

Large Open Spaces



The Facts

- Retail distribution warehouses accounted for 14% of all fires in the UK in 2013 (3,100 incidents)*
- On average there are 4,000 retail related fires every year in the UK
- Solar heat gain slows smoke rising to ceiling level detectors, increasing risks
- The earliest detection of invisible smoke concentrations is essential; an evacuation can take up to 30 minutes in a shopping centre, with smoke spreading in just a few minutes
- System testing can be difficult and costly in high ceiling buildings; cranes are required and business disruptions result
- Hi-bay racking can provide a significant barrier to the detection of smoke before developing in to a full-scale fire

*Department for Communities and Local Government: Fire Statistics: Great Britain April 2012 – March 2013

Why FAAST Works So Well

FAAST™ Fire Alarm Aspiration Sensing Technology, provides the earliest and most accurate detection down to invisible smoke concentrations, allowing more time to implement counter measures and prevent full scale evacuations. Using a discreet pipe network of sampling points, that can be installed both horizontally and vertically, FAAST™ draws in air via a high powered vacuum, providing effective stratified testing that can also successfully overcome the effects of solar gain.



The Results

- Earliest and most accurate detection of invisible smoke particle concentrations, providing more time to implement counter measures and prevent full-scale evacuations
- 67% increased false alarm immunity compared to traditional methods*
- Increased fire protection and coverage, with reduced maintenance requirements and simplified ground-level full system test, resulting in significant operational cost savings and no disruption to the working environment
- Flexible sampling pipe network for warehouse racking, where product storage makes other detection methods impractical
- Remote monitoring with flexible status updates via (email/smart phone/mobile)
- Optimal detection 24/7 with no downtime

*Independent test at the University of Maryland in the US

Fire Examples

30 firefighters tackle catering warehouse fire

Stansted Airport: April 2015

A large catering warehouse providing in-flight meals for Stansted Airport burned for three hours, requiring seven fire engines and 30 firefighters to tackle the blaze and bring it under control.

Three explosions cause structural collapse at a warehouse

Norfolk, UK: November 2014

A 45,000 ft² warehouse facility experienced three explosions causing major structural collapse. The fire involved three propane-fuelled forklifts and dense smoke could be seen up to 20 miles away.

The Challenges of Fire Protection in This Environment

Large open spaces like stadiums, airports, or shopping centres experience high visitor volumes, and warehouses and logistics facilities demand maximised productivity; the earliest fire detection and accuracy is therefore essential. Unnecessary evacuations and productivity downtime must be avoided, creating the need for stable, false alarm immune solutions. Many traditional smoke detection methods prove problematic due to smoke stratification effects and environmental conditions like solar gain, which slows rising smoke to ceiling level detectors. Device testing can also be costly and disruptive, requiring cranes and specialised resources.



The Requirements

- Identify potential fire events at the earliest opportunity and implement counter measures
- False alarm immunity to prevent unnecessary evacuations and business disruptions
- Cost-effective stratified sampling that can overcome the effects of solar gain and large/high volume area monitoring
- Efficient and non-intrusive system testing capability

Proven Technologies and Advanced Design Features

- Unique three-stage filtration for false alarm immunity: aerospace designed wing filter, harsh integral filter and advanced dual-optics, for accurate smoke identification
- Smoke detection down to invisible concentrations: 0.0015% obs/m
- Flexible remote monitoring: Internet/IP connectivity and status updates via email/smart phone/mobile device
- Horizontal and vertical sampling pipe work installation permits effective stratified detection and simplified testing
- In-rack sampling can be provided cost-effectively to meet compliance requirements and also to prevent smoke damaged stock, leading to a full-scale fire
- Single device monitors spaces up to 2,000 m² and 40 m high (equal to highest point density and maximised fire protection coverage)



Contact Us

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