ESSER
by Honeywell

Very Early Warning Aspirating Smoke Detection (ASD)

Invest in a safer future

Today's organizations depend on multiple complex systems. From business systems that manage data to the building systems that manage facilities and fire systems that protect people and property, all must work together to ensure the successful operation of an organization.

Simple installation and management

As the world leader in smoke detection technology, we know how important it is for early warning fire detection to work seamlessly with existing systems. That's why we designed our **Aspirating Smoke Detection (ASD)** product lines with features and flexibility that reduce the cost and complexity of integration, simplify installation and management, and greatly enhance the safety, continuity and ongoing operations of the facilities, processes and systems it protects.

Earliest warning EN 54-20 certified

Aspirating Smoke Detection solutions with continuous air sampling provide the earliest possible warning of an impending fire hazard. Aspirating smoke detectors buy the critical time needed to investigate an alarm and initiate an appropriate response to prevent injury, property damage, or business disruption. Our ASD systems have multi-level warnings and a wide range of sensitivities, so even minute levels of smoke can be detected before a fire has time to escalate. In addition, our ASD systems are manufactured using Six Sigma techniques and ISO 9000 standards and are EN 54-20 certified.

Easy and fast integration with fire alarm system

ASD systems easily integrate with FlexES Control fire alarm control panel via the esserbus transponder for special detectors. The transponder works with esserbus® and the esserbus-PLus and is tested and approved in compliance with the EN 54-17/18. The transponder is pre-configured via the tools 8000 programming software to guarantee a quick and trouble-free start-up. It provides information about alarms, pre-alarms and technical issues from ASD device to FlexES Control system.

Each critical incident stage needs an expert

FAAST LT-200 esserbus: all in one system

Fire Alarm Aspiration Sensing Technology

The FAAST LT-200 esserbus ASD is designed with the installer and end user in mind. It serves the wide variety of Class C applications where maintenance is difficult, where traditional smoke detection methods are inappropriate or prone to fail due to harsh environments or areas where aesthetics matter. It is also suitable for smaller mission-critical applications where very early warning - Class A or B detection is required.

Technology for the toughest applications

FAAST LT-200 esserbus combines proven aspirating detection technologies to deliver reliable smoke detection and efficient installation and maintenance. The device comprises innovative and intelligent internal design features designed to protect vulnerable components. These include a high sensitivity LED detection chamber (featuring a high-power output IR LED and high gain IR receiver amplifier), along with ultrasonic flow sensors.

Easy to install and maintain

The device is fast to install and easy to commission thanks to Pipe**IQ** pipe design and configuration software, which is included as standard. FAAST LT-200 esserbus devices are available as single channel and dual channel devices, offering flexibility for different detection strategies. A range of customizable settings are geared towards maximizing device performance and meeting different application needs. The devices are connected direct on the esserbus and are members of the esserbus loop and can be easy programmed with the commissioning software tools8000.

Performance features FAAST LT-200

- Direct connectivity to esserbus / esserbus-PLus loop
- High sensitivity LED fire detection for highest protection level
- Adjustable Sensitivity in 9 levels from 0.07 % - 0.66 %LD/m
- User friendly air flow pendulum graph for verification of pipe network functionality
- Easy access to filter(s) and sensor(s)
- Single & Dual channel versions with independent channels including fan, sensor and flow monitoring
- Pipe**IQ** software provides intuitive system layout and configuration, all in one package

What is PipeIQ?

PipeIQ is the all-in-one system design, configuration and monitoring software for the FAAST LT-200 aspirating smoke detector and is included free of charge with the devices. Once the system is installed, PipeIQ enables configuration and system monitoring.

Connectivity

The FAAST series of aspirating smoke detectors are equipped with an onboard USB connection. This interface permits to load the system configuration and to read out the error mesages and current status.

Ease of design

Using PipeIQ, a designer can complete the pipe network layout, verify hole sizes and detection sensitivity, and obtain a Bill of Material and Layout Report.

The software also includes a Pipe Wizard that can guide users through the pipe network design process. The wizard asks a series of questions about the area under protection and designs a pipe network tailored to the space. A great tool for inexperienced designers, the Pipe Wizard is also suitable for quickly designing a pipe network for less complex rectangular spaces and to create an initial layout for more complex spaces that will require additional design.

Ease of use

After the system is commissioned, PipeIQ supports FAAST systems with trend graphs, reports, and data storage options. It also includes a robust built-in help function that makes troubleshooting quick and easy.

PipeIQ - 3 in 1 design, configuration and monitoring software

VESDA-E:
maximum performance and protection with overall cost reduction

For decades, the VESDA range of aspirating smoke detectors has been recognized as one of the best in the world. Engineered for reliability with design flexibility, our ASD systems are purposely built to operate in different challenging environments - from very dirty to clean and from very small to large open spaces.

Best in its class

VESDA-E's sensitivity, flexibility, reliability, programmability, and expandability provides customers with superior performance and protection, while lowering the total cost of ownership (TCO).

All detectors features combine to make VESDA-E the best choice for early warning of smoke and fire threats.

Performance features VESDA-E family

- **VESDA Smoke+** offers up to 15 times increased sensitivity, at least three times better dust detection, up to twice the longevity while maintaining consistent sensitivity over time and up to 8% less power consumption per unit area
- **VESDA Flex** ensures future proof expandability for maximum flexibility using, StaX hardware expansion modules that easily bolt onto the VESDA-E detector to add e.g. power supplies
- **VESDA Point Addressability with VEA** provides situational awareness to improve response time, efficiency and effectiveness through pin-point addressability for up to 40 locations
- **VESDA Connect** provides extensive connectivity options including Ethernet, WiFi, USB, VESDAnet and relays, to reduce installation, commissioning, monitoring and maintenance costs. Connection to the ESSER FlexES Control is best done by the esserbus transponder for special detectors. It allows to evaluate pre-alarms and alarm messages as well as to reset the VESDA detectors from the FlexES Control panel.
- **VESDA TCO** reduces the Total Cost of Ownership (TCO) through Capex value, OPEX savings, plug-and-play installation, design-less pipe and microbore tube networks, vast monitoring options, and backwards compatibility. With VESDA-E you can reduce TCO by up to 15% for non-addressable products and up to 60% for the point addressable

VESDA-E VEP - A Superior Upgrade to the World's Best-Selling ASD

The VESDA-E VEP series of smoke detectors bring the latest and most advanced detection technology to provide very early detection of aerosols and the best nuisance alarm rejection to a wide range of applications. Built on the Flair™ detection technology and years of application experience, VEP detectors achieve consistent performance over their lifetime via absolute calibration. Flair is the revolutionary detection chamber that forms the core of the VESDA-E VEP, providing higher stability and increased longevity. Direct imaging of the sampled particles using a CMOS imager combined with multiple photodiodes allows better detection and fewer nuisance alarms. In addition, the VEP is backward compatible with VESDA VLP, allowing existing VLP installations to easily upgrade to the latest ASD technology.

VESDA-E VES - Zone Addressable ASD

The VESDA-E VES is similar to the flagship VESDA-E VEP aspirating smoke detector but also includes a valve mechanism in the inlet manifold to allow a single zone to be divided in to four separate sectors, for example, distinguishing between separate aisles within a data room. Each sector has four individually configurable alarm levels (Alert, Action, Fire 1 and Fire 2) allowing optimum protection in a wide range of applications and allowing the user to quickly locate the source of smoke. Once the detector has identified the First Alarm Sector, it continues to sample from all sectors to monitor fire growth.

VESDA-E VEA - Point Addressable ASD

VESDA-E VEA introduces a new approach for point addressable smoke detection; providing pinpoint addressability by using a network of VEA sampling points located in the protected area; connected to a centralised detector which actively draws air via microbore tubes. VEA provides assured detection by having end to end system integrity monitoring of the sampling network. VEA also provides flexible and fast installation utilizing easy to install flexible microbore tubes with push-fit connectors. The VEA detector supports 40 sampling points, all managed from the centralized detector which can be located in a readily accessible location. Centralized Test and Maintenance can reduce service time by up to 90% allowing servicing of up to 500 addresses a day lowering total cost of ownership by up to 60%. VEA centralized test and maintenance is ideally suited where interruption free business operation and restricted access are of paramount importance. With best in class connectivity via WAN and Wireless networks the iVESDA application provides real time and remote access for efficient and effective response.

VESDA-E VEU - Ultra-Sensitive ASD

The VEU series of aspirating smoke detectors are the premium detector of the VESDA-E range. An ultra-wide sensitivity range; 15 times greater than VESDA VLP, and provision for more sampling holes provide an increased coverage in high airflow applications by at least 40%. Considerably longer linear pipe runs and extended branched pipe network configurations cater perfectly to applications with higher ceilings providing an increased coverage by up to 80% whilst allowing convenient detector mounting for ease of service and maintenance. A range of revolutionary new features provide unsurpassed detection performance, flexibility, field programmability, connectivity and reduced total cost of ownership.

VESDA-E detector family

Our VESDA specialists and software

VESDA LASER Aspirating Smoke Detectors

VESDA Laser FOCUS (VLF)

VESDA VLF is ideal for small, business-critical spaces. Available in two models, the VLF-250 covers up to 250 m^2, and the VLF-500 covers areas up to 500 m^2.

VESDA Laser INDUSTRIAL (VLI)

VESDA VLI is an industry-first early warning ASD system, designed to protect industrial applications and harsh environments of up to 2000 m^2. The VLI detector combines a fail-safe Intelligent Filter (patent pending) with an advanced clean-air barrier for optics protection allowing the use of absolute detection and a long detection chamber life without the need for re-calibration.

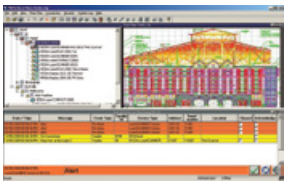
VESDA Software

iVESDA Mobile Monitoring Application

iVESDA is a downloadable application that can be installed on Android and iOS handheld devices to monitor and maintain VESDA-E systems with unprecedented ease. iVESDA is also compatible with existing VESDA detectors residing on the same VESDAnet as VESDA-E. iVESDA provides detailed alarm, fault and other status information such as smoke trends, airflow, filter life, as well as viewing of important configuration parameters such as pipes in use and smoke alarm thresholds.

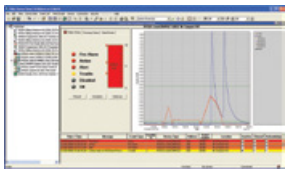
VESDA ASPIRE - System Design and Optimization

The performance of an aspirating smoke detection system is dependent on the design of the pipe network used to transport air back to the smoke detector. VESDA ASPIRE is a Windows-based application that aids the specification and design of pipe networks for VESDA air sampling smoke detectors. It provides the designer with tools to speed the design process and ensure optimum network performance and installation quality. ASPIRE also makes implementation of the design easy. With automatic generation of lists of all the components required for the project and an Installation Data Pack, the installer will have all the information they need at their fingertips.



VSM4 - VESDA Smoke System Management Center

VSM4 configures, monitors and trouble-shoots ASD systems. It is easy to use and has been designed to provide the operator with complete control. The user-friendly interface allows you to assess and respond quickly to system events – all from one convenient location. VSM4 is a total solution for integrated control and monitoring of your very early warning smoke detection systems.



VSC - VESDA System Configuration and Commissioning

VSC configures, commissions and maintains the full range of VESDA fire detection products including smoke detectors, LCD programmers and high-level interfaces. VSC can configure a single VESDA smoke detector or an entire network and is equipped with additional features that allow faster setup, fault resolution and event diagnostics.

Aspirating Smoke Detection decision guide

This Aspirating Smoke Detection model comparison chart gives you a quick and easy guide to the full ASD product range, its capabilities, classification class and area coverage enabling you, at a glance, to identify the right product for your installation.

	FAAST LT-200	VESDA-E					VESDA LASER	
		VEU	VEP		VES	VEA	VLF 250/500	Industrial VESDA VLI
			VEP 1-pipe	VEP 4-pipe				
								
Application Areas	Use in a variety of applications such as raised floor and false ceiling areas, storage areas and room surveillance in relatively clean areas	An extra high sensitivity range for the detection of very small amounts of smoke e.g. in data centers.	Earliest fire detection with the best possible false alarm suppression for a variety of applications such as public buildings, storage areas, halls, atriums, hospitals, power plants, etc.		Very early fire warning with the best in class dust rejection for data centers, warehouses, airports, clean rooms, large atriums, etc.	Targeted addressability with asuperior sensitivity to that of a point detector.	Earliest fire detection for a variety of applications such as telecommuni-cation areas, control cabinets, room surveillance in relatively clean areas	Difficult and industrial environmental conditions
Pipes and Area Coverage								
Pipe Length (Linear)	2 x 100 m	4 x 100 m	1 x 100 m	4 x 70 m	4 x 70 m	40 x 100 m	1 x 25 / 50 m	1 x 120 m
Pipe Length (Branched)	2 x 160m	800 m	130 m	560 m	560 m	4000 m	30 / 60 m	360 m
Area Coverage	1 600 m”	6 500 m^{2*}	1 000 m^2	2 000 m^2	2 000 m^2	2 000 m^2 across 40 sample holes	250 / 500 m^2	2 000 m^2
No. of Pipe Inlets	2 / channel	4	1	4	4	40	1	4
Multiple Pipe Addressability	per channel	No	No		Up to 4	Up to 40	No	No
Sensitivity								
Min Fire 1 Threshold	0.07% obs/m	0.001% obs/m	0.01% obs/m		0.01% obs/m	1.6% obs/m	0.025% obs/m	0.15%/m
Detection Range	0.07 - 6.5% obs/m	0.001 - 20.0% obs/m	0.005 - 20% obs/m		0.005 - 20% obs/m	0.020 - 16% obs/m	0.025 - 20% obs/m	0.005 - 20.0% obs/m
EN54-20 (Class A/B/C)								
Max. no of Holes Class A	3 / channel	80	30	40	40***	40**	12 / 30	24
Max. no of Holes Class B	6 / channel	80	40	80	80***	40**	12 / 30	28
Max. no of Holes Class C	18 / channel	100	45	100	100***	40**	12 / 30	60
Additional								
IP Rating	IP65	IP40	IP40		IP40	IP40	IP30	IP66

* System design and regulatory requirements may restrict the monitoring area to a lesser amount
** Check local codes for the required transport times determined by the tube lengths
*** Subject to agency Testing

The perfect additions to Aspirating Smoke Detection

Automatic Purging Unit

ASD systems continuously monitor the air in a protected environment, potentially subjecting the system to contamination over time. In order to prevent the buildup of pipe or aspiration hole contaminates, regular ASD system purging with compressed air is essential.

In contrast to conventional purging systems, our compact and user-friendly unit features a single built-in Solenoid valve, which initiates the release of air into the ASD system. This valve also increases reliability by protecting the unit from any compressed air damage and can be accessed through a control board that is integrated into the housing.

Installation time is greatly reduced, thanks to a compact and fully integrated design, removing the need for mechanical and electrical control devices. Further cost savings can be leveraged by a reduced need for cabling and pipe work to commission the system.

With user-definable purging processes and customisable program features, the Automatic Purging Unit delivers continuous and uninterrupted air flow and is also optimised to assist with benchmark preventative maintenance regimes, through automatic purging processes that can be set up at specific times. These purging processes are independent of any fault-initiated purging procedures performed by the system.

Designed with the engineer in mind, the system offers excellent flexibility; external devices -such as a pushbutton or a central timer – can be connected to an input to allow initiation of additional manual or automatic activations of the purging process.

- Fully integrated and compact system, designed for larger pipe networks
- Patented design without air resistance (as defined by EN 54-20)
- Easy commissioning without software tools
- Easy integration, even in inventory systems
- IP54 protection, also available for freezing areas

CLIP Hole Identification System

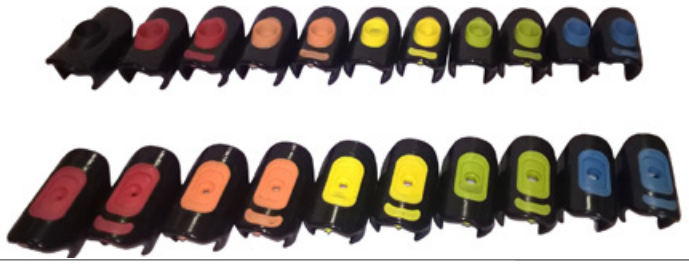
When installing an Aspirating Smoke Detection system in large format applications like warehouses or big open spaces with high ceilings, commissioning and installation time can be increased if the right approach is not employed. When dealing with such applications, it is often almost impossible to identify the exact location of sampling holes and more importantly, identify if the sampling hole is the correct size, creating unnecessary delays.

The CLIP Hole Identification system is designed to alleviate such potential issues, by providing a clear, visual indication of sampling point location and its associated hole size.

Each CLIP is colour-coded and indicates a specific hole diameter, providing an instantly accessible visual guide that can ease the installation process as well as help service engineers and auditors to update or test the system more efficiently.

Sampling hole creation is also greatly simplified using this technology, a 10mm diameter drill is all that is required by an installer to create each sampling hole (rather than many different drill sizes).

Available as a standard and special version for harsh environmental conditions, the special version features a flexi-lip design that changes its shape when subjected to blow off pressure. This ensures that any ice, fiber or dust build-up on the supporting rubber structure can be easily detached and broken up by the air jetstream out ofthe CLIP hole, providing additional protection in challenging locations like freezer applications.



- Clear and easily accessible visual colour-coded guide to sample hole location and sampling hole size
- Permits faster, more efficient commissioning and installation, as well as ongoing maintenance
- Reduces dust loading effects and makes cleaning easier

OSID: reliable, standard sensitivity smoke detection

OSID (Open Area Smoke Imaging Detector) range of detectors provide reliable, cost-effective smoke detection for open spaces where fire detection presents unique challenges.

Large, open spaces such as airports, train stations, stadiums, shopping malls, warehouses and production floors present many challenges for smoke detection. Many of these facilities are tall, operate 24 hours a day and seven days a week, making traditional spot or point smoke detection installation and maintenance difficult.

More then a traditional beam detector

Using CMOS imaging technology, the OSID range uniquely delivers faster installation and superior detection performance that cannot be achieved by traditional reflective beam detectors.

OSID uses coded Infra Red and Ultra Violet light beams to provide superior detection of all smoke types and deliver new levels of reliability in large open spaces.

The CMOS imager has a field of view that allows rapid set up reducing installation time from hours to minutes. The CMOS imager finds and locks on to their detection target (Emitter or Reflector); is then set to ignore unwanted light reflections and can accommodate building movement issues. The CMOS imager allows to minimize drastically false alarms from foreign object intrusion and sunlight saturation.

OSID-DE: dual-ended

OSID-DE uses a wired or battery-powered emitter(s) roughly aligned on the opposite wall within the protected area. The emitter sends both infrared and ultraviolet coded light signals to the imager. The innovative use of dual light frequencies in an open-path device enables OSID-DE to discriminate between real smoke and solid objects; allowing a high resistance to sudden and transient dust and steam clouds, thus drastically reducing false alarms.

OSID-R: reflective*

In its simplest configuration, OSID-R uses an imager and a reflector. It operates on the principle of light obscuration utilizing an Infra-Red beam and smart analysis at a pixel level of its reflector, offering superior performance. Power and connectivity occur in the imager only and the OSID-R only requires a single standard reflector on the opposite wall irrespective of detection distance.

* EN 54-12 pending, contact your local sales representative for details

Performance features OSID range

- Patented dual wavelength, UV & IR, particle detection
- High immunity to dust, fogging, steam, reflections and object intrusion
- High tolerance to vibration and structural movement
- Easy alignment with large adjustment and viewing angles
- Simple installation, commissioning and maintenance
- Simple DIP switch configuration
- 3D volumetric coverage
- Maximum detection range up to 150 m

another specialist of ours

Novar GmbH a Honeywell Company
Forumstraße 30
41468 Neuss, Germany
T: +49 213w1 40615-600
www.esser-systems.com
info@esser-systems.com

Honeywell Life Safety Austria GmbH
Technologiestr. 5
1120 Vienna, Austria
T: +43 1 600 60 30
www.hls-austria.com
hls-austria@honeywell.com

Part no. A10000.G0 02/2020

ESSER
by Honeywell