



## **IDEAL FIRE DETECTION FOR ALMOST ANY APPLICATION**

### **TITANUS® air sampling smoke detectors**

Reliable fire detection with maximum immunity to false alarms even in the most challenging application areas



## GAIN TIME, SAVE LIVES, SAFEGUARD PROCESSES

Act before the flames have an effect: TITANUS® air sampling 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 minimise direct and consequential damage caused by fire, guarantee the highest levels of personal protection and safeguard from interrupting operating process.

### Constant threat

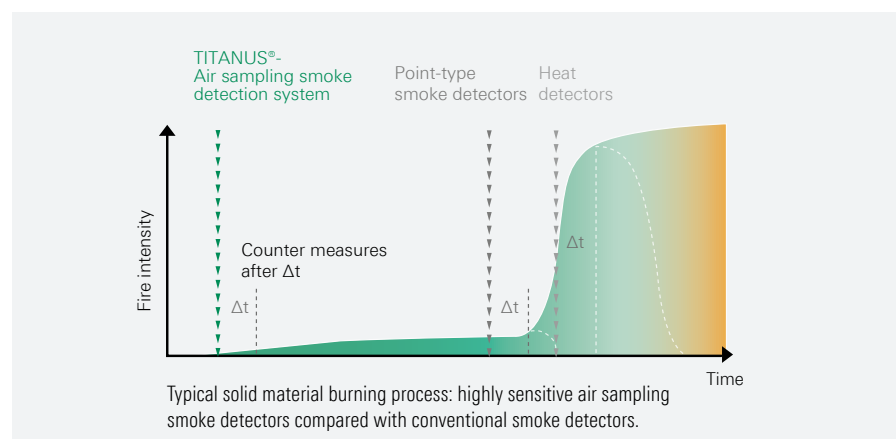
Fire hazards are a high corporate risk factor. Increasing concentrations of value, high demands to availability and having to rely on IT infrastructure are factors to illustrate how any fires that are detected too late would have very serious consequences. In this process, fire detection processes benefit 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 air sampling

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 smoke development pattern recognition.







#### For many applications

Thanks to their outstanding reliability, sensitivity and false alarm immunity, TITANUS® air sampling smoke detection systems 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 storage areas
- 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 modern architecture
- Ships and yachts





## TRIED AND TESTED FIRE PROTECTION AT THE EARLIEST POSSIBLE STAGE

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

### Active air sampling

Air sampling smoke detectors consist of a basic device connected to a pipe system. The pipe system is usually installed under a 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 air flow 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 smoke development pattern detection like TITANUS®

### Cumulative effect

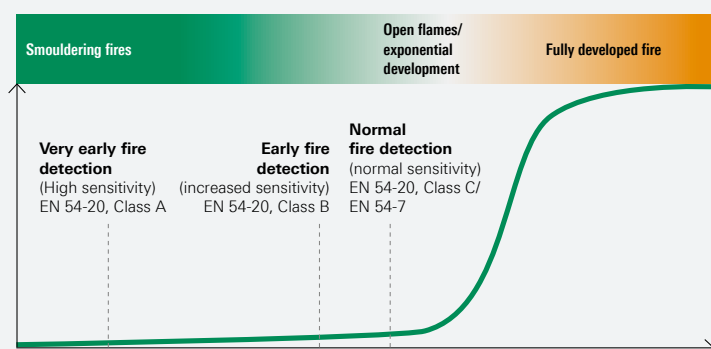
The air sampling points have been designed so that approximately the same amount of air is taken in at each point. In this process, each individual air sampling point must at minimum comply with the same detection demands as a point-type smoke detector. The smoke density of the overall air flow increases with each pipe system air sampling point subjected to smoke to thus encourage activation.

### High false alarm immunity

Air sampling smoke detectors also guarantee early fire detection even in the most difficult conditions. Consequently, active air sampling provides the option to use air



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



Categorised sensitivity as per EN 54-20 product standard



filters for dust precipitation. In this process, an ample filter portfolio forms the basis for ideal adaptation to the corresponding ambient conditions. This ensures protection from false alarms and prolongs a detector's service life. In contrast to locally installed smoke detectors, air sampling smoke detectors enable a high, central computing output for highly efficient smoke development pattern detection.

#### Competitive advantage thanks to fire detection

Product standard EN 54-20 introduced sensitivity classes for fire detection to give customers the option of defining their protective target as part of an objective system. Consequently, class C air sampling smoke detectors are suitable for general use in areas where point-type detectors are

undesirable, for instance for aesthetic reasons. Class B detectors are used in areas where early fire detection is required and Class A detectors warn of fires at a very early stage. In contrast to the often random classification of smoke detection patterns by manufacturers, the permissible number of air sampling points as per class A is a suitable parameter to indicate fire detection at a very early stage.

#### Advantages of air sampling 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 smoke development pattern detection
- Simple servicing thanks to easy access to detectors at a central point
- Use of air filter technology categories to ideally adapt to the application
- Use in low-temperature environments down to -40°C
- Suitable for detection in environments with strong air flow
- Also suitable for noise-critical areas
- Preserves architectural and aesthetic appeal
- Virtually resistant to vandalism



## THE BEST SOLUTIONS FROM THE TECHNOLOGICAL LEADER

TITANUS® air sampling smoke detectors have proven their worth in a host of different applications. Especially in areas with particular aesthetic demands and difficult environmental conditions, these flexible and durable systems have shown impressive technological leadership.

### Detection for special demands

Particularly suitable, for instance, in facilities with more than 12 m high ceilings, in hard-to-reach areas, in strong air streams or if the fire alarm technology must be particularly low key.

### Pipe system

The easy-to-install pipe system routes the air samples taken at air sampling points in the protected area into the detection chambers of the air sampling smoke detector.

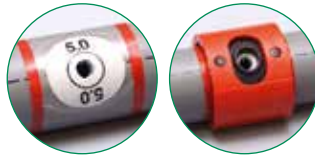
### Fire detection control panel

This is where all fire detection system messages are gathered. TITANUS® air sampling smoke detectors are connected using direct bus connections or floating contacts.

### TITANUS® air sampling smoke detectors

Central detection unit to take air samples and analyse them for smoke particles.





#### Air sampling points

Easy-to-read air sampling reduction foil for defined sampling. Special clips optionally available to blow out the pipe system in the event that it has iced over or become dirty.



#### Ceiling conduits

Flexible air sampling hoses mean almost invisible installation, e.g. in ceiling voids or if the architectural, aesthetic appeal must not be disturbed.



#### Multifilter concept

In dusty environments the detector can be protected using a filter concept certified as per EN 54-20. Various filters can be inserted into the pipe system to protect them from false alarms and prolong their service intervals.

#### Easy-to-service

A centrally installed diagnostic tool supports as part of service and maintenance.

#### Effective monitoring

TITANUS® units can be used to monitor rooms and equipment.



#### TITANUS RACK-SENS®

The air sampling smoke detectors suitable for installation in server and control cabinets are up to 400 times more sensitive than conventional smoke detectors plus they detect directly where the risk of fire is at its highest.



## INCOMPARABLE FIRE DETECTION

Innovative TITANUS® air sampling smoke detectors offer crucial benefits to match your special requirements.

### **Maximum protection from false alarms**

Patented LOGIC·SENS® smoke development pattern detection has been tried and tested in many of the most challenging applications. In this process, the system has also guaranteed an operation free from false alarms, a premise other smoke detectors would have not been able to deliver on.

### **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. Smoke development pattern recognition, filter technologies and drift com-

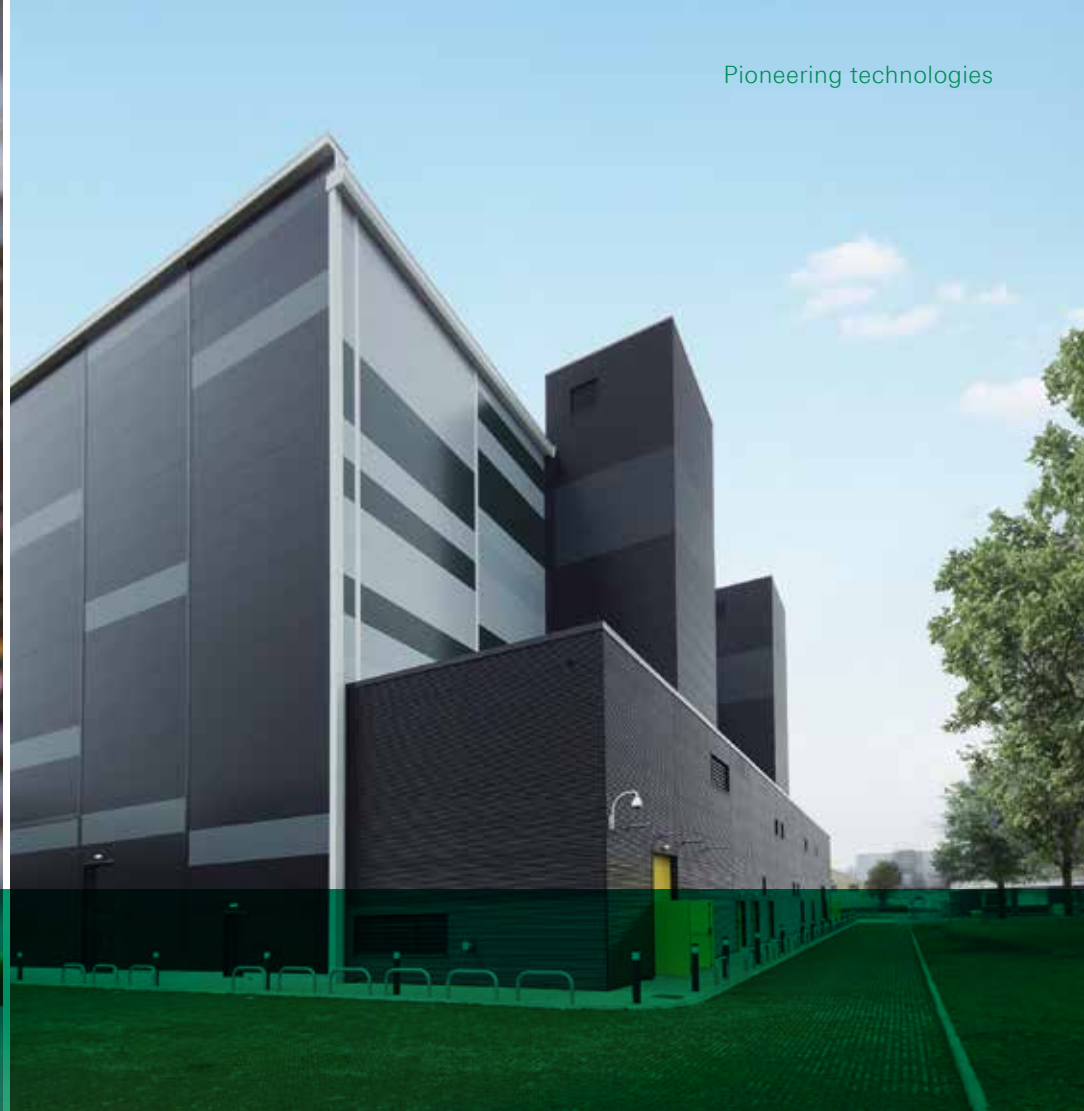
pensation, certified by the Organization of Property Insurers, guarantee maximum detection quality where other detectors would have to be set to non-sensitive mode, for instance with autonomously learning algorithms. Consequently, TITANUS® gives you those crucial minutes that can make the difference between minor and total damage.

### **Globally unique immunity**

Be it temperatures from -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







British Library

Reliable fire detection in environments subject to high dust loads



Effective monitoring in situations with challenging accessibility situations

during commissioning also guarantees ideal protection from air flow 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 air flow that is routed through the detection chamber. This monitoring process is subject to temperature compensation with an interference threshold from a variation of +/- 10%. Consequently, TITANUS® guarantees identical sampling as the requirement for secure, ideal detection.

#### **Intervention instead of extinguishing**

Depending on systems and design concept, TITANUS® guarantees compliance with requirements as per EN 54-20 even if the alarm is delayed by up to 150 seconds. Coordinate processes with experts to use this time for elements including interventions and preventing automatically triggered extinguishing measures to thus protect goods and infrastructure.



PERFECTLY MATCHED TO AMBIENT CONDITIONS

### 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 metre.

### Maintaining protection levels

Standard fire alarm threshold tracking (drift compensation) guarantees identical detection quality even in changing ambient conditions while ensuring the detection of slowly developing fires – even in situations in which

### DRIFT COMPENSATION

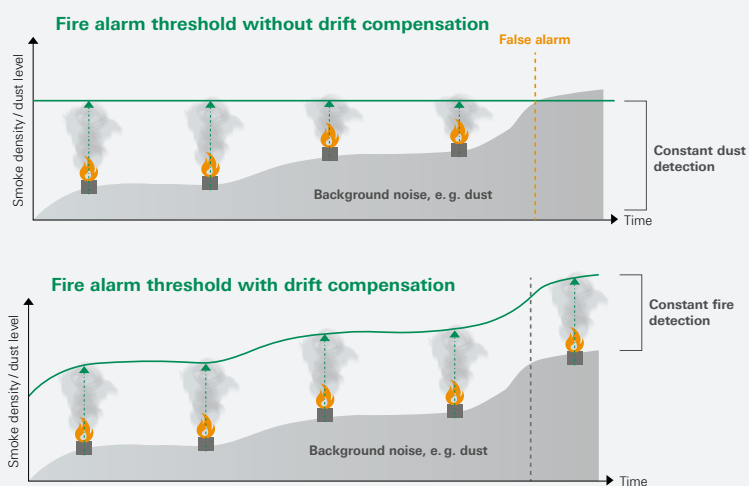


Image on the left: TITANUS® air sampling smoke detectors have proven their worth in areas subject to particularly stringent aesthetic requirements.

Image below: At the hotel air sampling smoke detectors guarantee efficient monitoring of individual rooms.



detectors without tracking would have long since triggered a false alarm (see image on the left).

### **Knowing exactly where the fire is**

With the ROOM·IDENT procedure you can locate the facility affected by fire in developments in which rooms are next to each other. Consequently, TITANUS MICRO·SENS® with ROOM·IDENT is able to monitor up to five small rooms on the basis of individual room localisation via one air sampling pipe.

### **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**

Customers can individually integrate their TITANUS® systems into available management consoles using SNMP protocols. Consequently, procedures in the event of alarms or faults can be flexibly adapted to changed demands.

### **Time is money**

Be it as part of developing concepts in seconds, „plug & play“ commissioning, user-guided maintenance without having to interrupt operation or tool-free module replacement: TITANUS® saves time and money in all areas.



# IDEAL FIRE DETECTION AT AN EARLY STAGE FOR ANY APPLICATION

TITANUS® enables ideal fire detection in conditions in which other models reach their limits. In this process, the extensive TITANUS® product range enables cost-effective solutions and applications that have been accurately geared towards the intended purpose and customer, providing maximum protection from false alarms thanks to LOGIC-SENS® smoke development pattern detection.



For very large areas and to monitor equipment

**TITANUS PRO-SENS® (/net)**  
**and TITANUS TOP-SENS®**

- 1 to 2 detector modules suitable for up to 3,000m<sup>2</sup> monitoring space
- Activation sensitivity from 0.0015% LT/m within a temperature range from -40°C bis +60°C depending on the version
- Depending on the version with bar graph smoke level indicator, up to 3 alarm levels, sound pressure level from 23 dB(A)
- Optionally with Ethernet connection and data logger



For medium-sized to large areas and for equipment monitoring

**TITANUS FUSION®**

- 1 to 2 detector modules suitable for up to 1,600m<sup>2</sup> monitoring space
- Activation sensitivity from 0.015% LT/m within a temperature range between -30°C bis +60°C
- Depending on the version with sound pressure level from 23 dB(A)



For small to medium-sized areas and for equipment monitoring

**TITANUS MICRO-SENS®**

- Up to 400m<sup>2</sup> monitoring area
- Activation sensitivity from 0.01% LT/m at temperature range between -40°C to +60°C depending on the version
- Optionally with bar graph smoke level indicator, 2 alarm stages; Location of fire determined using ROOM-IDENT, Ethernet connection and data logger



## For monitoring clean rooms

**TITANUS SUPER-SENS®**

- Up to 2,000m<sup>2</sup> monitoring area
- Activation sensitivity from 0.0006 % LT/m within a temperature range between -20°C and +60°C
- With bar graph smoke level indicator and 3 alarm levels
- Optionally with Ethernet connection and data logger
- Available as galvanic electroplating variant for aggressive ambient conditions



## For areas subject to artificial fogging

**TITANUS MULTI-SENS®**

- Up to 3,000m<sup>2</sup> monitoring range featuring mode to block artificially generated fogging (e.g. in theatres)
- Activation sensitivity from 0.0015% LT/m within a temperature range between -40°C and +60°C depending on version
- Optionally with bar graph smoke level indicator, 1 to 3 alarm stages, depending on the version with sound pressure level from 24 dB(A)



## For monitoring up to 19" server and control cabinets

**TITANUS RACK-SENS® 1 U****TITANUS RACK-SENS® 2 U**

- In 1 U version with optional extinction actuation
- In 2 U version with integrated Novec™ 1230 by 3M® extinguishing cylinder
- Activation sensitivity from 0.01 % LT/m, with 2 alarm stages
- Optionally with bar graph smoke level indicator, Ethernet connection and data logger



## THE APPROPRIATE SOLUTION FOR ANY SITUATION

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

*TITANUS® air sampling smoke detectors deliver advantages in any circumstances requiring special parameters in terms of fire protection: in deep-freezing facilities, environments with high dust and dirt pollution, sensitive to noise or if its about almost invisibly protecting aesthetically pleasing architecture.*



High-voltage systems



Multi-storey car parks



EDP systems / control cabinets



Recycling systems





## INTELLIGENT FIRE PREVENTION THROUGH INNOVATIVE STRENGTH

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



Modern architecture



Industrial production



High-bay warehouses



### **Focussing 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 minimising risks to guarantee your company's and your personal, economic success.



# WAGNER Group Plant Engineering & Construction



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WAGNER sets standards in fire  
protection – with innovative  
and comprehensive solutions

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### **Fire detection units**

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**Very early fire detection systems  
(TITANUS®)**

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**Active fire prevention (OxyReduct®)**

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**Fire extinguishing (FirExting®)**

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**Hazard management (VisuLAN®)**