xtralis®

VESDA

WAREHOUSES

PROTECT WAREHOUSE CONTENTS FROM SMOKE, FIRE & WATER DAMAGE. ENJOY LOW INSTALLATION COSTS AND COST OF OWNERSHIP.

- MEZZANINE AND GENERAL STORAGE AREAS
- HIGH-BAY RACKING
- AUTOMATED PICK AREAS
- LOADING BAYS

LEARN MORE: XTRALIS.COM

THE CHALLENGE OF PROTECTING WAREHOUSES FROM FIRE

WHAT WILL YOU TELL YOUR CUSTOMERS?

"A huge warehouse fire destroyed more than 100 artworks from Charles Saatchi's famous collection."
Whilst dramatic warehouse fires make the news, there are many hundreds of smaller fires that occur in warehouses around the world each year, each with potentially devastating consequences.

The damage bill from a warehouse fire is not limited to lost goods or buildings. Environmental damage to the local area, the cost of business interruption and the negative impact of press coverage following a spectacular blaze may also have severe business implications.

Telling your customers that their goods have gone up in smoke or that you can't supply them for several months could mean the end of your business.

NO FLAMMABLE MATERIALS? HAVE A CLOSER LOOK

Even if your warehouse does not contain flammable goods the risk is still large. Packing materials such as plastic wrapping, cardboard, wooden crates and pallets are common in warehouses.

Add possible ignition sources such as:

- Shrink wrap equipment
- Fork lifts
- Unauthorized smoking
- Computers
- Heaters and hot surfaces
- Electrical equipment
- Incompatible materials stored close together

and it's easy to see why warehouse fires are common.

A plastics warehouse burnt to the ground in Wilton, UK, resulting in US$14 million in stock loss.

The probable cause? A fluroescent light fitting failed and dripped molten acrylic onto storage.[1]

"BUT WE HAVE A SPRINKLER SYSTEM"

Sprinklers are designed to protect buildings and lives, not livelihoods. A fire has to be quite large to activate a sprinkler system and the resultant water damage may be as bad as the damage caused by smoke and fire. Take a look around your warehouse and think about the consequences of the goods getting wet and/or smoke damaged. How much would you have to throw out?

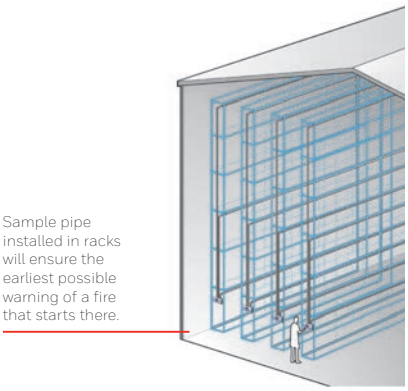
WHY DO WAREHOUSES NEED A DIFFERENT APPROACH TO SMOKE DETECTION?

Smoke is difficult to detect in a warehouse for the following reasons:

- Warehouses contain large volumes of air. Smoke is easily diluted in such large spaces, making it difficult to detect.
- Warehouses have multiple doors which are often left open. Drafts through open doors dilute smoke even more.
- Warehouses often have high ceilings. Smoke stratifies into layers below ceiling level, only reaching smoke detectors on the ceiling when the fire has enough thermal energy to force smoke upwards.
- Storage racks in a warehouse can trap smoke. A smouldering fire can go undetected for hours because the smoke doesn't make it to the ceiling until the fire is quite large.

WHY IS A VESDA ASPIRATING SMOKE DETECTION SYSTEM DIFFERENT?

A VESDA smoke detector uses a network of sampling pipes to continuously draw air samples from the protected area back to a detector.



Sample pipe installed in racks will ensure the earliest possible warning of a fire that starts there.

The highly sensitive, laser-based detector then measures the amount of smoke in the air. The measured smoke levels are compared to the 4 alarm thresholds set by the user. These alarm thresholds allow a staged response to any threat.

For example, if the first threshold is reached an investigation can be commenced, whereas the third level can automatically call the fire brigade.

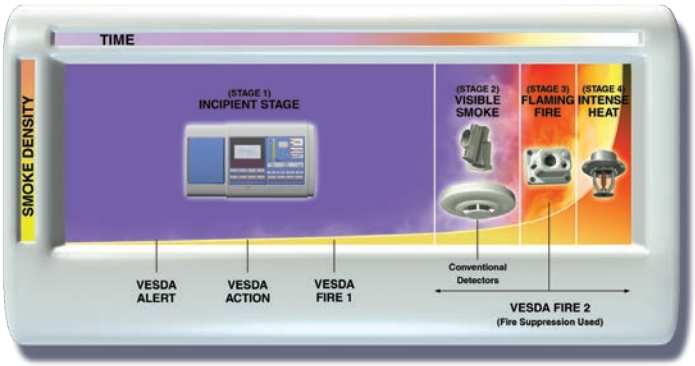
The key benefits a VESDA system has in a warehouse are:

- **Easy maintenance**. The VESDA detector can be installed at ground level instead of on the ceiling
- **Coverage**. One detector can cover up to 2000 m^2.
- **Easy interfacing**. A VESDA system can interface with an existing fire panel and response system.

1 Loss Prevention Bulletin Issue 132, Institution of Chemical Engineers.

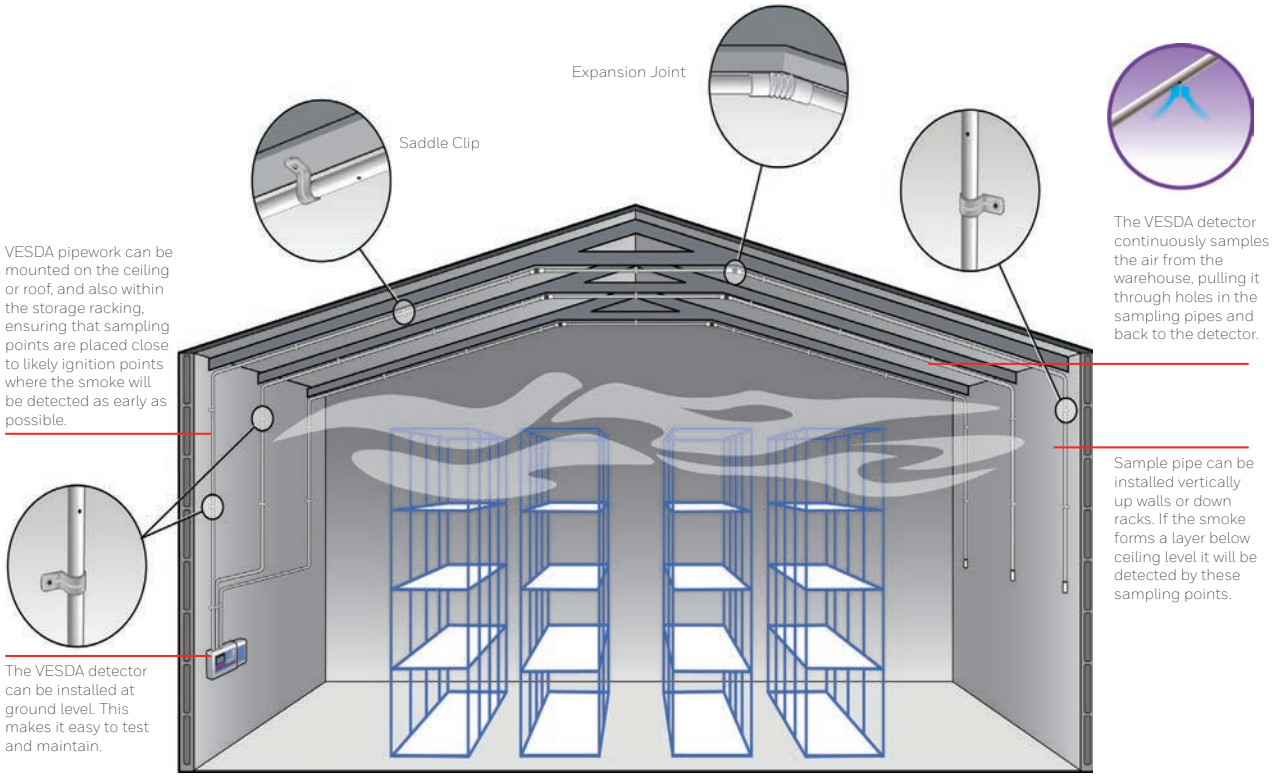
WHICH FIRE PROTECTION SYSTEMS ARE USED IN WAREHOUSES?

System	Comments
Sprinklers	Often mandated by fire codes. Sprinklers are designed to protect the building, not the contents of a building.
Linear heat detectors	Often installed to activate sprinklers when intense heat is present. These detectors won't detect a fire at its earliest stage.
Beam detectors	Building movement or stock blocking the beam can trigger a false alarm. They are not sensitive enough to detect a fire at its earliest stage.
Spot detectors	The traditional round, white detector that is installed on the ceiling. Not good at detecting smoke in rooms with large volumes or high airflow as the smoke may never make it to the detector. Difficult to maintain as each detector has to be tested & maintained at ceiling level.



FIRE GROWTH CURVE

The progression of fire growth over time. A VESDA detector can reliably detect a warehouse fire at the incipient stage and avoid the incidence of damage and loss. The detector can be configured to generate multiple alarms during the earliest stage of a fire.



XTRALIS' GLOBAL NETWORK OF OFFICES AND REPRESENTATIVES MEANS THAT HELP IS SOON AT HAND

WHY USE A VESDA SYSTEM?

When selecting an aspirating smoke detection system for a warehouse, consider:

Look For	Why?	What VESDA Offers
The best sensitivity	To get the earliest possible warning of a fire	VESDA can alarm at 0.005 % (obs/m)
A wide sensitivity range	So that detection levels can be set to suit the environment, avoiding false alarms	VESDA detectors have a sensitivity range of 0.005 - 20% obs/m
A redundant peer-to-peer communications network	To give you flexibility in positioning and programming detectors and display modules	The VESDAnet communication network allows you complete installation flexibility
Nusiance alarm rejection	For reliable performance in the presence of dust and other nuisance alarm sources	VESDA detectors have a filtration system to remove particulate matter that could cause false alarms
Multiple programmable alarm thresholds	So that the response can be appropriate for the stage of the fire, from 'Investigate' at the first alarm through to 'Start the sprinkers' at the fourth alarm level	VESDA has 4 programmable alarm levels, allowing a response appropriate for the threat
Event log and reporting	A forensic tool for investigating faults, alarms, user actions and smoke trends	Each VESDA detector has an event log that stores the last 18000 events
A wide product range	You can choose the product that is right for the area size you wish to protect	VESDA has the widest product range on the market
Absolute calibration	Ensures repeatable and reliable detection of very slow growth incipient fires	VESDA is the only aspirating smoke detector with Absolute calibration
An accredited global distribution and support network	So you get the right technical advice when you need it	All distributors of VESDA products are factory-accredited

SOME OF THE WAREHOUSES THAT ARE PROTECTED BY VESDA

Food:
- Bega Foods, TESCO
- Anheuser Busch

Chemical:
- Jotun Paint
- Shell Chemical

Transport/Logistics:
- Qantas, Kerry Logistics

Automotive:
- Toyota, GE Aircraft Engines
- Lockheed, MAZDA, Michelin Tyres

Storage/Records management:
- Kent Removals & Storage
- Iron Mountain

Furniture:
- IKEA, Rooms to Go

Retail:
- Boots Contract Manufacturing,
- Amazon.com, Yates

APPROVALS

ABOUT XTRALIS

Xtralis is a leading global provider of powerful solutions for very early & reliable detection of smoke, fire, and gas threats. Our technologies prevent disasters by giving users time to respond before life, critical infrastructure or business continuity is compromised.

We protect highly valuable and irreplaceable assets and infrastructure belonging to the world's top governments and businesses.

To learn more, please visit us at www.xtralis.com

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