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Vaisala CheckTime

/ Leading the Way in Aviation Innovation

Feature Highlights

- **ProtectTime** – dynamically calculates impact of weather on anti-icing fluid used
- **Vaisala LWE Station** – located at each airport, reliably measures conditions every minute
- **LWE vs. Visibility for Calculation** – LWE is a more accurate way to measure the impact of precipitation on anti-icing chemicals
- **Vaisala Cloud Storage** – Features built-in redundancy and quality checking

Winter can be a challenging time for airline operations due to the frequency, and sometimes unpredictability, of winter weather. The stress of staying within budgets, maintaining a flawless level of safety, and meeting the long-term business goals of the airline are all demands placed on operations. One of the significant winter weather challenges is the de-icing and anti-icing of aircraft. Currently, airline pilots use holdover time tables to provide a time in the future when it is no longer safe for the aircraft to depart based on an assumption that the present weather conditions will remain constant. These tables are based on air temperature, precipitation type and intensity; where observed visibility is used to estimate precipitation intensity. The tables are cumbersome for pilots and cause added distraction along with other departure procedures.

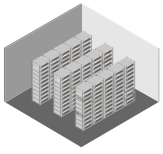
Advanced Weather Technology

Vaisala CheckTime is a modern decision-support system that helps airlines succeed during winter weather. Developed by aviation weather experts, CheckTime uses Vaisala precision weather sensors that measure temperature, wind, precipitation type, and Liquid Water Equivalent (LWE) to calculate the impact of changing weather conditions on anti-icing fluid after the aircraft anti-ice time. Updated every minute, Vaisala CheckTime is able to provide dynamic decision support to the pilot via the airline ACARS computer or mobile application in the cockpit.

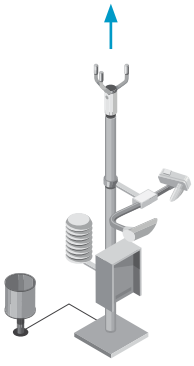
Instead of using holdover time tables, the pilot receives a CheckTime message that allows them to maintain awareness of the state of the fluids on the aircraft. Using CheckTime streamlines airport operations while maintaining the highest level of aviation safety.

CheckTime System

ACARS or via mobile device browser



Vaisala Cloud Data Center

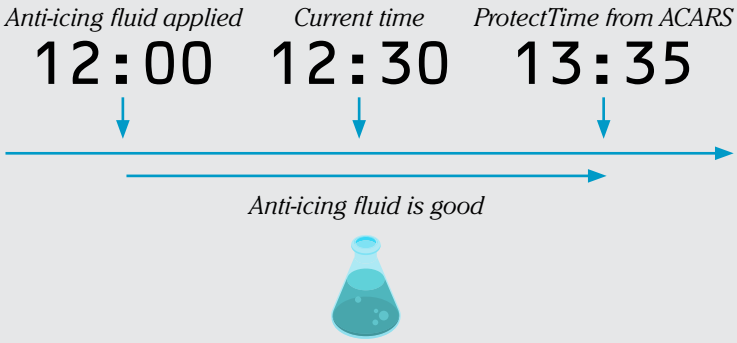


CheckTime Weather Stations at Airport (Vaisala owned)

CheckTime Example

Type-IV anti-icing fluid is used. 30 minutes after de/anti-icing, the pilot enters the anti-ice time to ACARS and receives a ProtectTime of 13:35. Meaning, at that moment, your anti-icing is valid until 13:35.

Checktime calculates the impact of changing weather conditions on the anti-icing fluid every minute. All fluids and mixtures are impacted differently, so the ProtectTime may change.



Why Vaisala?

EXPERIENCE

Weather and aviation go hand in hand; and thus, weather observations are always important to airport and aviation operations. It all started with a single Automated Weather Observation Station (AWOS) in 1975. Today, 40 years later, Vaisala has designed and perfected solutions that touch nearly every breadth of weather and aviation. Partnering with Vaisala means that you have the support of a weather company that offers a wide variety of technologies.

- 80 years of weather measurement
- Over 30 years of experience in hosting and managing continuous weather data

TRUSTED

Vaisala is a trusted supplier of weather solutions for national aviation authorities, such as the FAA, and meteorological offices around the world.

Solutions include:

- ICAO AWOS
- Runway Visual Range
- Runway Weather Info
- Weather Radar
- Lightning
- Liquid Water Equivalent

SCIENTIFIC EXCELLENCE

In many of the core Vaisala weather sciences we are considered around the world as the authority on meteorology.

- Lightning Detection - leaders in the detection and classification of lightning strikes means more precise timing of disruption
- Runway Surface Conditions – 40 years of measuring surface conditions equates to better winter de-icing decisions on runways
- Visibility – Superior accuracy and reliability of ground visibility translates into stronger confidence in low-visibility situations
- Observing Sensors – whether it is temperature, wind, or dew point, 80 years of trusted measurements means accurate aviation operations

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