vindicator® laser wind sensor (LWS) is a lightweight, portable, all-weather wind assessment tool that precisely measures wind speed and direction up to 300 meters above ground – the full tip height of the largest utility scale wind turbines. The Vindicator® LWS is the ultimate tool for wind prospecting, wind resource assessment and wind turbine performance assessment – removing the guesswork from your engineering analyses using laser-generated precision.

ALL-WEATHER WIND ASSESSMENT BOTH ON AND OFF SHORE

Tested from -40°C to 55°C, the Vindicator® LWS is a robust, rugged, all-weather system that generates an accurate three-dimensional vector of the wind in all conditions and environments, including offshore. With its built-in motion compensation, the system can be mounted on a moving platform and still maintain accurate wind data. Moisture and salt spray did not affect the performance of the Vindicator® LWS when tested in extreme marine environments.

MINIMAL ENVIRONMENTAL IMPACT

Because the Vindicator® LWS is a portable unit, you don't need to install a tower or obtain a permit. Instead, it can be mounted easily in a truck or other vehicle, driven to a site, and operated with minimal setup time, and no adverse effect on the environment.

WIND TURBINE PERFORMANCE ASSESSMENT

With the Vindicator® LWS, you can determine the profile of the wind flow in front of a wind turbine, analyzing the performance against the manufacturer's specifications. The Vindicator® system can be used to quickly survey sites and gather precise wind data with ease and flexibility.

Vindicator® Laser Wind Sensor

General Specifications

System Dimensions

Base Laser Unit	17.5"L x 17.5"W x 10.5"H
Environmental Control Unit	14"L x 12"W x 18"H
Remote Laser Unit	31"L x 17"D

System Weight

Base Laser Unit	65 lbs.
Environmental Control Unit	52 lbs. (incl. 41 lbs. washer fluid)
Remote Laser Unit	35 lbs.
Total Weight	152 lbs.

Functional Specifications

Operating Temperature	-40°C to 55°C
System Power Requirements	0°C - 55°C: 110 VAC at 250 Watts Max. -40°C - 0°C: 110 VAC at 450 Watts Max.
Operational Wavelength	1550 nm
Minimum Wind Speed	0 m/s
Maximum Wind Speed	90 m/s
Sensing Range	50 to 300 meters vertically
Number of Range Gates	3 - 6
Range Gate Depth	± 20 meters
Wind Speed Accuracy	< ± 0.2 m/s @ 1Hz data rate
Vector Orientation	360° in horizontal plane (± 180 degrees)
Relative Angular Accuracy	± 0.7° @ 13 m/s speed, 1Hz
Data Output Format	Customer defined
Eye-Safety	Class 1 Eye-Safe

Contact Catch the Wind, Inc.
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