VESDA® VLI

Aspirating Smoke Detection for Industrial and Harsh Environments

Industrial VESDA VLI

Selecting the most suitable form of smoke detection for the application and environment is the first step towards ensuring a reduced fire risk. There are a myriad of detectors purporting to be suitable for harsh and difficult environments, unfortunately not all these claims are reliable. Ongoing poor performance and increased maintenance and service costs for an incorrectly chosen or specified solution are a reality in the industry and only serve to instil in the end-user a lack of confidence in the smoke detection system.

The consequence of loss due to a fire event is inversely proportional to how well the detection system can detect smoke. That is the higher the sensitivity and performance reliability of the detection system the lower the risk and losses will be. Equally important, the detection system needs to be able to cope with the environment where it's installed, offering longevity with minimal service and maintenance.

With over 35 years proven market leadership, VESDA VLI was created to provide an effective and reliable Very Early Warning Smoke Detector designed to meet the specific and unique challenges of Industrial applications and harsh environments and designed to:

• Withstand harsh environmental conditions
• Maintain its sensitivity over the life of the detector
• Provide best in class detection performance
• Provide a lower TCO

Withstanding Harsh Environments

The design of Industrial VESDA VLI enables the product to be deployed into many industrial applications without special application engineering, system design support and enhanced maintenance procedures that were previously required. Key features that enable deployment into these environments include:

• World's first patented fail-safe intelligent filter to eliminate the need for external filters and significantly extend service life
• Inertial secondary filtration removes large dust particles thereby further extending detector service life and safeguarding against nuisance alarms
• IP66 enclosure to provide protection from the environment eliminating the need for costly enclosures
• Extending total aggregate sampling pipe capability up to 360 m (1,181 ft) to cover larger areas with fewer detectors

Another industry first is the 100% modular design. This enables field replacement of individual detector components reducing down time and spare part inventory. No longer does the entire detector have to be replaced.

Maintaining Detector Sensitivity

Fundamental to Industrial VESDA VLI's ability to provide consistent performance throughout its service life is the use of VESDA's patented absolute detection technology, that uses a clean air barrier to keep the components of the optical detection chamber clean. In addition, a new, innovative and patented Clean Air Zero feature provides the highest degree of detector stability, while maintaining absolute smoke detection.

VESDA does not rely on any "predictive" algorithms to compensate for short term or long term drift. These approaches inevitability lead to degraded detector performance and extended detection times, if not missing fire events completely.

The VESDA Advantage offers the ability to set alarm thresholds above specific site background contamination levels to further safeguard against nuisance alarms.

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| Key Features	Benefits
Robust absolute smoke detection	Reliable and consistent performance
Patented intelligent filter	Fail-safe filter design providing consistent sensitivity over the entire life of the filter and extending detector life
Lint trap	Capture fibrous particulates, safeguarding against nuisance alarms
Clean air barrier	Time-tested technology keeping the optical surfaces within the chamber free of contamination
IP66 enclosure	Total protection against ingress of dust and strong water jets
Sub-sampling Probe (inertial separator	Eliminating nuisance alarms due to large dust particles and also extending chamber life
Clear Air Zero™	Safeguard against nuisance alarms
Air-path monitoring	Detecting internal blockages
Modular field replaceable parts (ie. Detection chamber assembly, intelligent filter, aspirator assembly, secondary filter)	Ease of service and maintenance, reduced down time and lower total cost of ownership
Total pipe length up to 360 m (1,181 ft) with up to 120 m (394 ft) of a single straight pipe	Accessible mounting of detector and eliminating need for access equipment
AutoLearn™ Smoke and Flow	Out of box operations

Lower Total Cost of Ownership

The net result of all the unique features and performance characteristics is that Industrial VESDA VLI delivers up to 60% lower Total Cost of Ownership than other ASD detectors.

Best in Class Performance

The results of Accelerated Life Testing, carried out by an independent 3rd party (figure 2), unequivocally demonstrates the superiority of Industrial VESDA VLI compared to other ASDs. Results not only predict that Industrial VESDA VLI will have the longest service life but even at the end of its predicted service life its sensitivity is still higher than competitive units' "out of box" sensitivity.
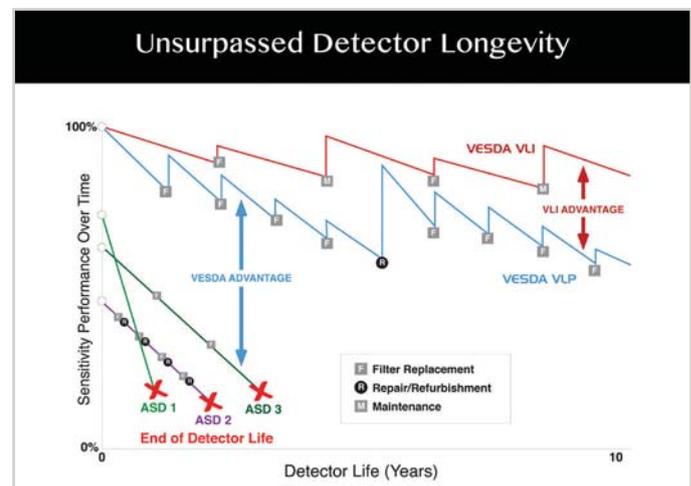
The Industrial VESDA VLI showcases other features that make it the ideal ASD solution for industrial applications.

Up to 2,000 m² (21,520 sq ft) coverage	Xtralis VSC, VSM and ASPIRE2 software support
Up to 4 inlet pipes	Ultrasonic flow sensing
Five (5) high-intensity status LEDs for greater visibility	Easy mounting through steel support bracket
Clean air barrier for optics protection	Local USB configuration port
Referencing	Easy cable termination access
Relays configurable as latching or non-latching	Imperial and metric pipe ports
Five (5) relays (Fire, Fault and 3 configurable)	Rubberized finish to external housing

Applications

Power Generation	*Processing Plants*	*Timber Production*	*Textile*
Petrochemical Plants	*Tunnels*	*Fertilizer Plants*	*Lift shafts*
Conveyor protection	*Pulp & Paper Production*	*Abattoirs*	*Stables*
Mining	*Warehouses*	*Laundries*	*Water Treatment*
Manufacturing	*Transport*	*Cold Storage*	*and more…*

Facilities Protected

AELEC (AUS) — Tamworth Equestrian Centre	***New Zealand Steel (NZ) —*** Switch Room
Apparel 21 (India) — Textiles Manufacturing	***Richards Bay Coal Terminal (SA) —*** Conveyor Belt
ArcelorMittal Steel Mill (US) — Electrical Equipment Room	***Southern Companies (US) —*** Boiler Feed Pumps
Calgary International Airport (Canada) — Road Tunnels	***Network Rail New Street Station (UK) —*** Rail Station
Cannington Silver and Lead Mine (AUS) — Underground Electrical Switch Room	***Cook Colliery Under Ground Coal Mine (AUS) —*** Underground Coal Mine
SSAB Tunnels (US) — Tunnel	***TM Textile (India) —*** Textiles Manufacturing
Cutler Airforce Base (US) — Very Low Frequency Antenna	***Unipart - Tata Motors (India) —*** Warehousing
Kaltex (Mexico) — Cotton & Textile Plant	***Superior Essex (US) —*** Manufacturing
Yallourn Energy Power Station (AUS) — Coal Transfer Conveyors	***ThyssenKrupp Steel (US) —*** Conveyor, Tunnels, Transformer Vaults

About Xtralis

Xtralis® is the leading global provider of converged solutions for the early detection and remote visual verification of fire, gas and perimeter threats.

Our technologies prevent disasters by giving users time to respond before life, critical infrastructure or business continuity is compromised. We protect high-value and irreplaceable assets belonging to the world's top governments and businesses.

Our brands include the VESDA-E – the next generation of aspirating smoke detection technology; VESDA® – the world's No.1 very early warning aspirating smoke detection (ASD) systems; ICAM™ for flexible ASD; ECO™ – Gas detection & environmental monitoring modules for VESDA & ICAM systems; OSID™ – easy to use smoke detection for open areas; ADPRO® – passive infrared sensors, perimeter, multisite, video analytics and enterprise security; HeiTel™ – digital video remote monitoring; and, ASIM® – intelligent traffic detection. To learn more, please visit us at www.xtralis.com.

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