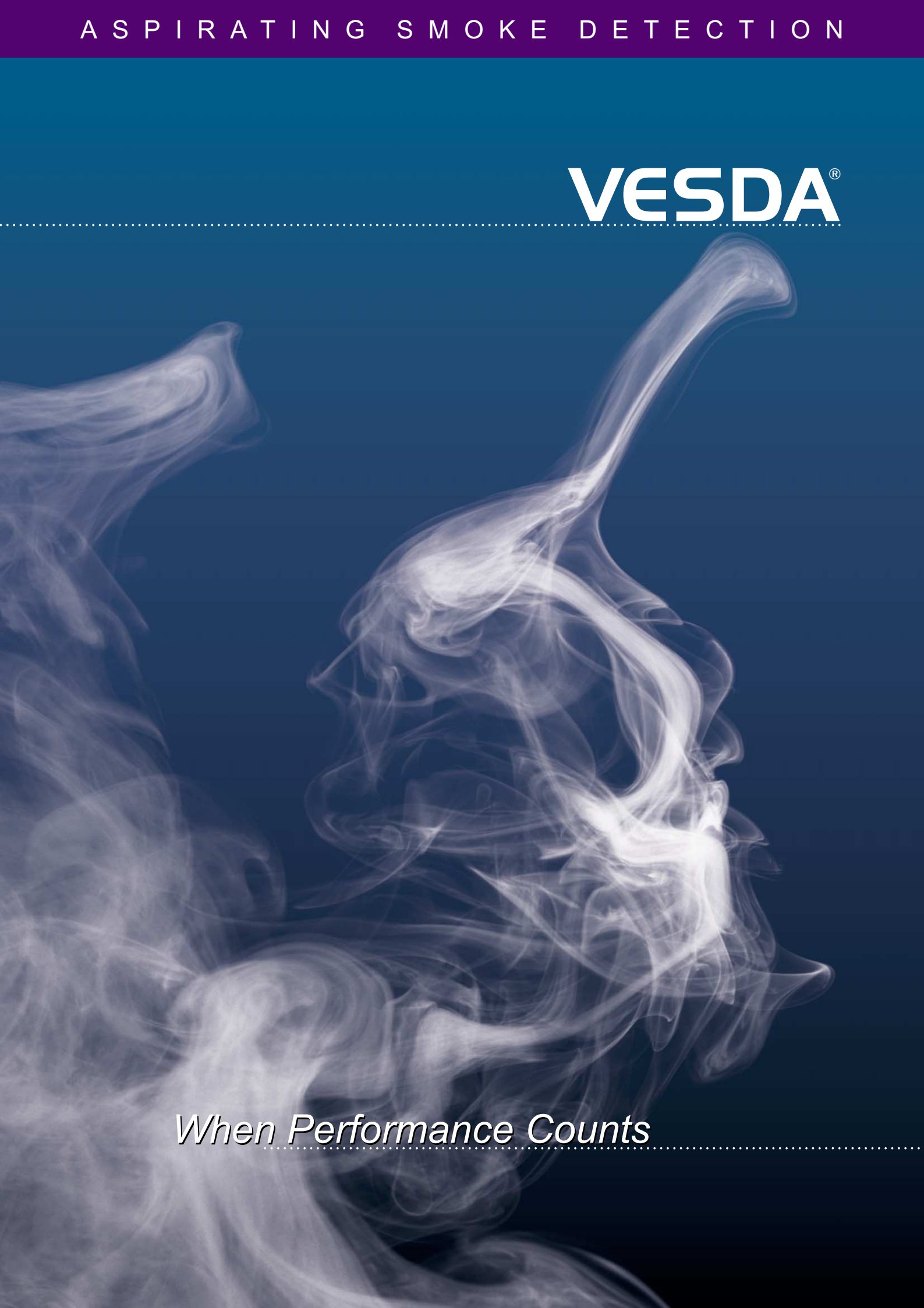
ASPIRATING SMOKE DETECTION

VESDA®



When Performance Counts

VESDA Aspirating Smoke Detection

It's critical

A fire detection system that offers the earliest possible warning of a potential fire.

A system that will ensure that business is never disrupted and that nuisance alarms are eliminated.

A system that can adapt to the 'unique' characteristics of any given environment.

One that delivers high performance through its high quality design and it's dedicated global sales and distribution channels.

With over 50,000 units installed worldwide, the VESDA name has become synonymous with high performance very early warning smoke detection.

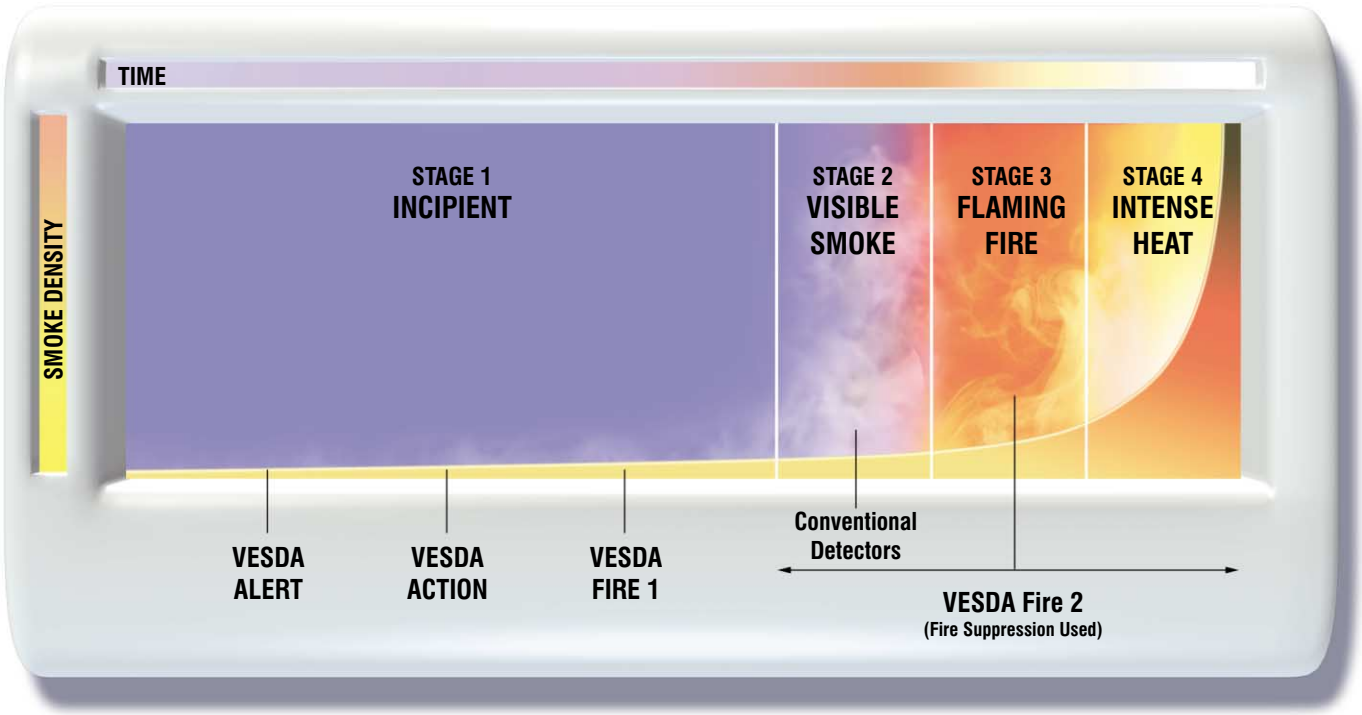
It is the product chosen when reliable performance is crucial.

VESDA...When Performance Counts

VESDA Features

- The Latest in Laser Technology
- Absolute Smoke Detection
- Patented High Efficiency Aspirator
- Widest Sensitivity Range
- Up to 4 Levels of Alarm
- VESDAnet communication - linking detectors and ancillary devices
- Dual Stage Dust Filtration
- Programmable Relays
- Air Flow Monitoring
- AutoLearn™
- Referencing
- Built-in Event Logger
- Optional Remote Displays
- Versatile Mounting Options
- Easy Interfacing to Major Fire Alarm Panels

VESDA Provides The Earliest Possible Fire Warning



All escalating fires have four stages: Incipient (pre-combustion), Visible Smoke, Flaming Fire, and Intense Heat. This chart shows the progression of fire over a time period. Note that the incipient stage of smouldering fires provides the widest window of opportunity to detect and control the spread of fire, before it takes hold causing major damage and disruption. VESDA can be configured to generate multiple alarms within this window.

Conventional smoke detectors often detect smoke when a fire has already taken hold thus causing major damage to assets and property.

VESDA helps to ensure that business disruption and down time are avoided by detecting smoke at the earliest possible stage. Also, VESDA's wide sensitivity allows optimum alarm settings for a wide range of environments, providing active protection where other systems prove inadequate. This sensitivity range (0.005 to 20% obscuration/m) allows for the initiation of up to four different response procedures as the smoke level rises.

Typical response procedures could include: activation of a pager, a general alarm, building evacuation and fire department notification. The VESDA Fire 2 response could initiate fire suppression if necessary.

VESDA Solutions For Every Environment

In environments where down time must be eliminated or minimised:

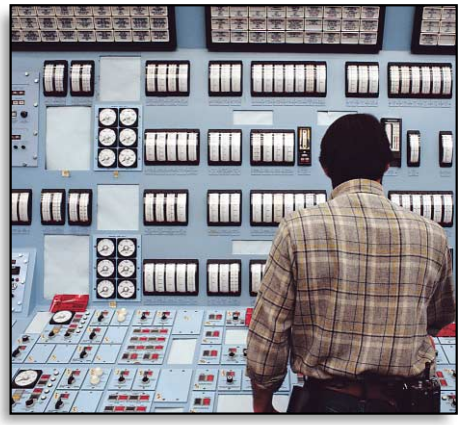
In today's business environment down time is costly and unacceptable. VESDA detects the earliest possible sign of smoke, before flaming fire. It allows for time to take action, ensuring 24 hour service and operation.

Telecommunications
Computer Rooms
Hospitals
Clean Rooms

In environments where smoke is difficult to detect:

Larger areas and environments experiencing high air changes are often not adequately protected with conventional smoke detection systems. For these environments, VESDA is the ideal solution.

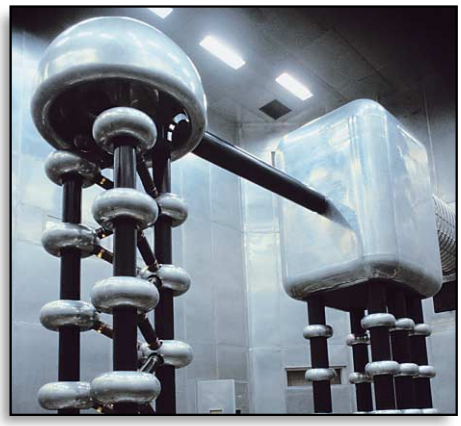
Warehouse
Atria
Aircraft Hangars
Cold Storage
Function Rooms
Indoor Stadiums



In harsher environments:

Traditionally, environments with a higher degree of pollution or with extreme environmental characteristics have posed a problem for conventional smoke detection systems. VESDA is able to provide a superior level of detection in these hostile environments.

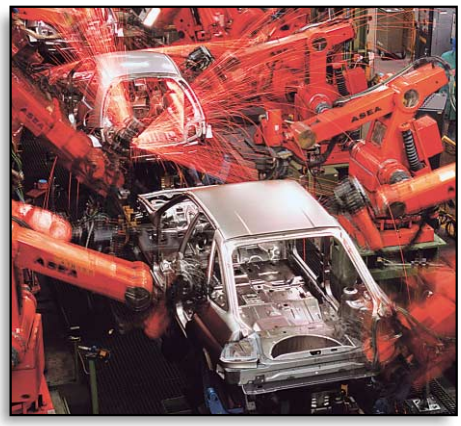
Power Stations
Mines
Public Transport
Automotive Operations
Paper and Timber Mills
Manufacturing Operations



In environments where appearance is important:

The aesthetic requirements of some buildings will always pose a challenge for conventional smoke detection systems. VESDA provides concealed smoke detection for these environments while maintaining critical early warning.

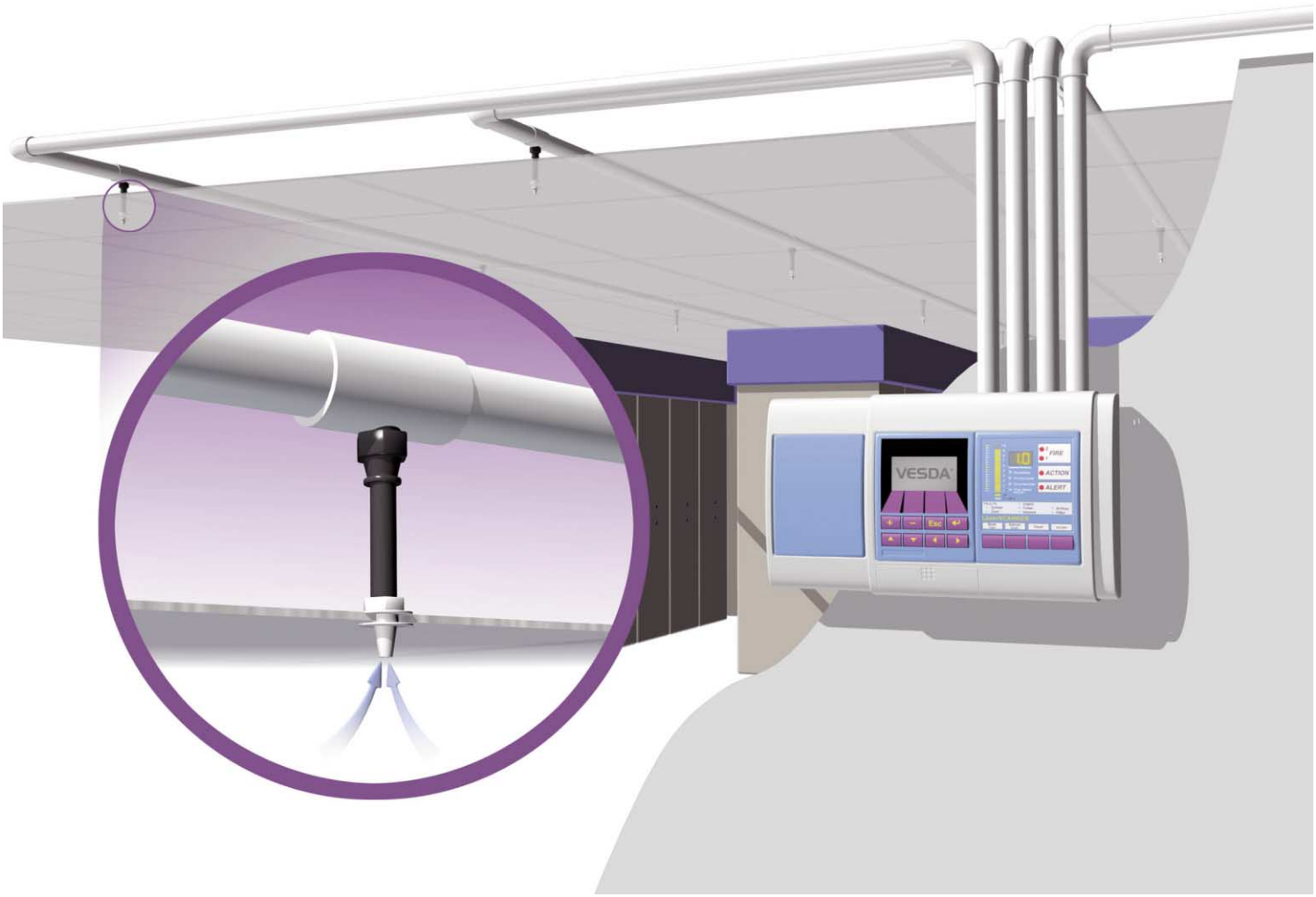
Modern Offices
Heritage Buildings
Cathedrals
Museums
Archives
Art Galleries



How Does VESDA Work?

VESDA's high quality aspirating smoke detectors work by continually drawing air into the pipe network by a highly efficient aspirator. A sample of this air is then passed through a dual stage filter. The first stage removes dust and dirt from the air sample before it allows the sample to enter the laser detection chamber for smoke detection. The second ultra fine stage has the unique feature of providing an additional clean air supply to keep the optical surfaces within the detector clear from contamination and to ensure the stable calibration and long life of the detector.

From the filter, the air sample is passed through to the calibrated detection chamber where it is exposed to a stable controlled laser light source. When smoke is present, light is scattered within the detection chamber and is instantly identified by the highly sensitive receiver system. The signal is then processed and presented via a bar graph display, alarm threshold indicators and/or graphic display. The VESDA detectors are then able to communicate this information to a fire alarm control panel, a software management system or business management system via relays or a high level interface.



VESDA Eliminates Nuisance Alarms

Other high sensitivity smoke detection systems allow false alarm conditions in the presence of dust or lint and are therefore only recommended for clean and controlled environments.

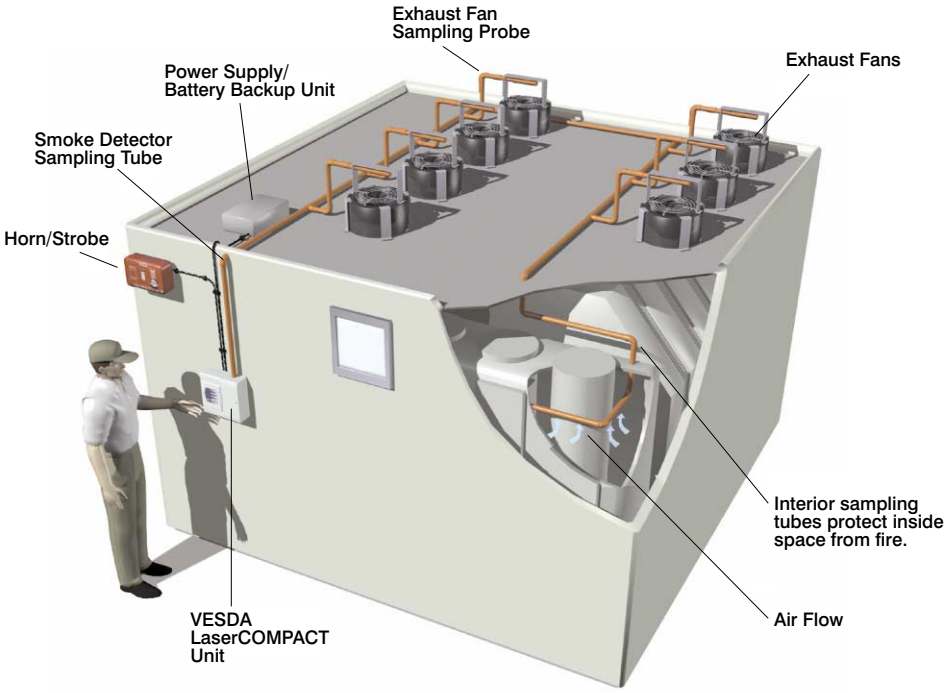
VESDA's ability to trap dust and dirt particles through its highly reliable filtering system, coupled with the traditional method of using time delays, reinforces VESDA's commitment to eliminating nuisance alarm activity.

AutoLearn™

AutoLearn is a unique feature available with all the VESDA detectors to ensure optimum operation in differing environments. By monitoring 'average' environmental conditions and automatically setting alarm thresholds for the protected area, it allows for the earliest possible warning of a potential fire situation and minimises the occurrence of nuisance alarms.

Referencing

As added protection against nuisance alarms caused by external sources, VESDA offers a Referencing feature. Referencing ensures that external pollution does not interfere with the true smoke level being detected in the protected area, particularly in air conditioned environments. With Referencing, reliable and accurate detection can be achieved at all times.



The same process of continually drawing air through a standard pipe network can also be applied to small, single environments including critical process tools. VESDA LaserCOMPACT, which is specifically designed for areas less than 500 sq.m (5000 sq. ft), is shown as a cost effective approach to very early warning smoke detection.

VESDA Supports Innovative Performance Based Design

With the trend towards performance based fire safety systems, designers are able to show an increasing level of innovation when designing new buildings or remodelling existing ones. VESDA's modularity and flexibility supports designers in their quest to provide ideal fire detection solutions without compromising fire safety.

The VESDA Products

VESDA LaserPLUS™

- The LaserPLUS detector is the core product in the VESDA product range.
- Like all VESDA products it detects fire at the earliest possible stage and reliably measures very low to extremely high concentrations of smoke.
- The LaserPLUS detector protects areas up to 2000 sq.m (20,000 sq.ft)
- It has the world's widest sensitivity range: 0.005 to 20% obscuration/m (0.0015 % to 6% obscuration/ft)
- The LaserPLUS display supports four (4) configurable alarm levels (Alert, Action, Fire 1 and Fire 2) and a 20-segment bar-graph indicating real-time smoke level and fault conditions.
- The detector can form part of a modular system with the display, programmer and VESDAnet modules installed in a remote location or as a "self-contained" system by replacing the detector's panels with display and/or programmer modules.

VESDA LaserSCANNER™

- The LaserSCANNER locates the origin of smoke by identifying the first sector (pipe) with the highest level of smoke and then continues to sample from all sectors to monitor fire growth.
- The LaserSCANNER provides the same four alarm levels as LaserPLUS for each individual pipe (Alert, Action, Fire 1 and Fire 2). Sector factors (sensitivity) can be set individually to ensure the optimal alarm thresholds are applied for each sector.
- The display is similar to that of the LaserPLUS. The bar graph displays the individual pipe smoke levels during the scanning sequence. There is also an extra LED to indicate when the first alarm sector has been established.
- Protects areas up to 2,000 sq m/500 sq m per sector (20,000 sq ft/5000 sq ft per sector)
- Provides Individual Pipe Addressability and Individual Pipe Sensitivity Settings.

VESDA LaserCOMPACT™

- While LaserPLUS and LaserSCANNER address larger, more complex environments, the LaserCOMPACT offers a simple, cost effective solution for the protection of single and smaller environments such as, small archives, production machinery, ceiling voids, prison cells, wet benches, data storage cabinets and critical process tools.
- Offers the same wide sensitivity range of LaserPLUS and LaserSCANNER 0.005 to 20% obscuration/m (0.0015% to 6% obscuration/ft)
- The LaserCOMPACT display supports three configurable alarm levels (Alert, Pre-Alarm, Fire)
- The LaserCOMPACT is available in two versions, one that interfaces via relays only (RO), the other across either relays or VESDAnet (VN).
- It is directly targeted at small mission critical areas, processes and equipment that occupy less than 500 sq.m (5000 sq.ft).

REMOTE DISPLAYS

The VESDA displays monitor and report the status of a detector. The display module can be mounted in a detector unit, or separately (connected via VESDAnet) in a remote unit or in a 19" sub rack. It gives visual representation of smoke levels along with all alarm and fault conditions. For monitoring convenience, multiple displays can be associated with a single detector.

PROGRAMMERS

The VESDA programmer is menu driven and allows the user to conveniently configure, commission and maintain their VESDA system as well as program each individual detector. Only one programmer is needed to support the entire network. Like the display, it can be mounted within a detector or at a remote location. A hand-held version is also available to plug into the VESDAnet socket located on the detector or in a remote area. It is specifically designed for convenient on-site maintenance and service interrogation.

SUB RACK ENCLOSURES

The VESDA 19" sub racks are designed to accommodate the display and programmer modules and to interface with other standard cabinet control systems.

VESDA Pipe™

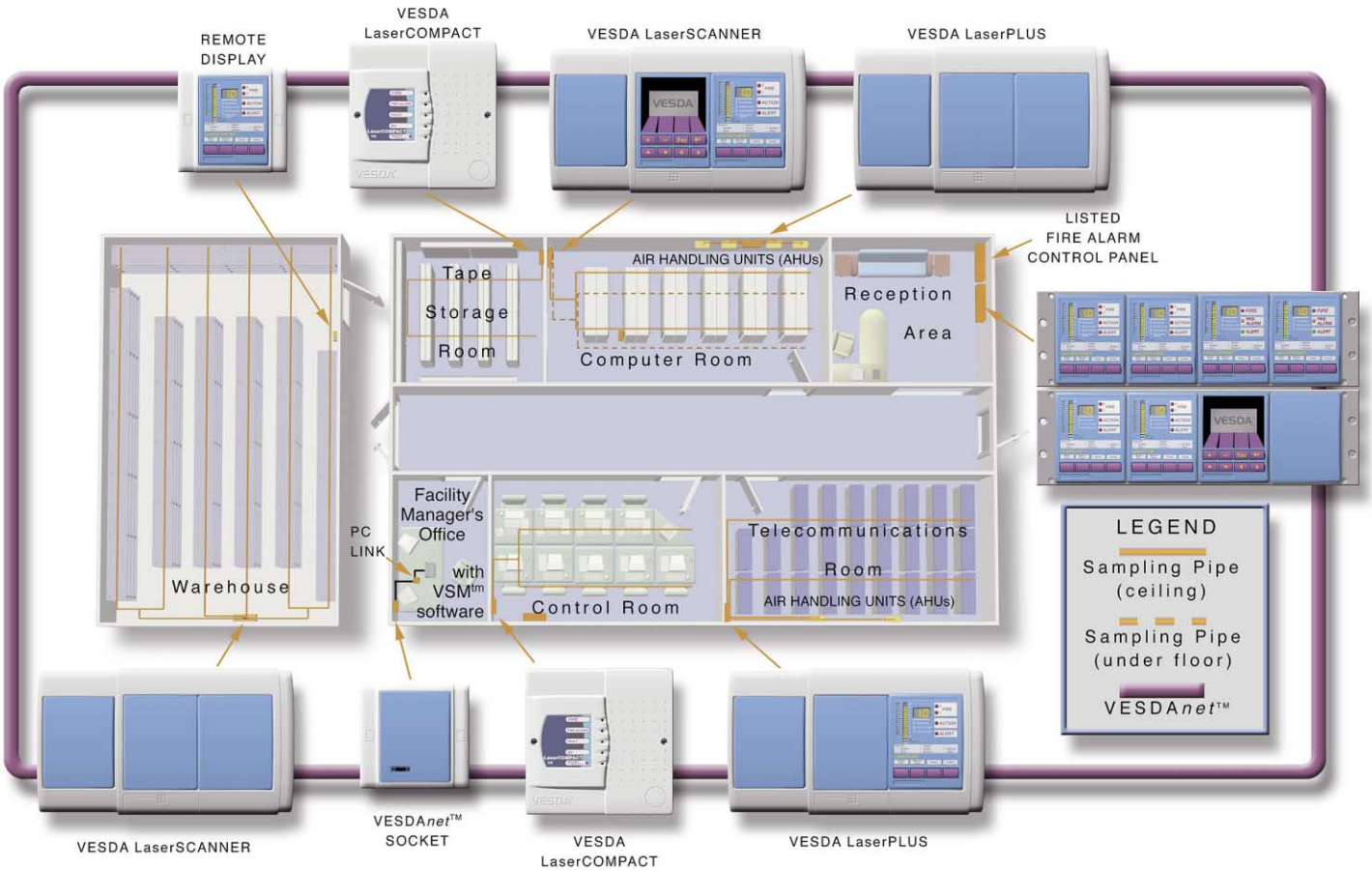
One of the key elements in the performance of a VESDA aspirating detection system is the network of sampling pipes that actively transport air from a protected area to the detector. This is why VESDA offers Aspirating Pipe and Fittings packages to simplify pipe selection and to ensure that a quality system is installed every time.

The VESDA "Connection"

VESDAnet™

VESDAnet is a comprehensive fault tolerant "closed" communications loop. It links the detectors, displays, programmers, remote units and power units on a daisy chained loop in a configuration that meets customer requirements. It allows for a number of these units to be programmed together from one or more locations and automatically detects communication failures.

It also allows for easy interfacing with systems external to the network such as, building management systems that are able to use VESDAnet to communicate with the individual devices in the VESDA system.



The VESDA Software

VSM™

The VESDA System Management software package allows the user to monitor, configure and control a VESDA system from a central location via a VESDAnet communication loop. Real time and historical events for a single detector, an area, or the entire facility can be collected, processed and presented in either report or graph format.

Features:

- Complete System Monitoring
- Zone Display Representation
- Event Logging
- Smoke Trending
- Modem Access
- Floor Plans
- Comprehensive Help Menu

VConfig™

VConfig is a configuration tool specifically designed to simplify the setup of any VESDA system during commissioning and installation. It is available via a PC link into VESDAnet or directly to a LaserCOMPACT using VESDAlink.

Features:

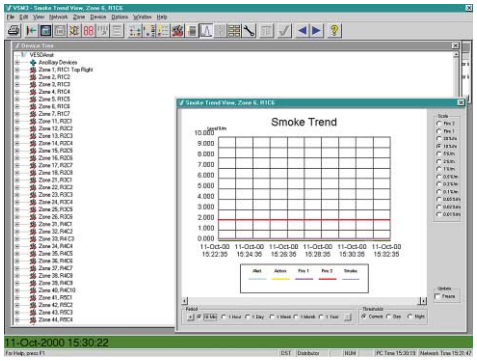
- Simple drag and drop address setting of display and relay devices to detector zones
- Wiring table to show VESDAnet device order with the immediate identification of communication faults
- Simple configuration table allowing straight forward detector configuration
- Event Log Analysis
- Graphical Smoke Trending Capability
- Detector configuration up-load and down-load.

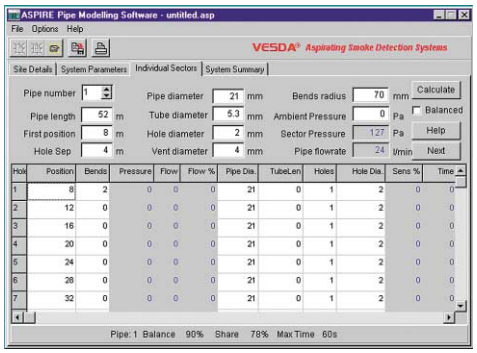
ASPIRE™

ASPIRE is a computer software tool for designing and evaluating aspirated pipe system layouts. By simply entering parameters such as pipe length, the number of pipes in use, air temperature and pressure and the type of detector(s) used, the software can calculate a pipe sampling model that will predict the performance of the proposed pipe network.

Features:

- Allows modelling of optimum system during design stage
- Allows for single pipe and twin branch (T-joined) arrangements
- Generation of data for inclusion in commissioning reports
- Easy to use and understand





Vision Fire & Security is the world's leading manufacturer of advanced technology fire and security products.

We are committed to providing high quality products and unsurpassed service through ongoing research into new technology based solutions and customer needs.

Backed by a highly experienced and dedicated support network, all our products are installed and supported by accredited technicians.

VESDA products are certified by the key approval bodies worldwide including FM, LPCB, SSL, UL, ULC, VdS.

Vision Fire & Security has offices in Asia, Australia, Europe and The Americas.

Vision Fire & Security is a member of the Vision Systems group.

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