IDEAL FIRE DETECTION FOR A WIDE VARIETY OF APPLICATIONS

TITANUS® aspirating smoke detectors

BETTER SOLUTIONS IN FIRE PROTECTION





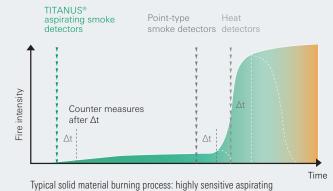
GAIN TIME, SAVE LIVES, SAFEGUARD PROCESSES

Act before the flames have an effect: TITANUS[®] aspirating smoke detectors make it possible to detect fires when they are still in the early development stages. Thanks to this added time it is possible to minimize direct and consequential damage caused by fire, guarantee the highest levels of personal protection and safeguard from interrupting operating process.

Constant threat

Fire hazards are a high corporate risk factor. Increasing concentrations of value, high demands to availability and having to rely on IT infrastructure are factors to illustrate how any fires that are detected too late would have very serious consequences. In this process, fire detection processes benefit from the fact that fire causing damage is mostly caused by extended phases of smouldering. In these scenarios fire detection equipment geared towards the corresponding application is able to detect fires many minutes earlier than conventional smoke detectors.

Crucial time-factor advantage Highly sensitive aspirating smoke detectors enable ideal use of the time-factor advantage as part of fire detection. They detect fires at such an early stage that the system must merely fight the cause of the fire – for instance by cutting the power supply – and there is no need for extinguishing it. In this process, the finer details lie in detecting fires at an early stage while particularly guaranteeing high levels of immunity to false alarms and sensitivity – two paramount factors of highly effective fire pattern detection.



smoke detectors compared with conventional smoke detectors.



For many applications

Thanks to their outstanding reliability, sensitivity and false alarm immunity, TITANUS® aspirating smoke detectors have been the tried and tested system of choice for many years in a wide variety of applications. These include:

- Warehousing and logistics facilities
- Deep-freeze warehouses
- IT and telecommunications
- Archives and libraries
- Industrial and recycling systems
- Wind energy systems and transformer stations
- Power plants and high-voltage systems
- Server and control cabinets
- Hotel rooms and hospitals
- Historic and moder architecture
- Ships and yachts













TRIED AND TESTED FIRE PROTECTION AT THE EARLIEST POSSIBLE STAGE

Patented advantage: Nowadays aspirating smoke detectors are standard in many challenging applications.

Active air sampling

Aspirating smoke detectors consist of a basic device connected to a pipe system. The pipe system is usually installed under the ceiling with defined openings that would each replace a point-type smoke detector. A fan in the basic device generates the required vacuum to continuously take air samples from the monitoring areas. In this process, the airflow of each connected pipe system is monitored individually for fractures or blockages. Up to two detector modules per basic device determine the opacity of the air sample to assess the probability of a fire, providing they feature adequate fire pattern detection like TITANUS®.

Cumulative effect

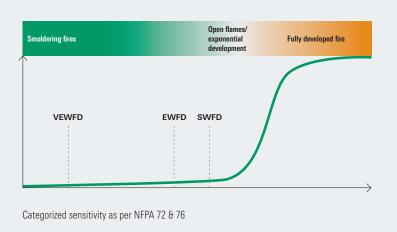
The sampling points have been designed so that approximately the same amount of air is taken in at each point. In this process, each individual sampling point must at minimum comply with the same detection demands as a point-type smoke detector. The smoke density in the detection chamber increases with the number of sampling points through which smoke is aspirated, resulting in earlier alarming.

High false alarm immunity

Even in harsh environments aspirating smoke detectors can provide early fire detection and increased false alarm immunity at the same time, depending on the detector's performance.



TITANUS® aspirating smoke detectors offer active air sampling and thus comply with particularly stringent fire detection demands.



False alarm immunity and long service life of the detector therefore require the use of aligned external air filters, which must match the particular demands of the application. In contrast to locally installed smoke detectors, aspirating smoke detectors enable a high, central computing output for highly efficient fire pattern detection.

Defined suitability for fire detection

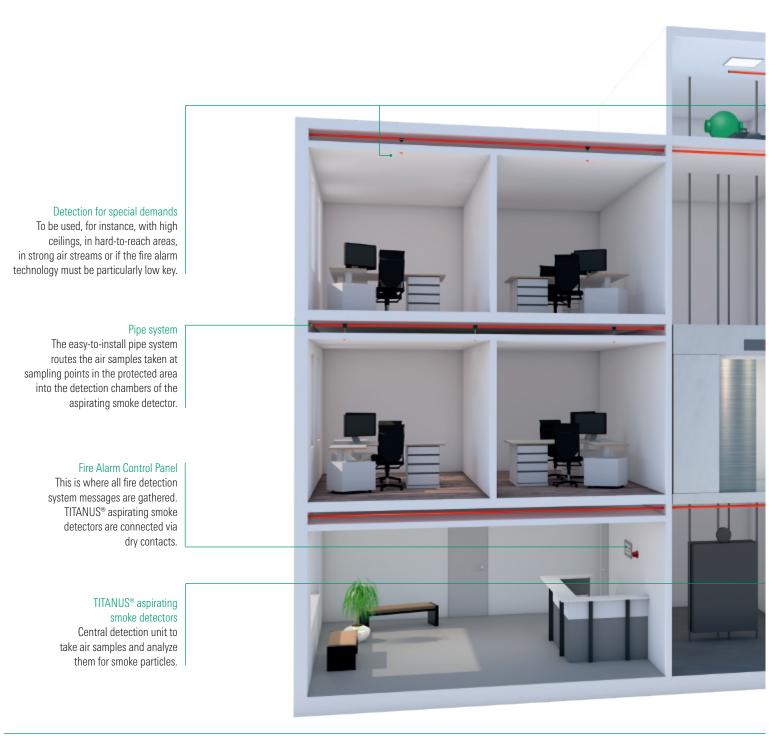
NFPA 72 and 76 provide classifications for fire detection which enable the customers to define the protective goal according their own fire protection concept. Consequently, SWFD aspirating smoke detectors are suitable for general use in areas where point-type detectors are undesirable, for instance for aesthetic reasons. EWFD detectors are used in areas where early fire detection is required and VEWFD detectors warn of fires at a very early stage. In contrast to the often random classification of detector sensitivity by manufacturers, the permissible number of sampling points as per VEWFD is a suitable parameter to indicate fire detection at a very early stage.



Advantages of aspirating smoke detectors

- Normal to highly sensitive fire detection supported by the cumulative effect
- Very high false alarm immunity on the basis of highly effective algorithms for fire pattern detection
- Simple servicing thanks to easy access to detectors at a central point
- Use of graduated air filter technologies for optimum adaptation to the area of application
- Use in low-temperature environments down to -40 °F (-40 °C)
- Suitable for detection in environments with strong airflow
- Also suitable for noise-critical areas
- No aesthetic impairment of the architecture
- Virtually resistant to vandalism

BETTER SOLUTIONS FROM THE TECHNOLOGY LEADER





INCOMPARABLE FIRE DETECTION

Innovative TITANUS[®] aspirating smoke detectors offer crucial benefits to match your special requirements.

Maximum protection from false alarms

Patented LOGIC·SENS® fire pattern detection has been tried and tested in many of the most challenging applications. Thus, TITANUS® has been able to demonstrate troublefree operation thousands of times to date.

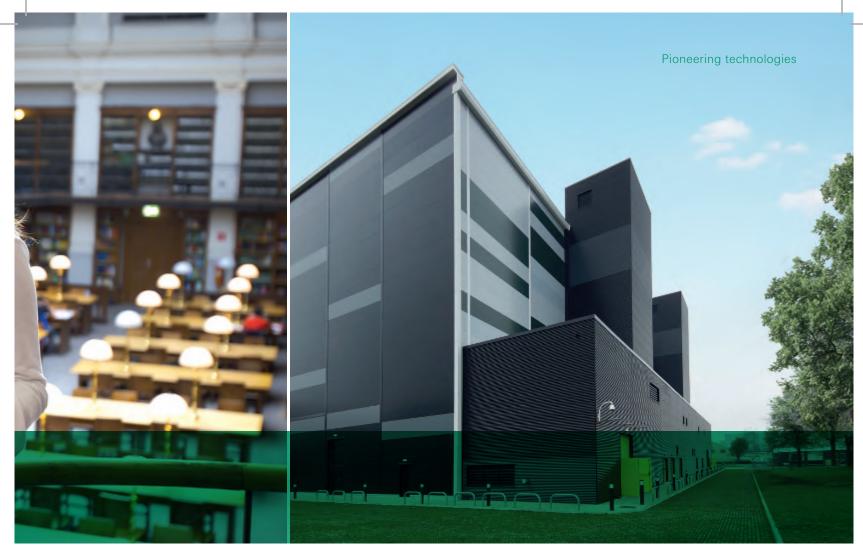
Uncompromising, very early fire detection

WAGNER has clearly proven that fire detection at a very early stage can also be merged with protection from false alarms. By means of fire pattern detection, filter technologies and drift compensation, the highest detection quality is ensured where other detectors have to be set insensitively, e.g. via self-learning algorithms. Consequently, TITANUS® gives you those crucial minutes that can make the difference between minor and total damage.

Globally unique immunity

Whether temperatures from -40 °F (-40 °C), condensing humidity, significant dust accumulation or radiation: there are hardly any applications that cannot be safely controlled with TITANUS[®]. Taking into account the current air pressure during commissioning also guarantees ideal protection from





British Library

Reliable fire detection in environments subject to high dust loads



Effective monitoring in situations with challenging accessibility situations

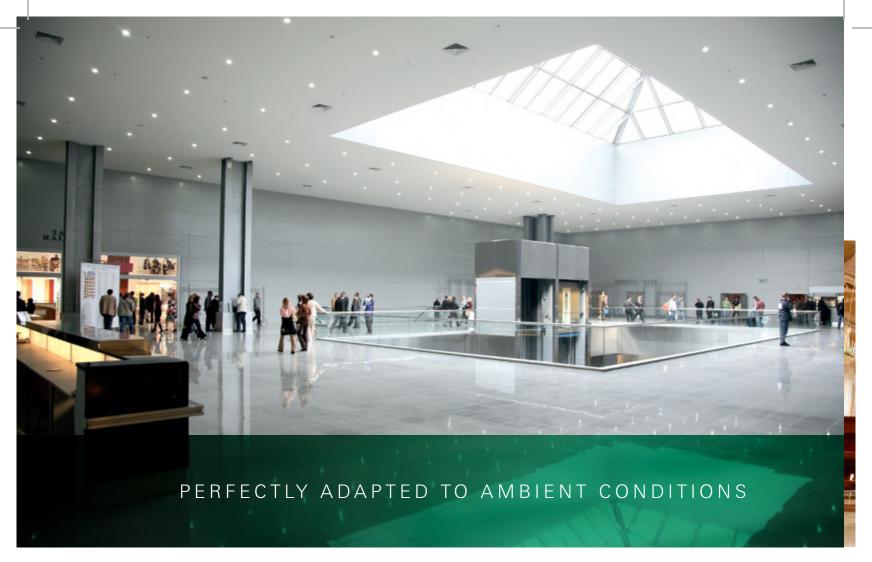
airflow faults within application areas susceptible to differences and fluctuations in air pressure.

Safely monitoring the function

In contrast to what is standard practice, TITANUS® monitors the actually relevant airflow that is routed through the detection chamber. This monitoring process is subject to temperature compensation with an interference threshold from a variation of +/- 10%. This ensures that TITANUS® actually evaluates representative air samples.

Intervention instead of extinguishing

Innovative design tools make it easy to quickly tune TITANUS® systems to NFPA requirements. In consultation with experts, this time can be used, for example, to intervene and prevent automatic extinguishing measures and thus protect goods and infrastructure.



Maintaining protection levels

Standard fire alarm threshold tracking (drift compensation) maintains nearly constant fire detection even in changing ambient conditions while ensuring the detection of slowly developing fires – even in situations in which detectors without tracking would have long since triggered a false alarm (see image on the right).

DRIFT COMPENSATION

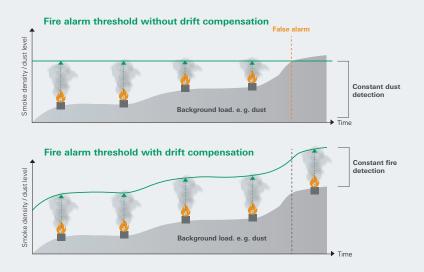


Image on the right: TITANUS® aspirating smoke detectors have proven their worth in areas subject to particularly stringent aesthetic requirements.



Almost invisible and silent

TITANUS[®] can be integrated into modern as well as historic architecture without interfering with the aesthetic appeal of buildings. The system is generally only visible to experts. In this process, special detector variants generate noise levels from 23 dB(A), meaning they are no louder than human breathing at a distance of one meter (equals 3.28 ft).

Never more than necessary

The modular TITANUS® concept allows a cost-effective configuration of performance characteristics that are actually required for application. For instance, instead of purchasing maximum sensitivity and having to automatically reduce it using autonomously learning algorithms, WAGNER can offer ideally configured sensitivity areas on the basis of specific requirements.

Self-determined procedures in the event of fire

Using the SNMP protocol, the customer can independently integrate his TITANUS® systems into an existing management console. Consequently, procedures in the event of alarms or faults can be flexibly adapted to changed demands.

Time is money

Whether during project planning within seconds, during commissioning via "Plug & Play", during user-guided maintenance without interrupting operation or during tool-free module replacement: TITANUS® saves time and money everywhere.

IDEAL FIRE DETECTION AT AN EARLY STAGE FOR ANY APPLICATION

TITANUS® Family

Very early fire detection and highest immunity to false alarms even in harsh environments.



For very large areas and for equipment monitoring

TITANUS PRO·SENS® (/net)



- 1 to 2 detector modules for monitoring 2 zones or optional double-knock
- Area of coverage up to 32,280 ft² (3,000 m²)
- Fire 1 sensitivity from 0.005% obs/ft (0.015% obs/m)
- Up to 63 sampling points per detector module
- Depending on version:
- 1 to 3 alarm levels per detector module
- Temperature range from -40 °F to +140 °F (-40 °C to +60 °C)
- Optional Ethernet / SNMP connection and / or data logger
- Sound pressure level option from -23 dB(A)
- Alternative sensitivity input (day / night)



For medium-sized to large areas and for equipment monitoring



TITANUS TOP·SENS®

- 1 to 2 detector modules for monitoring 2 zones or optional double-knock
- Area of coverage up to 32,280 ft² (3,000 m²)
- Smoke sensitivity from 0.0005% obs/ft (0.0015% obs/m)
- Bargraph smoke level display
- 3 alarm levels per detector module
- Optional Ethernet / SNMP connection and / or data logger
- Alternative sensitivity input (day / night)
- Up to 63 sampling points per detector module
- Depending on version:

- Temperature range from -40 °F to +140 °F (-40 °C to +60 °C)
- Sound pressure level option from -23 dB(A)

Brand Name	
Alarm Levels	
Туре	6
No. of Detector Modules / Zones	
Detector Module Type Designation	
Bargraph Smoke Level Display	
Alternative Sensitivity Input (Day/Night Operation)	
Normal Power Consumption, operation, 1 zone	
Normal Power Consumption, operation, 2 zones	
Normal Power Consumption, alarm, 1 zone	
Normal Power Consumption, alarm, 2 zones	
Ambient Temp4 °F to +140 °F (-20 °C to +60 °C)	
Ambient Temp40 °F to +140 °F (-40 °C to +60 °C)	
Sound Pressure (ISO 3744) 40 dB (A) or higher	
Sound Pressure (ISO 3744) as low as 31 dB(A)	
Sound Pressure (ISO 3744) as low as 23 dB(A)	
2 GB Data Logger / Event Logfile	
Ethernet / SNMP connectivity	
Dry Alarm Contacts (1 A / 30 V DC)	
Dry Fault Contacts (1 A / 30 V DC)	
Reset Input	
Max. Main Alarm (Fire 1) Sensitivity, Depending on Detector Module	
Max. No. of Sampling Points	
Max. Area of Coverage	
Max. Pipe Length	
Input Voltage	
Rel. Humidity (non-condensing)	
Dimensions (W x H x D)	
IP Class: Standard (Optional)	
Binary Event Memory	
External Air Filter (optional)	
Condensate Separator (optional)	
Sound Absorber (optional)	

Double-Knock (optional)

	TITANUS PRO·SENS® 2 x 1 Alarm Level			TITANUS PRO·SENS®/net						TITANUS	TOP·SENS®		
				2 x 2 Alarm Levels			2 x 3 Alarm Levels			2 x 3 Alarm Levels			
	TP-1-U/a <i>(Standard)</i>	(Freeze)	TP-1-SL-U/a <i>(SILENT</i>)	TP-4-U/a <i>(Standard)</i>	(Freeze)	TP-4-SL-U/a <i>(SILENT)</i>	TP-5-U/a <i>(Standard)</i>	TP-5-F-U/a <i>(Freeze)</i>	TP-5-SL-U/a <i>(SILENT)</i>	TT-1-U/a (Standard)	(Freeze)	TT-1-SL-U/a <i>(SILENT)</i>	
		1 to 2		1 to 2				1 to 2			1 to 2		
	Standard: DM-TP-xx-L-U Freeze: DM-TP-xx-L-F-U -			Standard: DM-TT-xx-L-U Freeze: DM-TT-xx-L-F-U -			Standard: DM-TT-xx-L-U Freeze: DM-TT-xx-L-F-U -			Standard: DM-TT-xx-L-U Freeze: DM-TT-xx-L-F-U YES			
ו)		-			YES			YES			YES		
	200 mA	200 mA	150 mA	210 mA	210 mA	140 mA	210 mA	210 mA	140 mA	200 mA	200 mA	160 mA	
	220 mA	220 mA	180 mA	240 mA	240 mA	170 mA	240 mA	240 mA	170 mA	230 mA	230 mA	200 mA	
	210 mA	210 mA	160 mA	220 mA	220 mA	150 mA	220 mA	220 mA	150 mA	230 mA	230 mA	190 mA	
	240 mA	240 mA	190 mA	250 mA	250 mA	180 mA	250 mA	250 mA	180 mA	290 mA	290 mA	230 mA	
	\checkmark	-	\checkmark	\checkmark	-	\checkmark	\checkmark	-	\checkmark	\checkmark	-	\checkmark	
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	-	-	Opt.	-	-	Opt.	-	-	Opt.	-	-	Opt.	
		- Opti				Optional Optional				Optional			
		-			Optional			Optional			Optional		
	1 pe	r detector mo	dule	2 pe	r detector mo	odule	3 per detector module			3 per detector module			
		1 per detector module											
	YES												
				<i>,</i> ,	M-TP-01-L(-F)∙ M-TP-10-L(-F)∙	-U, DM-TT-0 -U, DM-TT-1	. ,	0.009% obs 0.046% obs	•	obs/m) obs/m)			
	24												
	10,800 ft ² (1,003 m ²) per zone												
656 ft (200m) per zone													
	14 up to 30 V DC 10 up to 95% 7.87 x 11.5 x 4.45 in (200 x 292 x 113 mm)												
						IP 20	(IP 52)						
						YES							
	type LF-AD/a (15 μm), type LF-AD-1/a (10 μm), type LF-AD-2/a (5 μm)												
		type KA-1, with automatic drain option											
				type	e SD-1/a (redu	uces sound pr	essure level l	by up to 10 d	3(A))				
	YES (with 2 detector modules)												

THE APPROPRIATE SOLUTION FOR ANY SITUATION

The extensive TITANUS[®] product range offers an ideally adapted, cost-efficient solution for almost any application.



TITANUS[®] aspirating smoke detectors deliver advantages in any circumstances requiring special parameters in terms of fire protection: in deep-freeze areas, in areas with high levels of dust and dirt, in noise-sensitive environments and when it is necessary to protect aesthetic architecture almost invisibly.





High-voltage systems





Parking garages



Recycling plants

EDP systems/control cabinets

INTELLIGENT FIRE PREVENTION THROUGH INNOVATIVE STRENGTH

As technological leaders, we set standards with our innovative fire protection solutions.



Focusing on protecting you

WAGNER has been developing and producing technical fire protection systems since 1976. The company has established itself internationally as an innovative provider of solutions and systems. In this context, our expertise ranges from individual planning and application-specific development to installation and maintenance of your fire prevention systems. This always results in a protection scheme to match your security demands. Because it is about minimizing risks to guarantee your company's and your personal, economic success.





Modern architecture



Industrial production



Recycling plants

Fire Protection as Holistic Solution. Trendsetting. Worldwide.



WAGNER Fire Safety Inc.

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You can find your personal WAGNER contact at **us.wagnergroup.com**



Technology leadership in technical fire protection – by innovative solutions that protect lives and assets:

Fire Detection Aspirating smoke detectors: TITANUS®

Fire Prevention Oxygen reduction: OxyReduct[®]

Fire Extinguishing Gas extinguishing technology: FirExting®

Hazard Management Organization via: VisuLAN®

BETTER SOLUTIONS IN FIRE PROTECTION

