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# Fire Prevention Systems

Available fire detection and suppression systems for optimised business case certainty

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## Benefits of Vestas' Fire Prevention Systems

- Detection of fire risk in the earliest stages to limit damages
  - Limiting dispersion of a potential fire eruption
  - Active suppression at the source
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## Preparing for the unexpected

Fire hazard incidents are significantly rare, but implications potentially severe. Therefore, fire prevention is a critical Vestas product function with a dedicated engineering discipline. The Vestas engineers ensure that the turbines are designed adhering to the Vestas Fire Hazard Risk Assessment to comply with relevant standards and guidelines specific to fire and wind turbine application. In addition to this, fire detection systems as well as fire suppression systems are available across the Vestas 2 and 4 MW platforms to safeguard the turbine.

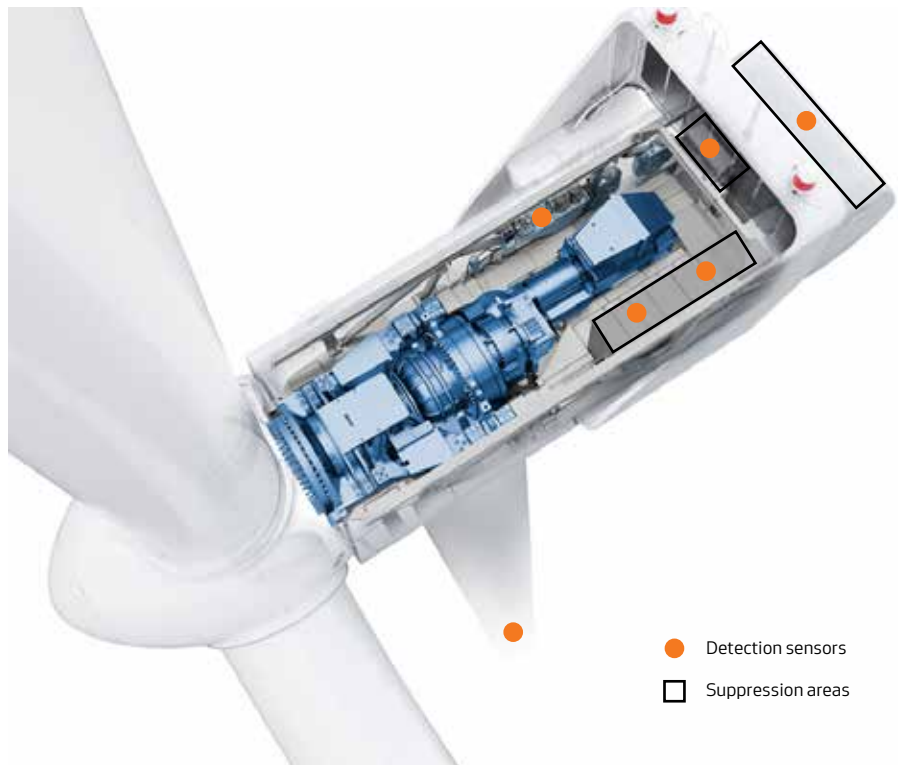


Illustration of fire detection and suppression system placement in a V136-3.45 MW \*

**Vestas turbines with detection and suppression systems available:**

- V100-2.0 MW<sup>®\*</sup>
- V110-2.0 MW<sup>®\*</sup>
- V116-2.1 MW<sup>™\*\*</sup>
- V120-2.2 MW<sup>™\*\*</sup>

- V105-3.45 MW<sup>™</sup>
- V112-3.45 MW<sup>®</sup>
- V117-3.45 MW<sup>®</sup>
- V117-4.2 MW<sup>™</sup>
- V126-3.45 MW<sup>®</sup>
- V136-3.45 MW<sup>®</sup>
- V136-4.2 MW<sup>™</sup>
- V150-4.2 MW<sup>™</sup>

- V150-6.0 MW<sup>™</sup>
- V162-6.2 MW<sup>™</sup>
- V162-6.8 MW<sup>™</sup>

\* Fire suppression system is only available in North America.

**Early detection**

Vestas' two detection systems continuously monitor the turbine for signals that fire may be imminent. The Smoke and Heat Detection System monitors the switch gear and mechanical driven events, such as brake zones and trigger an alarm if both smoke and heat is detected. The Arc Detection System focuses on high voltage zones and monitor for light glints related to arc flashes. In case of detection, the systems disengage the main switchgear and disconnect the turbine from the grid. Additional smoke and heat sensors can be added to the 2 MW turbines based on the customer's fire risk assessment.

**Fire Suppression**

As a second line of defense, Vestas Fire Suppression System (FSS) is available for Vestas' 4 MW turbines. In case of a fire incident, the electrically activated fire suppression system actively suppresses fire at the source by de-energizing the hazard zones, utilising a suppression agent. Connected to a back-up power source, the fire suppression system continues operation after the main switchgear is turned off and limits fire dispersion and further damage. A fire suppression system is also available for the 2 MW platform in North America.

**Business case optimisation**

Application of fire detection and suppression systems safeguards the turbine and protects the investment, while ensuring optimal business case certainty. Please contact the local Vestas office for more details and market specific availability.

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