



# Internal Inspections

**Clobotics offers internal blade inspections as part of the ongoing maintenance of wind turbines**

Internal blade inspections are crucial for a detailed and thorough inspection of large blade structures. Clobotics performs internal blade inspections in a safe and effective way, providing blade specialists trained to work in confined spaces and the use of advanced robot crawler systems.

Clobotics is a global leader in solutions that combine artificial intelligence and the internet of things (AIoT) for the wind power and retail industries. Clobotics' end-to-end solutions combine computer vision, artificial intelligence/machine learning, and data analytics software with different hardware form factors, including autonomous drones, mobile applications, to help companies automate time-intensive operational processes and boost the bottom line through the use of data-driven insights and analysis. Clobotics was named to the CNBC Upstart 100 List in 2018 and was highlighted as an important computer vision solution provider for the industrial sector in the latest Bloomberg NEF report on computer vision.

**94%**

Achilles HSEQ  
Certification Score



**100+**

Years of In-house  
Blade Experience



**14,000+**

Wind Turbines  
Successfully Inspected





## Internal Blade Inspections

Wind turbine blades have evolved over the years to become 20-30-ton structures, designed, and engineered for longevity and durability in very extreme conditions. A thorough inspection of the whole structure is often recommended as part of the ongoing maintenance strategy or for responsibility handover (e.g., “Due Diligence” or “End of Warranty”).

Clobotics offers internal blade inspections of wind turbines performed by trained blade specialists and a ROV (remotely operated vehicle). The blade specialist performs a thorough close-up inspection, while the ROV operator performs a remote inspection of the blade tip, where humans are not allowed to enter. All inspections are documented and uploaded to the Clobotics web platform when a data-connection is available. Data from the ROV is uploaded to the same database. The data is then made available for client access, filtering/sorting, and report generation. The Clobotics project management team facilitates the complete project management including task specific planning that accounts for local requirements, confined space work, HSE, tools and procedures.

When performing confined space work, the HSE/project manager customizes RAMS (Risk assessment – Method Statements) for the specific tasks, and all operators are trained prior to the inspections.

### Clobotics provides the following advantages for an internal blade inspection:

- Safe and effective setup via use of a ROV
- Only 1 lift to nacelle for setup
- Specific blade specialists
- Fast backup support via the web platform
- Customized reporting





# Internal Blade Inspections

## Required certifications

- Certificates – depending on blade type
- Confined space – advanced rescue

## Weather Limits for inspection/repairs

- Depending on turbine/blade type
- Crane lift to turbine nacelle (windspeed limit)

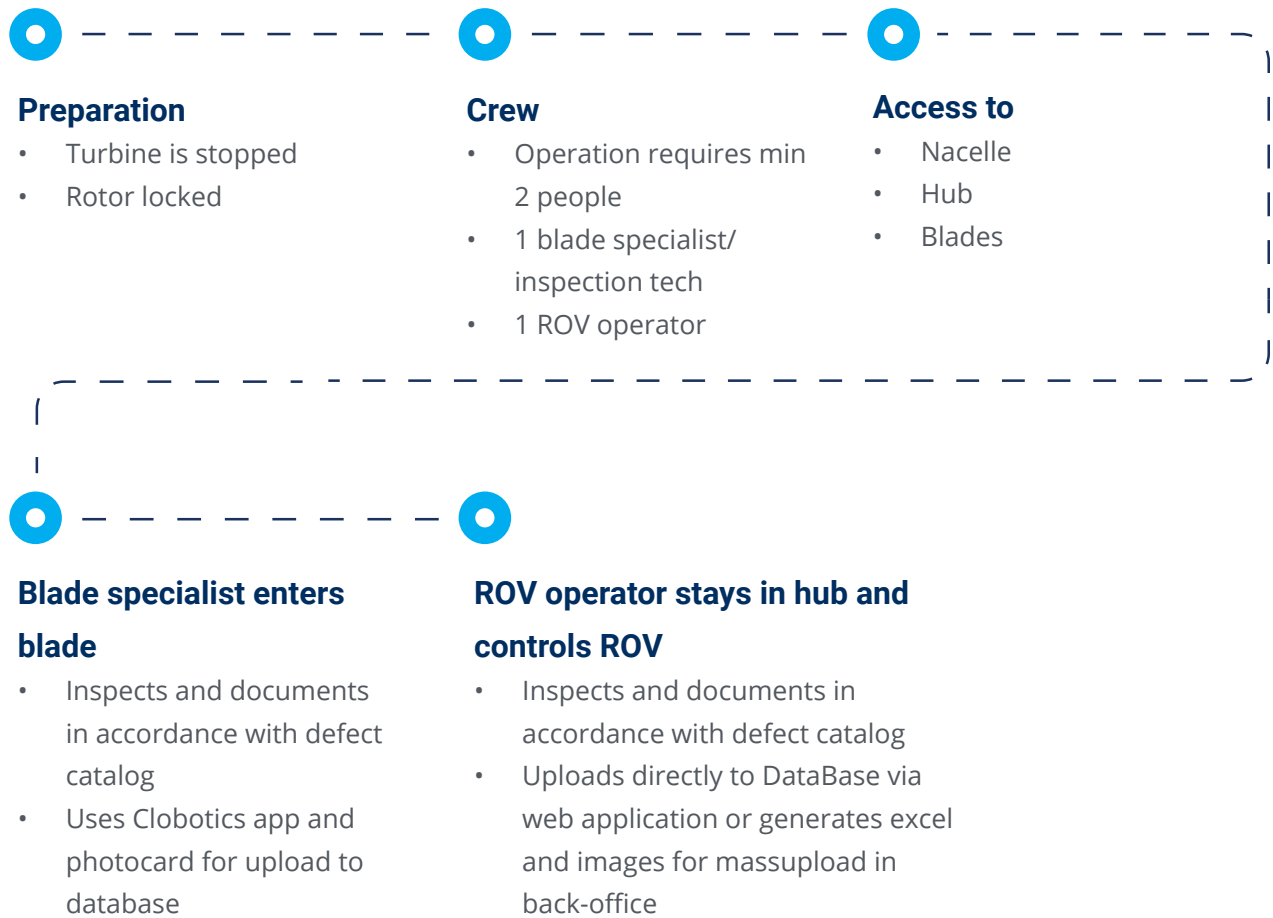
## PPE/Equipment

- Maintained and Certified Equipment LOG
- Personal check before each use
- IPEK travel kit (air travel luggage)
- Ipek VC200, RMX100, RX130, PTP10711

## Documentation

- Clobotics documentation tool
- Portable camera with macro
- Photo cards for inspection or repair info

## Process





[www.clobotics.com](http://www.clobotics.com)

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## Get Started

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