

# AIRPORT AND HELIPORT WEATHER OBSERVATION

QUALITY THROUGH INNOVATION AND DESIGN

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Energy, Water, Environment.  
Global Sustainable Solutions.

## 11 Airport and Heliport Weather Observation (AWOS)

ENEA Grupo®'s Airport Weather System (Automatic Weather Observation System - AWOS) deals with measuring all the meteorological parameters of airports, aerodromes, heliports, etc., providing data already processed to the Meteorological Center for distributing them to the aircraft pilots and Authorities responsible for air traffic safety, using different communication ways.



Besides the aviation market, ENEA Grupo® AWOS Systems are also implemented at small public-use airports, heliports, seaplane bases, crop duster operations and private landing strips providing high quality, up-to-the-minute weather conditions to ground personnel and pilots.

Depending on the category of the airport, or if a heliport with smaller requirements is to be implemented, the parameters to be measured can vary considerably. Below we have listed all those that should be considered in any of the possible cases:

- Wind speed and direction
- Air temperature
- Relative Humidity of the air
- Dew point
- Precipitation
- Atmospheric pressure (QFE-QNH)
- Solar Radiation
- Visibility (MOR- Meteorological Optical Range)
- Present weather (Intensity and type of precipitation: rain, snow, hail, etc.)
- Cloud base height
- Sky condition
- Thunderstorm detection (via a cloud-to-ground lightning detector)
- Vertical visibility
- Turbulence in altitude
- Runway surface condition

ENEA Grupo® integrates complete Automated Weather Observing Systems (AWOS) for all airport categories, according to the needs of each specific project, providing accurate and reliable data to ensure airport safety and operational efficiency.

AWOS systems disseminate weather data in a variety of ways:

### Weather reporting (voice messages)



AWOS system disseminates weather data via a computer-generated voice message which is broadcast via radio frequency to pilots in the vicinity of an airport. The message is updated at least once per minute, and this is the only mandatory form of weather reporting for an AWOS.

The aviation weather report also may include a section containing the trend forecast, which indicates the forecast change in meteorological conditions in the next two hours.

### AWOS Reports

METAR is an aviation routine weather report that is issued at hourly or half-hourly intervals. It is a description of the meteorological elements observed at an airport at a specific time.

SPECI is an aviation special weather report issued when there is significant deterioration or improvement in airport weather conditions, such as significant changes of surface winds, visibility, cloud base height and occurrence of severe weather. The format of the SPECI report is similar to that of the METAR and the elements used have the same meaning. The identifier METAR or SPECI at the beginning of the weather report differentiates them.

