reddot award 2014
winner

AQSystem

Remote sensing technique

ADVANCED REMOTE SENSING TECHNOLOGIES

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COMPANY OVERVIEW

- Established 1989
- Development, Production & Sales
- Private company
- Location of head office in Tyresö, Sweden
- Europe’s leading Sodar manufacturer and innovator

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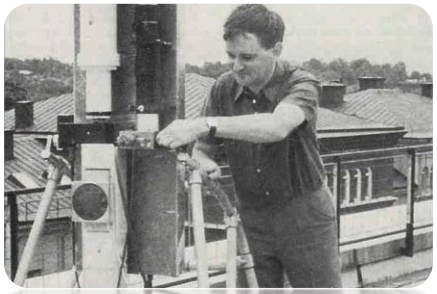
HISTORY

- SoDAR technology originally developed by Swedish military in 1960s
- Founder of AQSystem an early pioneer of SoDAR and LiDAR in 1970s
- AQ500 wind industry SoDAR launched in 2005
- 2014 – 400 AQ500's in operation
- AQ510 Wind Finder launched 2014



LiDAR early 1970s

SoDAR mid 1970s

SoDAR mid 1970s

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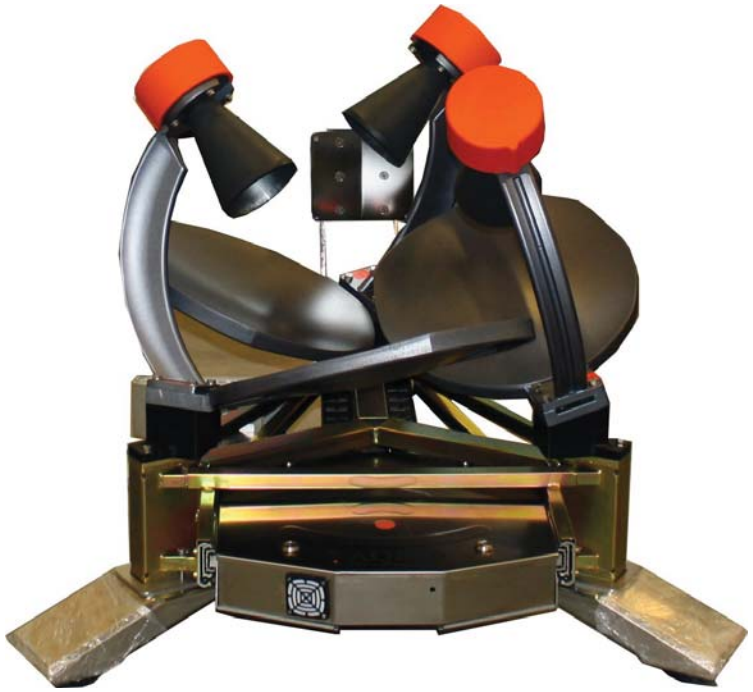
SECOND GENERATION

- AQ510 system configured for the wind industry
- Very low power requirement (15W average)
- Very high quality using the best materials
- Tight production tolerances
- Excellent unit-to-unit conformity
- Proven and independently verified accuracy
- No recurring support charges
- Competitive pricing and low operation costs



AQ510 Speaker & Electronics assembly

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AQ510 KEY FEATURES

- Wind speed range 0 to 30m/s
- Exceptional high data availability (>98 % @ 100m, >92% @ 150m, >85% @ 200m)
- Hi resolution - 31 measurement heights every 5m from 40m to 200m
- Compact and modular design for easy shipment and deployment
- Integrated GPS, temperature and humidity sensors
- Power and heating options to suit all climates
- Communication options via, GPRS or Satellite
- Symmetrical design, no directional bias
- Fixed geometry and parabolic dishes
- Unique 3 speaker technology

AQ510 Speaker & Electronics assembly inside housing

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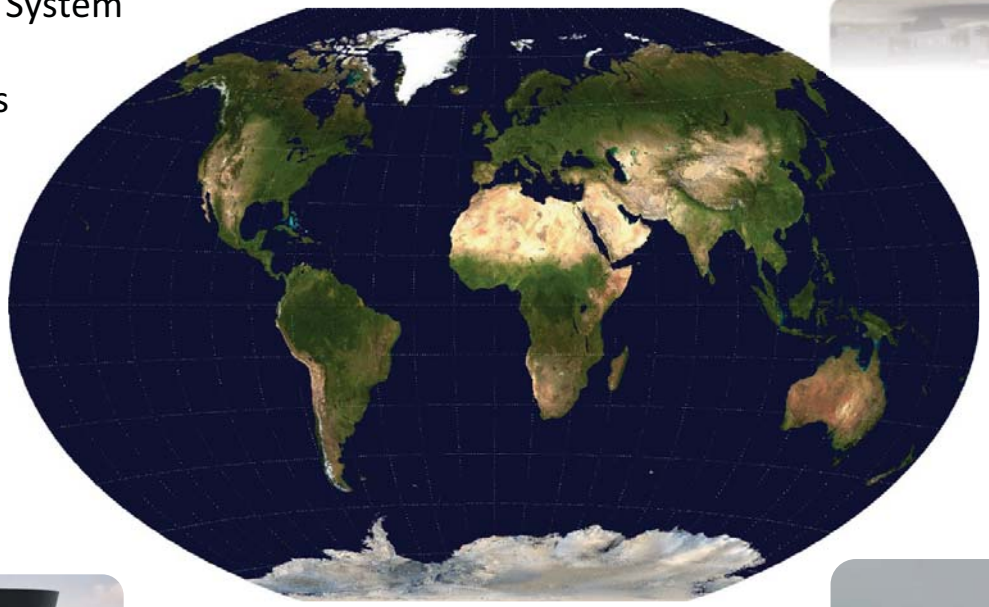
GO WHERE EVER THE WIND BLOWS

- Designed for any environment
- Optional Diesel Heating System
- Optional Power Systems



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WHAT OUR CLIENTS SAY

”AQ500 and 80 m mast is current RES standard practice in Scandinavia The AQ500 is a very good device: Robust and provides data in all weather conditions. Reliable with excellent operational availability (> 98 %).” Iain Campbell, MInstP, RES Group

res power for good

”We currently have 35 AQ500 deployed in various measurement campaigns in Sweden and elsewhere in Europe. Due to their mobility and high data availability, we see them as a useful tool in our measurements campaigns.” Daniel Gustafsson, Project Manager at Vattenfall

VATTENFALL

”We consider the AQ500 a very useful tool for wind site assessments. In our most recent project with the AQ500, we used altogether three units in parallel with a met mast and were thus able to run simultaneous measurements at four separate points for a period of four months. As a result we were able to raise the project’s P90 value with several percent.” Måns Håkansson, PhD, Wind & Site at Statkraft

Statkraft

”We use the AQ500 in a number of projects and are impressed with the high data availability and robustness of the unit. With an average data availability of 98% at 100m, it is the remote sensing product with the highest data availability we have ever installed.” Rafael Zubiaur, CEO of Barlovento Recursos Naturales

barlovento
recursos naturales

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EVERY UNIT VERIFIED

- Every AQ510 instrument is verified against a 103m met mast with traditional anemometry prior delivery. The site and instrument is fully IEC 61400-12-1 compliant and approved by DNV-GL. Every AQ510 instrument comes with a verification report.

”It is very positive to see that AQSystem has launched a dedicated test site for remote sensing, potentially allowing high quality performance verifications."
– Detlef Stein, at DNV-GL

DNV·GL

AQSystem test site

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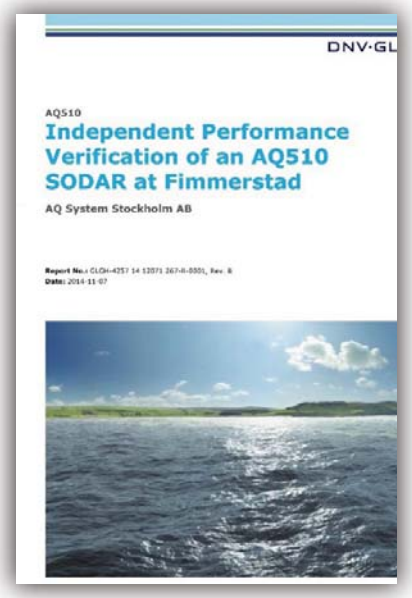
INDEPENDENTLY VERIFIED

"Up to now the AQ510 is the best SoDAR we had in a verification outperforming even Some LiDAR units".
– Thomas Latacz at BBB Umwelttechnik

- Verification reports available
- Compliant with IEC 61400-12-1 rev 2



DNV·GL

ECOFYS

BBB® Renewable Energies

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AQPOWER FOR MET MAST OR LiDAR

EMPOWER

- AQPower is a complete freestanding solution to power up heated anemometers or LiDAR instruments.

Windcube & AQPower

KJELLER VINDTEKNIKK

"Kjeller Vindteknikk delivers accurate wind measurements. In harsh and cold climate, it is necessary with robust and reliable power supplies. We have experience with AQ-Power under challenging conditions in Norway and Sweden. AQ has offer good service and helped us to supply our customers with measurements of high quality." – Finn Nyhammer, at Kjeller Vindteknikk

" We have been using eight AQ Power systems during winter in Finland. Especially when using heated sensors the consumption is significant and thus the power supply plays a key role in the measurement system. AQPower guarantees good data availability and reliability of the measurement to our customers in all conditions. We have been very satisfied with the AQPower systems. It is a perfect freestanding power supply solution to the cold climate region". – Maija Isoaho, at Empower

100m met mast & AQPower

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DISTRIBUTORS AND SERVICE PROVIDERS

- AQSystem is using a network of distributors and service partners. Our global distributor is Ammonit Measurement GmbH

Ammonit

”We are very happy to have signed a global distribution agreement with AQSystem. Thus we enhance the Ammonit sales strategy in the SoDAR business. With its proven track record of developing advanced SoDAR and power supply systems, AQSystem has an excellent reputation in the wind energy market. We are convinced that our customers greatly benefit from our extended portfolio and from the AQ510 Wind Finder.”
– Vincent Camier, Managing Director of Ammonit Measurement GmbH

barlovento
recursos naturales

EMPOWER

anemos-jacob
GmbH

STUDIO
RINNOVABILI

TUULISAMPO
~ tietoa tuulesta ~

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TRAINING

- Make the most of your investment in our wind measurement products by attending our popular training course AQademy at beautiful Beckershof mansion.

"The AQS training course is interesting, detailed and covers a wide range of relevant topics. The course is well thought out and delivered by people who are very knowledgeable on their subject matter. The course material is clearly explained and communicated. In my experience it was an excellent environment to learn and discuss ideas on remote sensing in general. This course enhanced my understanding of important aspects of the deployment of the AQ500 and the analysis of data from the AQ500. I would thoroughly recommend this course to anyone interested in the analysis of data from the AQ500 SoDAR device."
– Iain Campbell at RES Group

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