

## PRESS RELEASE

### Deutsche WindGuard expands portfolio to include inspections by drone

#### In service: TOPseven system for lightning protection measurement on wind turbines

**Varel/Starnberg, 2022-09-22:** Deutsche WindGuard Inspection GmbH has now expanded its portfolio of technical inspections for onshore and offshore wind turbine generators (WTG) to include examinations by drone. Besides drone-based visual inspections using a high-performance zoom camera, the inspection body from Varel, Germany, also offers its customers contactless lightning protection measurements. These are performed with the innovative technology from TOPseven GmbH & Co. KG from Starnberg, Germany.

“Our patented measuring method is unique on the market. It is based on the non-invasive injection of an electromagnetic field into the lightning protection system, which the 3D field sensor mounted on the drone measures during flight operation along the rotor blades,” explains Katja Weißbach, Head of Sales at TOPseven, “with the help of this highly specialised measurement technology and mathematical-algorithmic processing of the collected field data, we can quickly and efficiently check whether the lightning protection system is functioning properly. This procedure, which has been validated by TÜV SÜD, complies with the technical guidelines of the German Wind Energy Association (BWE) for testing lightning protection systems and is recognised by Gothaer Allgemeine Versicherung AG.

After instruction by TOPseven, thorough training and the first successfully completed inspection assignments, Deutsche WindGuard’s inspection team is now well acquainted with drone operation and measurement technology. The control software, which is based on artificial intelligence, first calculates the exact flight route on which the drone then autonomously flies along the WTG to conduct the necessary measurements.

“Thanks to the simple and quick conversion of the drone, we can offer the lightning protection measurement and visual inspection in just one appointment,” says Jan Wallasch, Managing Director of Deutsche WindGuard Inspection, “besides cost savings, the fact that the WTG only has to be switched off once is the greatest advantage for our customers.”

For visual inspection and evaluation, Deutsche WindGuard offers two alternative options: The autonomous patrol provides complete 3D external views of all inspected WTG components, once the high-resolution images have been processed by TOPseven. With the more time-saving manual flight, Deutsche WindGuard’s inspectors can react flexibly and directly on site and take a closer look at any damage they may have discovered.

„In any case, drone deployment saves a considerable amount of time compared to the much more complex and physically strenuous rope access inspection. Particularly regarding the new, tall onshore turbines, with the drone we are ideally equipped for the future,” concludes Jan Wallasch.

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### Foto:

Deutsche WindGuard – Inspektion by drone



### Bildzeile:

Deutsche WindGuard Inspection GmbH has expanded its portfolio of technical inspections for wind turbines to include inspections by drone. Contactless lightning protection measurements are performed with the innovative technology from TOPseven GmbH & Co. KG from Starnberg, Germany.

Photo: Deutsche WindGuard

### Deutsche WindGuard – The Wind Professionals

Deutsche WindGuard Inspection is an independent, internationally operating type A inspection body for onshore and offshore wind turbines accredited according to DIN EN ISO/IEC 17020:2012. The comprehensive range of inspection and testing services includes inspections of wind turbines and their components, commissioning inspections, recurring inspections, lifetime extension inspections, endoscopic inspections of gearboxes, bearings and generators as well as inspections of hoist platforms.

Deutsche WindGuard Inspection is an independent part of the Deutsche WindGuard group. In a complex energy market, Deutsche WindGuard is committed to providing unbiased and manufacturer-independent consulting and comprehensive scientific, technical, and operational services. Deutsche WindGuard was founded in 2000. With the headquarters in Varel, Germany, and subsidiaries in Germany, the United States, China and India, it employs more than 180 experienced experts.

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### TOPseven – Making Drones Smarter

TOPseven is a software and technology developer with a focus on drone technology, cloud computing and artificial intelligence.

With an international team of experts, TOPseven develops AI-based navigation and analysis software as well as special hardware in the fields of sensor technology and drones. For the future, TOPseven is committed to making even inaccessible infrastructures of all kinds regularly and completely inspectable in order to detect damage occurrences at an early stage, minimise damage impact and increase service life.

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