

Testing Smoke Detectors

No access, No variations, No excuses

Many buildings require smoke detection in areas that are difficult to access, but are vital to ensure the safety of the building and its occupants. They are found in the most common of places – in lift shafts, at the top of atria, or in the void space above ceilings. They are also found in buildings that are in 24/7 use such as airport terminals, factories and warehouses, academia, and hospitals. In these environments, it is estimated that up to 10 percent of detectors are never tested, and yet these detectors are often those that are most critical to function.

With Scorpion, all smoke detectors in a building can now be safely and efficiently tested every year.

Testing these point detectors or ASD systems often carries a disproportionate time and cost.

Current test methods often mean:

- Health and safety risk assessments and approval.
- Restricting access that disrupts the normal operation of the building.
- Bringing in access equipment (hire cost, possible damage to building or floor tiles).
- Risk of dislodging or damaging cables, fittings and lights.
- At least two staff members able/trained to work at height or in restricted spaces, or lift engineers to shut down the lifts.
- Out of hours working (evening or weekends), which increases staff costs.

With ASD systems, industry-accepted test methods involve over-heating cables to give off smoke (wire-burn test) or setting fire to different materials (lactose or wood, for example). These present health and safety risks and need the area to be cleared of personnel until the smoke has dissipated.

Scorpion is a new way of bringing these difficult-to-access detectors into reach and enables them to finally be tested. The Scorpion system consists of a smoke-generator that is mounted alongside a point detector or next to the furthest sampling hole on an ASD pipe. The smoke generating head unit is then cabled back to a Scorpion control panel that is mounted at a convenient, easy to reach, location. Testing of the “hard to access” detector is now as simple as selecting the appropriate head unit and pressing the “start” button on the control panel.

Smoke is generated right where it is needed – in the immediate vicinity of the point detector or ASD sampling hole. This enables a functional smoke test to be conducted safely and quickly, meaning there is no disruption to the normal working of the building. Scorpion also provides the ability to measure transport time for ASD systems with greater consistency from one maintenance visit to the next.



Scorpion is already proving its worth in a number of sites across Europe, ranging from university archives and sports halls, lift shafts and void spaces, to warehouses and computer server rooms. One such example is the archive at the University of Leeds in England. The secure archive is covered by five ASD pipes that now have Scorpion heads mounted at the furthest accessible sampling hole. The control panel is outside the secure area from where the test of the complete system can be run.

Scorpion brings difficult-to-access detectors into reach. It comprises a smoke-generator mounted alongside a point detector or next to the furthest sampling hole on an ASD pipe.

Althuisius Warehousing in The Netherlands is another example where maintaining the fire system to the highest standards is of paramount importance. The ASD pipes in the warehouse are 15 metres from the floor. After the initial installation, Scorpion eliminated the need for specialist access equipment, and allowed a full test of the pipe integrity to be carried out from ground level. The whole fire detection system is tested every month, with alarm activation and system clearing being considerably quicker than traditional test methods.

Testing time is reduced to minutes rather than hours, and access equipment and additional staff costs are eliminated. The fire system is fully tested and compliant with codes, standards, and regulations. Scorpion means variations to the maintenance schedule are now un-necessary, as all smoke detectors can be functionally tested easily and safely. **IFP**