Aircraft IceGuard

Increase aircraft safety, limit flight delays and prevent unnecessary costs by making informed de-icing decisions

For airlines, maintaining passenger safety is paramount, so wintery weather conditions bring a range of challenges... Unnecessary de-icing and anti-icing of aircrafts costs time and money, while failing to correctly predict when de-icing is required, can lead to safety risks, flight delays, and even cancellations. To help airports and airlines navigate these crucial decisions, DTN developed Aircraft IceGuard.

Benefits

Aircraft IceGuard helps airports and airlines make informed de-icing decisions, supporting flight safety and maximizing airplane availability. With Aircraft IceGuard you can:

- **Increase aircraft safety:** Clear ice is hard to observe during inspection of a plane. The clear ice indication alerts improve safety by highlighting dangerous wing conditions.
- **Minimize flight delays and cancellations:** The 36-hour and 5-day forecasts support deicing and anti-icing planning and allocation. Multi-point measurement and modelling identifies local differences across the airport, while real-time monitoring enables rapid response and high-quality local forecasts.
- **Reduce anti-icing cost:** Wing condition forecasting allows you to optimize anti-icing activities and planning of resources.
- **Decrease your environmental footprint:** Minimizing de-icing activities reduces your environmental footprint.

Users and key use cases

Aircraft IceGuard supports Ground Operations, airport and airline staff, and de-icing contractors responsible for making de-icing decisions. With Aircraft IceGuard you can:

- **Plan resources:** Optimize planning of de-icing and anti-icing resources by replacing generic weather forecasts with Aircraft IceGuard's detailed wing temperature and condition forecasts for the next 5 days.
- **Avoid unnecessary anti-icing operations:** Reduce costs by using wing temperature and condition forecasts to make de-icing decisions (in place of air temperature measurements, which can differ by many degrees on the same spot).
- **Evaluate past decision-making:** Gain insights into forecast accuracy by comparing forecasts against actual wing temperature measurements and de-icing activities.

Customers

Airports like Schiphol and Zurich put their trust in us. Contact us to learn more about how we help these organizations to minimize flight delays and cancellations, reduce costs, and support aircraft safety by making informed de-icing decisions for thousands of flights.

Features

Aircraft IceGuard is a web portal that supports de-icing decision-making by combining weather observations and forecasts with wing temperature observations and forecasts. It has been developed in cooperation with the Schiphol Airport 'Knowledge Development Centre'. The Aircraft IceGuard portal provides access to the following features and provides personalized expert advice:

Wing hazard overview - Receive warning when wing temperatures below 0°C, clear ice, (heavy) hoar frost, snow, sleet or freezing rain are expected within the next 24 hours.

Location details - Drill down to gain detailed insights of local wing temperature, air temperature, and dewpoint measurements. Gain even deeper insights using the 36-hour and 5-day wing temperature, wing condition and weather forecasts.

WMO observations, METAR and TAFS - Access the official airport- specific weather observation reports and forecasts.

Ensemble prediction forecast 15 & 30 days - Track the long-term weather forecast, including potential variables.

Archive - Access past measurements, wing temperature and condition forecasts, and weather forecasts.

Precipitation-type radar - Improve short-term decision-making based on real-time and forecasted precipitation radar information, which distinguishes between rain, hail, snow and freezing rain.

Meteorologist consultation - Get personally informed by weather experts with extensive experience.

Unique Weather Data APIs Directly Available

Aircraft IceGuard builds on decades of experience in weather forecasting and many years of research conducted in association with the Knowledge Development Centre, Schiphol, and KLM. With Aircraft IceGuard, users get access to the following unique capabilities:

- **Actual wing temperature measurements and condition forecasts** - Efficient wing de-icing requires knowledge of the wing temperature, not just the air temperature. The DTN wing-specific forecast model draws on 20+ years of road- and runway-forecasting experience.
- **24/7 forecast quality control** - Forecasts are monitored and improved by meteorologists 24/7 to ensure accuracy and quality.
- **Expert advice** - When in doubt, obtain personal advice from meteorologists with extensive experience.

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