

Noise reduction: H-type DinoTails

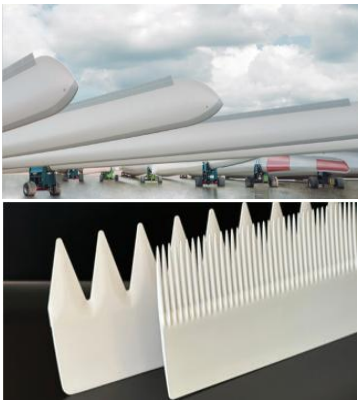


Figure 1: Blade with H-type DinoTails and serrations.

Challenge

Wind farms operating in proximity to residential or environmentally sensitive areas must comply with strict and increasingly demanding noise regulations. When these limits are exceeded, operators may face curtailment, operational restrictions, or financial penalties, which directly reduce energy production and negatively impact overall asset profitability

Solution

Siemens Gamesa addresses this challenge with H-type DinoTails, an aerodynamic blade add-on installed at the rotor blade tip that reduces the turbine’s sound power level. By optimizing airflow at the trailing-edge separation point under laminar flow conditions, the solution effectively lowers noise emissions by 2 to 4 dB(A), enabling operators to maintain compliance with noise limits and minimize the risk of curtailment.

Benefits

- Avoids curtailment to enable full turbine operation while meeting noise regulations.
- Safeguards and increases AEP by limiting noise-driven restrictions.
- Increases asset profitability through higher availability.
- Reduces environmental impact in noise-sensitive locations.
- Delivers a proven, reliable solution with up to 20 years lifespan.
- Allows quick, simple installation with minimal disruption.
- Requires no PLC or SCADA changes, avoiding impact on turbine controls.

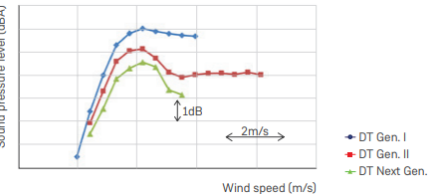


Figure 2: Reduced Sound Power Level based on measurement in a wind tunnel (H-type DinoTails: green curve).

Maintenance ease	Cost control	Operating reliability	Trusted partner	Safety

Applicability

Senvion 3.2M114 and 3.4M114 wind turbines.

Fleet experience	Installation time	Functional system
Installed in +90 Gamesa turbines for DinoTails and +800 Senvion turbines for Serrations.	24 hours x 2 technicians for Senvion turbines.	Blades.

Information is subject to change without prior notice.