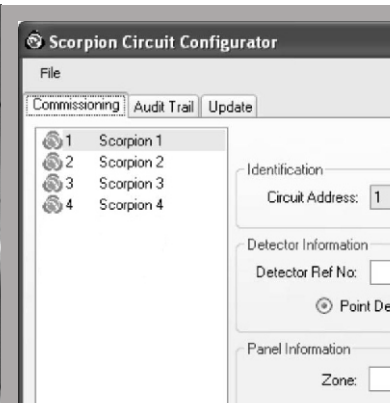


REMOTE TESTING



For **ASPIRATING SMOKE DETECTION (ASD) SYSTEMS**



scorpion[®]
REMOTE DETECTOR TEST TECHNOLOGY

www.scorpion-tester.com

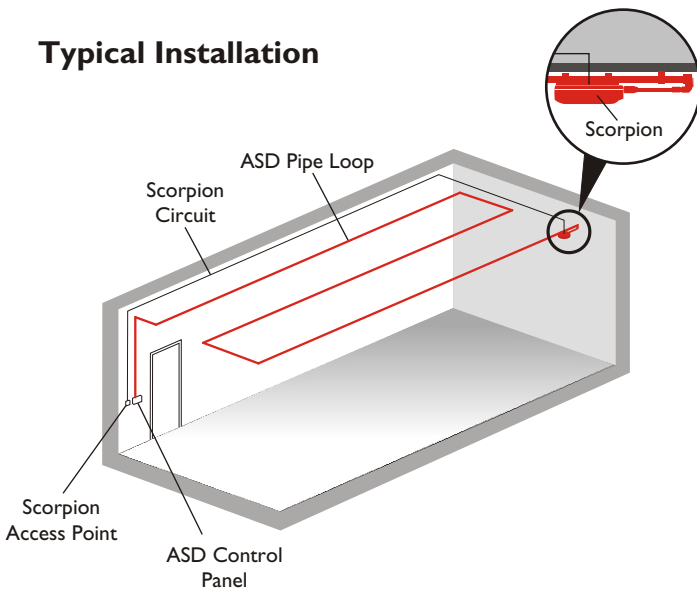
Remote Testing

Scorpion ASD is a unique, remote smoke detector test system for Aspirating Systems that solves a number of long standing challenges, assists compliance with International Codes and Standards and delivers radical time, cost and disruption savings while enhancing professionalism and delivering a documented and traceable audit trail.

Traditional post commissioning ASD testing is generally performed by trying to introduce a test smoke (often of inappropriate suitability or even questionable quality) into individual sampling points. Not only can this be highly impractical but it can also contaminate an ASD system. Scorpion offers an approved, benign and effectively non contaminating test particulate (with a lifetime of at least 120 seconds and 100 metres) introduced under software control.

With Scorpion permanently positioned at the end of a pipe run a repeatable and consistent test is achieved from one period to the next and, by recording the moment of Scorpion activation and the moment of alarm signal, the transport time is measured. Comparing this against the retained commissioning data, previous tests and the acceptable tolerances enables judgements to be made regarding the integrity of the aspirating system.

Typical Installation



Installation

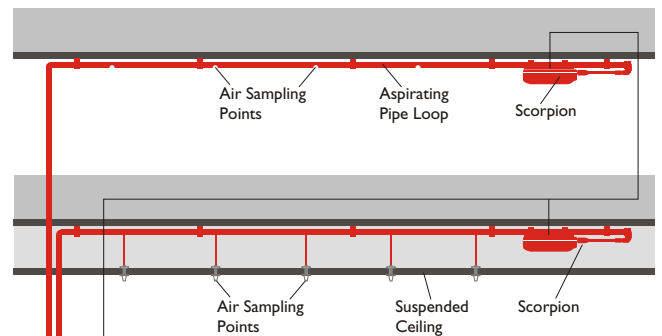
Scorpion ASD is suitable for retrofitting to existing ASD installations as well as new installations.

The Scorpion ASD head is a smoke generator which is mounted adjacent to an ASD sampling point - typically at the end of the pipe run, with just one Scorpion needed for each pipe run regardless of the number of sampling points on that run. There is no limit to the number of circuits that can be installed on a site. Each circuit 'terminates' at a conveniently located Access Point (which is the point at which the Service Engineer interfaces with the Scorpion system). Typically, but not of necessity, that Access Point might be located near the alarm panel / control and indicating equipment.

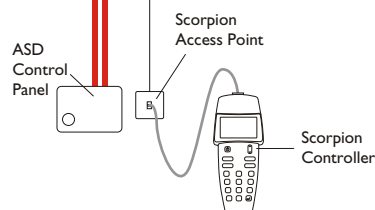
Scorpion is suitable for obscuration, particle counting and cloud chamber technologies.

Use

The system is powered and activated only through the portable Scorpion Controller, carried from site to site by a service engineer and which connects to the system through the conveniently located Access Point - a single location from which multiple Scorpions can be accessed; negating the need for expensive additional aspirating pipe run to accessible (and usually very visible) locations.



Installation Examples



At commissioning, data is uploaded to individual Scorpions from the Controller through the Access Point and, during regular ongoing testing, the Controller interrogates the Scorpion circuit, displaying the number of Scorpion heads connected to the Access Point, the commissioning data for each of those Scorpions and previous test results. Tests (of what might be multiple Scorpions) can then be conducted and test results downloaded back to the Controller.

Automatic monitoring of alarm activation, achieved by a connection between an ASD alarm relay output and a Scorpion¹ enables pipe run transport time to be recorded as a test result for later use in ASD system integrity assessments.

¹ Although the alarm output can be connected directly to the Scorpion conducting the test it is also possible to connect it to another Scorpion on the same circuit thereby reducing cabling needs.

Audit Trail

All tests conducted by Scorpion are recorded. With appropriate circuit design and commissioning input, data recorded includes; zone and location information, test personnel identification, time and date of tests and ASD pipe transport time.

The data can also be downloaded from the Controller for transmission to interested parties or for use in back office systems assisting administration and providing the 3rd party audit trail sought by so many on an increasing basis.



Benefits

Accessibility

- Connecting a remote Scorpion to a convenient Access Point means:
 - Additional pipe runs eliminated
 - Access challenges avoided
 - Disturbance and disruption averted
- Transport time evaluation avoids testing every sampling point periodically

Time and Cost Savings

- Radical time savings from accessibility gains
- Transport time integrity evaluations
- Unnecessary (and unsightly) extended pipe runs eliminated
- Physical access equipment no longer required

Approved Stimulus

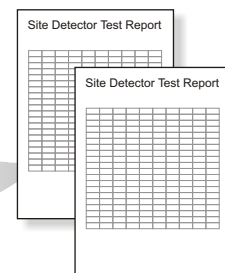
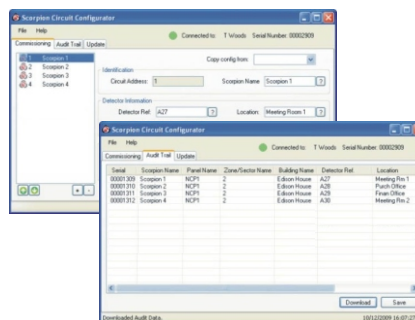
- Benign particulate dispensed under software control avoids material contamination
- Particle lifetime > 120 seconds and 100 metres suitable for ASD systems
- Consistent, repeatable stimulus source from one test to the next

Compliance

- True functional testing using stimulus with wide smoke particulate size range
- Access issue resolution eliminates maintenance variations, exceptions and deviations
- Elimination of access challenges avoids conflict with safety (access) rules

Traceability

- Test dates and times recorded alongside user personnel
- Transport times recorded
- Audit trail stored at device (on site) level and easily interrogated by future users
- Test data downloaded for use in back office systems and user reports



Product Selector



Scorpion ASD
SCORP 400



Scorpion Controller
SCORP 200



Scorpion Access Point
SCORP 300



Scorpion Power Pack
SCORP 50



Scorpion Control Cable
SCORP 60



Solo Universal Fast Battery Charger
SOLO 725



Scorpion Mounting Bracket
SCORP 10

Technical Specifications

Suitable detector types

- Aspirating smoke detection (ASD) systems based on cloud chamber, obscuration and particle counting technologies

Features

- Smoke generation profiles tailored for point type smoke and ASD systems
- Historical test data (date, time and time to alarm) stored for each detector or ASD pipe run for last, previous and commissioning tests
- Test audit trail and data integrity through storage of data on each Scorpion
- Auto confirmation of detector alarm through isolated point detector remote LED or ASD alarm output connection
- Activity LED on each Scorpion
- On-screen activity indicator and test results on Controller

Testing capacity

- In excess of 120 tests per Scorpion

Safety features

- Scorpions energized only at time of test
- Isolation between Scorpion circuit and detection system
- Internal over-current protection on Scorpion circuit
- Battery over-current cut-out
- Controller auto power off after 30 minutes inactivity

ASD Particle lifetime

- Suitable for 120 seconds / 100 metres (excluding clearing cycle)

Power source and charge data

- Scorpion NiMH rechargeable battery pack nominal 7.2v 2.2Ah
- Charging time 75 - 90 minutes (when completely discharged)

Environment

	Controller / battery pack	Scorpion
Operating temperature range	+5°C to +30°C (41°F to 86°F)	-10°C to +60°C (14°F to 140°F)
Storage temperature range	-10°C to +50°C (14°F to 122°F)	-20°C to +70°C (-4°F to 158°F)

Servicing intervals

- Scorpion sealed for life (no serviceable or field replaceable parts)

Weights & Dimensions

- Scorpion: 180g 145mm x 113mm x 27mm (excluding nozzle)
- Access Point: 55g 85mm x 85mm x 30mm
- Controller: 365g 222mm x 93mm x 35mm
- Power Pack: 523g 139mm x 81mm x 48mm

Cabling

- Scorpion circuit wiring: 1.5mm² shielded twisted pair FP200 (or equivalent)
- Maximum cable length per Scorpion access point 500 metres
- Maximum Scorpions per access point 4

PC Requirements

- Microsoft Windows XP (SP3), Windows Vista or Windows 7
- CD-Rom drive or internet connection to install software
- USB port to connect to Scorpion controller for commissioning data upload and test data retrieval.

International Patents Apply

Scorpion[®] is a registered trademark.



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This information must be read in conjunction with the Scorpion Installation Manual & User Guide which provides further information on Scorpion applications, compatibility and suitability.



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