

# Wind can go anywhere. So can the AQ500.

Finding the right wind is hardly a static task. By pure definition it's a moving element that knows no boundaries. So why use traditional met masts when you can get all your bankable data more efficiently with the speed of sound?



 **AQSystem**  
Remote sensing technique

# AQ500 windfinder

No matter where the wind goes, our mobile and self-sufficient Sodar system AQ500 Windfinder can go there too. It measures wind conditions up to a height of 200 metres with the help of sound waves.

Sodar technology operates in a similar fashion to sonic radar, detecting even the slightest wind well above the highest blade of any hub. So you can be sure to get all the bankable data needed without any uncertainty.



## One switch start-up

The AQ500 is a simple solution that you can set-up with no previous experience after having attended the AQSystem technical training. All you have to do is position it and activate the power switch. The system is already pre-calibrated at our factory.



## Instant wind data

Time is a key factor in every wind project. The AQ500 has proven to be the most efficient method for measuring wind conditions, eliminating the need for permits, subcontractors or construction.

Instead you can just make sure that the rest of the project run just as smoothly as the site assessment.

With the AQ500 you can start your site assessment at least 6 months earlier than when using the more traditional met mast. This will not only get your turbines spinning faster but will also turn your investment into to a more profitable venture.



## Easy deployment

The AQ500 is lightweight and small enough to be transported by car. When an installation is challenged by some more diverse terrain, the four lifting hooks on top of the trailer will allow a helicopter to transport the AQ500 to even the most remote of locations.



## Completely self-sufficient

As the AQ500 must be able to work anywhere, its energy requirements are low. The system only needs a solar panel to recharge the powerful battery bank. During the winter months when there is little sunshine the small power generator acts as a back-up.





The AQ500

Met mast



### Unique Sodar design

The measuring antennas are well protected in the AQ500 Sodar, allowing accurate results even in the most adverse weather conditions. With no moving parts, unlike the anemometer on a met mast, the AQ500 will not freeze or shut down.



## 200 metres measuring range

Height is the key element for measuring wind because hubs today often rise well over 100 metres above ground level. Traditional met masts just can't keep up any longer – especially if you consider that more than 50 percent of power is generated at the highest rotor blade.

So to not leave anything to chance, the AQ500 measures up to 200 metres with a 5-metre resolution. This registers any wind movement beyond the highest blade of any hub today or in the foreseeable future, with an accuracy of 0.1 m/s.



## All terrain compatibility

The AQ500 can be used in really complex terrain with the help of triangulation. With a combination of systems you can now measure a “common volume” in a single spot – even if an area has complex height variations.



## Certified stand-alone solution

AQSystem started working with Sodar technology in the 1960's and have delivered several hundred AQ500 Windfinders since its release in 2007. Several independent test institutes have evaluated the system and approved it as a certified stand-alone solution.

# Technical specifications

## Environment

Temperature range	-40 °C to + 60 °C
Humidity range	10 to 100 % RH

## AQ500 Windfinder trailer

Height	2,2 meter
Width	1,4 meter
Length	3,0 meter
Weight	1180 kg
Fuel tank	200 litre

## Data

Data transfer	GSM / GPRS
Data format	ASCII

## AQ500 antenna

Height	1,2 meter
Width Ø	1,0 meter
Weight	70 kg

## Electrical

Power supply	Solar / Generator / 230 VAC / 120 VAC
Power consumption	30 – 50 W
Pulse power (max)	300 W
Acoustic power (max)	17 W



## Support & Service

As the AQ500 Windfinder can go anywhere we must be able to do the same. At AQSystem we therefore have a well-established support and service organisation.

We can for example offer you the following:

- 1-year factory warranty on all AQ500 parts.
- Individual service contract according to your need.
- Hot line support for hardware or software issues.
- On-site service, diagnostics and repair.
- Spare parts for a period of seven years.



## The AQ500

AQSystem have been working with sonic radar since the 1960's and the AQ500 Windfinder is the most popular Sodar solution of its size in the market today. Since its release in 2007 several hundred units are being used everyday all around the world.

These are some examples of our clients, please find out more about them and how they use the AQ500 by visiting [www.aqs.se/case-studies](http://www.aqs.se/case-studies)

