# alphasystem

## The intelligent health check for wind turbines!

**alphasystem** is a revolutionary real time diagnostic system for predictive maintenance for gearboxes, generators and bearings. The system helps to strike and maintain a perfect balance between operating and maintenance costs.

### Direct Benefits:

- Eliminate catastrophic machine breakdowns
- Pinpoint faults during operation
- Reduce operational costs, no need to open gearbox/bearing for routine checks
- Extend maintenance intervals safely
- Real time diagnostics system
- Indicate overall health of the equipment
- ROI in less than six months


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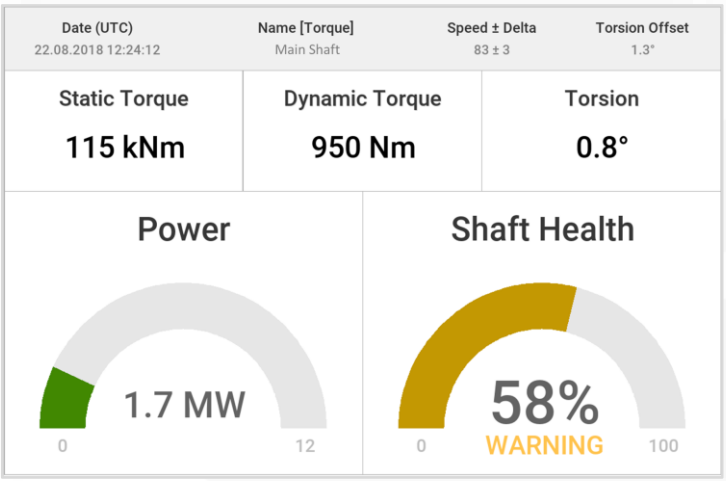
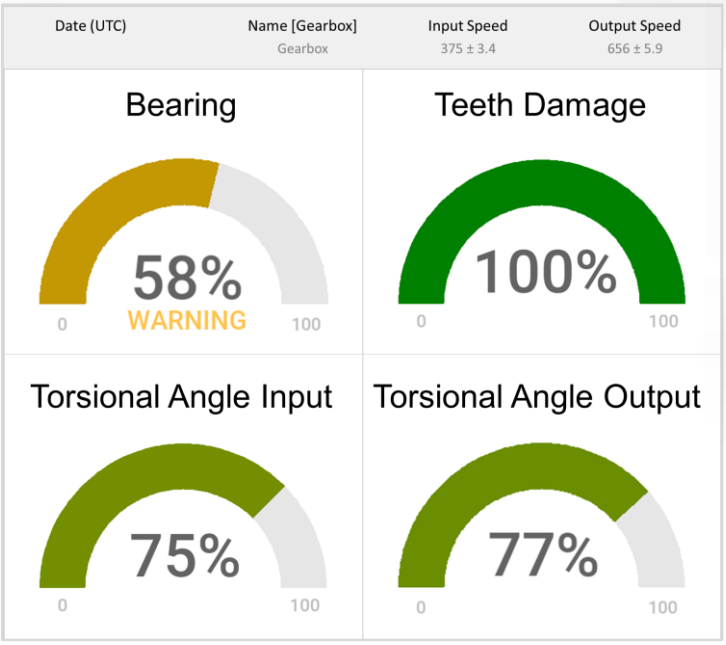
## alphabearing

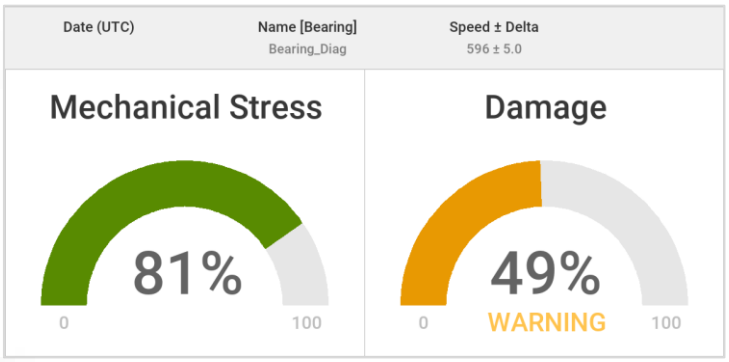
Excessive wear of bearings can result in reduced bearing lifetime, increased operating costs and unscheduled maintenance of machines. By using **alphabearing,** faults can be detected at their initial stage. This allows sufficient time to repair before catastrophic failures occur, supporting operators to improve scheduling of their maintenance.




## alphamotor

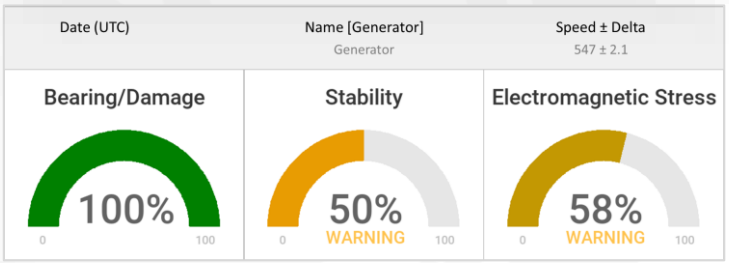
**alphamotor** is designed to determine the health condition of electric motors and generators by analyzing torsional vibration of the shaft. The system has a built-in automatic expert system, which provides the possibility of remote motor or generator monitoring. It is of non-invasive nature and offers broad fault coverage. **alphamotor** is easy to install or retrofit and suitable for almost all electric motors and generators.




## alphatorque

By providing the true mechanical work being generated by the rotor shaft, torque can be used to determine the true efficiency of the system: mechanical energy in - versus electrical energy out. This can be obtained by the information provided by **alphatorque**, which is suitable for all shaft diameters and shaft speeds without the requirement of any electronic parts that have to be installed on the shaft. The system is easy to install, both on new wind turbines and on wind turbines in operation.




## alphagearbox

Gearboxes are critical assets and any failure leads to expensive repair costs and down-time. **alphagearbox** diagnostics is based on torsional vibrations of the shaft. The system supports early fault detection, enabling users to prevent breakdowns before catastrophic failure. **alphagearbox** can diagnose the type of damage and it's source, based on changes in the torsional vibration signal. The system is able to predict problems well in advance.

## Other modules of the alphasystem product family:

- alphaengine
- alphacompressor