

Laser FOD Detection System

LFOD

The **laser foreign object debris (LFOD)** detection system uses high speed cameras, custom optics and laser line projectors to acquire both 2D images and high resolution 3D profiles of airport runways, taxiways and aprons in order to automatically detect even the smallest objects at highway speeds.

The LFOD system can be operated both during daytime and nighttime as well as under all types of lighting

conditions. Sun and shadows as well as various pavement types ranging from dark asphalt to concrete can be scanned at inspection speeds from 0 to 100 km/h. Depending on the configuration selected, an entire runway can be scanned in only a few minutes; automatically detecting FOD as small as 2 mm in size.



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FOD and GPS data is collected simultaneously and is analysed in real-time. Alarms can be pre-set to trigger upon detection of FOD of specific sizes or volume. Included software reports size, number and location

data for each of the detected debris; thus allowing operations and maintenance personnel to quickly decide whether to remove individual threats or to proceed with a general runway maintenance program.

SYSTEM SPECIFICATIONS

- Number of laser profiles: 2 sensors
- Sampling rate: 28,000 profiles/s
- Transversal field of view: 4.5 m
- Transversal resolution: 1.2 mm
- Longitudinal resolution: 1 mm
- Vertical accuracy: 1 mm
- Laser profiler dimensions: 428 mm (h) x 265 mm (l) x 139 mm (w)
- Weight: 13 kg
- Power consumption (max): 150W at 120/240 VAC

KEY FEATURES

- Detection of FOD as small as 2 mm
- 24 hour operation; day and night-time
- Automated detection; alarms can be pre-set to trigger upon the detection of specific FOD sizes
- Safe and efficient; operational speeds from 0 to 100 km/h
- Flexible configuration; scanning width of 4.5 m per pass.
- Cost-effective installation; typically can be mounted on existing inspection equipment
- Accurate; GPS tagging of detected debris

