

ATLAS



**Automated Take-off and Landing
Assessment System**



With a clear objective to reduce runway excursions, the ICAO has established the Global Reporting Format (GRF) in an effort to globally harmonized runway condition assessment. In this respect, Boschung has designed ATLAS (Automated Take-off and Landing Assessment System), based on field-proven sensing technologies.

The presence of contaminants on the runway surface has detrimental effects on braking actions, with an upmost danger of runway excursions. A continued monitoring of substances contaminating the runway surface without closure is of paramount importance for a safe and economical operations of airports.

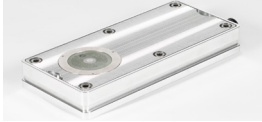
ATLAS provides in real time the contaminant types and depths as valuable information about the level of danger on the runway. According to ICAO's GRF, the system delivers the following surface condition assessment year-round, twenty-four-seven, with no need to close the runway:

- Runway condition code (RWYCC), a number between 0 and 6 that reflects the runway braking capability as a function of the surface condition;
- A normalized description of the type of contamination on the runway;
- An assessment of the depth of the contamination;
- An assessment of the contamination coverage.

Automated system with innovative sensors

ATLAS is composed of the following elements:

- Base ice early warning system from Boschung or third-party airport weather information system



- IT-RWY: pavement sensor specifically designed to report contamination status of the runway surface
- r-snow: sensor for very accurate snow depth measurement and snow type detection

ATLAS modularity and scalability

ATLAS is customized according to the specificities of the airports (international, middle-sized or unmanned airports) for all regions of the world with all climates. The number and types of measuring elements can for example vary depending on the length of the runways or on the frequency of snow falls.

ATLAS can make use of existing airport weather information systems.

Ideal for runway monitoring applications

The IT-RWY permanently surveys the surface condition of the runways and provides information on the surface contamination. It can measure the depth of the water film up to 18 mm. Combined with the other sensors, ATLAS provides all contaminant types and depth required by the GRF.

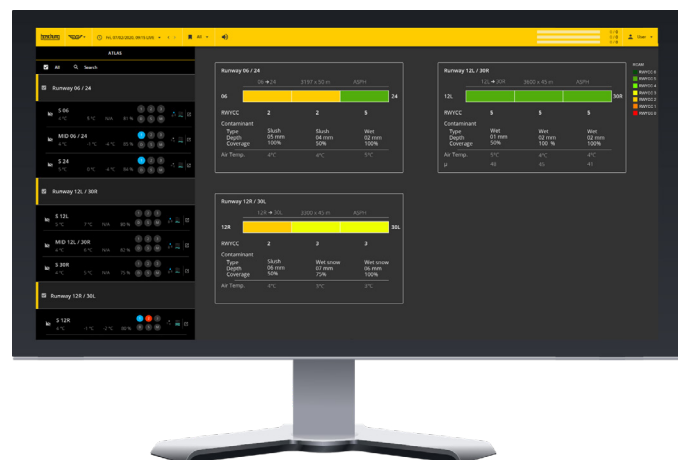
The pavement sensors IT-Sens, IT-ARCTIS and IT-RWY are installed in cases with connector for quick sensor replacement. They are designed for long lasting operations. Cases and sensors have an excellent resistance to mechanical stress and chemical agents for use on airports. With very low power consumption, their robust design makes them the ideal candidate for runway monitoring applications.

Surface condition assessment without runway closure

ATLAS permanently delivers the assessment of runway conditions. With fixed installation efficiently covering the complete runway, the system is available twenty-four-seven without runway closure. Any change of runway conditions is recorded instantly, without the need for lengthy actions along the runway.

Support to runway inspections

When the overview of the runway conditions is clear on all thirds, supplementary visual inspections get unnecessary. Likewise, ATLAS (live as well as historical) data contribute to confirming the inspection works.



GRF visualization with bVision ATLAS

The results of the runway monitoring can be visualized in the bVision web-based software.

All runways are displayed at a glance with all information from the Global Reporting Format. RWYCC as well as contaminant type, depth and coverage are visible on the screen in a very user-friendly manner. Next to the codes of the runway, a color scheme implicitly brings clarity on the overview of runway conditions.

Data transfer to external servers is also possible.



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