

# WAGNERIMPULSE

THE WAGNER GROUP CUSTOMER MAGAZINE 2/2019



Extras as standard:  
**Earliest smoke detection  
in automotive production**

## NEWS

News from the world of WAGNER

## PRACTICE

Fire protection for KyotoCooling® at noris network AG

## PROJECT

Earliest smoke detection behind the scenes at the Castle Theatre in Celle

## *Dear business partners, dear readers,*

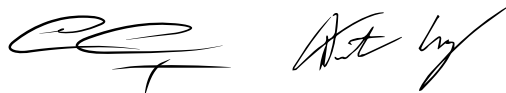


**On the eve of 15 April we all witnessed on live TV and social networks how large parts of Notre Dame Cathedral in Paris were ravished by fire. The world was shaken up, shocked, downright horrified. Within hours after the fire, countless companies, private individuals, municipalities and large conglomerates had pledged their financial support to rebuild the landmark.**

WAGNER has been an independent and reliable partner in fire protection for over 40 years. We still observe valuable cultural heritage, but also many private companies which are inadequately protected. For this reason, we need to be aware that there is always a risk of fire at any time. If we deny this permanent risk, we will continue to suffer from the consequences of catastrophes like the one in France recently. Facilities without reliable very early smoke detection are taking a risk that can be minimised with the simplest of measures.

Building a consciousness for reliable fire prevention often starts with minor details. Find out why the baroque Castle Theatre in Celle has opted for air sampling smoke detectors to guarantee very early fire detection. In our title story we would also like to introduce you to how production facilities in the automotive industry are protected with aspirating smoke detectors. Not an easy task as the many interference factors, such as finest dust particles or layers of lubricant, are a real challenge for which we have developed a trendsetting solution in collaboration with our customer.

We hope you enjoy reading! Yours,



**Werner Wagner**

**Torsten Wagner**

Managing directors and WAGNER Group GmbH  
company owners



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Extras as standard:

# *Earliest smoke detection in automotive production*

WAGNER can look back on around 20 years of experience in fire protection for the automotive industry. The fire protection expert has equipped various plants of well-known automobile manufacturers with his individual solutions. WAGNER employee Peter Stehr has been there from the outset.



“Some of the automobile manufacturers at that time had individual fire protection solutions, but not a comprehensive, consistent system,” recalls Peter Stehr, sales employee at the WAGNER branch in Hanover. Since he had originally trained as an electrical mechanic at an automobile manufacturer, he was able to assess the local requirements in the factories well. With great commitment, he finally convinced those responsible of the advantages of the highly sensitive

TITANUS® aspirating smoke detectors. “Thanks to sophisticated smoke development pattern detection they bring about a new dimension of immunity from false alarms,” explains Stehr.

Initially, only one system was installed at one of the car manufacturers for testing purposes. The customer was sceptical. “The first devices featured a reset button in case they were too sensitive and thus triggered false alarms all the time”, Stehr reports.

But they didn't. For this reason, the car manufacturer then decided to also install air sampling smoke detectors from the TITANUS® range in production halls and other buildings. “Once the system was established, we kept getting new projects.”





**TITANUS TOP-SENS® becomes the standard**

Today WAGNER works for various automobile manufacturers and is gradually installing fire protection solutions in different buildings at several locations. "If it is not a new building, our projects usually run over several years, because we work our way through hall by hall", explains Stehr. Volkswagen Commercial Vehicles (VWCV) in Hanover is a WAGNER customer. Ulf Strassburger, Specialist Planner for fire detection panels at VWCV, emphasises "it's a massive advantage for us to monitor very large areas without having false alarms with low maintenance efforts."

The fire protection experts from WAGNER install air sampling smoke detectors completely with accessories, piping and power supply. "TITANUS® air sampling smoke detectors bring about the advantage that they detect in production areas at ceiling level, yet can be tested remotely every three months from the ground", Stehr explains. The system has not only proven its worth with its high levels of immunity against false alarms, but also on the basis of its cost-efficiency. "With TITANUS TOP-SENS® devices it is possible to use very long, comprehensive piping systems and consequently this sustainably cuts costs as part of procurement, maintenance and repairs."

**Individual VdS-certified solutions to master any challenge**

The challenges during installation change with each facility. "Each plant brings about its very specific requirements and for this reason, we always provide an individual design", Stehr says. "In this process, we need to take the specific conditions at site into account. If we take the press plant as an example, an oily and hot environment, we need to tackle a developing layer of lubricants and consequently rely on special filters that we need to replace more frequently. In contrast, welding gener-

*“Each plant brings about specific requirements and for this reason, we always provide an individual design.”*



*Peter Stehr, Sales Representative at the WAGNER subsidiary in Hanover*

ates the finest dust particles. We take note of these interference factors to prevent false alarms. Our accessories portfolio is a great help to us to enable individually tailored solutions." However, installation itself can prove to be a real challenge too, especially in facilities with ceilings at a height of up to 20 metres and when the job requires industrial climbers rather than platforms. Project management must also make sure on-going production is not disrupted. In some areas WAGNER can therefore only work outside the production times and sometimes only during the factory holidays. However, all these challenges appeal to Stehr all the more to install a tailor-made fire protection system for his customers according to their individual needs. The sales representative has just received a new order from another plant. "We have been tasked with installing 30,000 metres of air sampling pipes by the end of the year", Stehr, who will soon be starting his well-earned retirement after having worked at WAGNER for 30 years, says with a smile. His colleagues will then take over the support of the automobile manufacturers. And Stehr knows: TITANUS® will continue to reliably ensure that cars roll off the assembly line safely.



**About Volkswagen Commercial Vehicles:**

*“We transport success.”* Volkswagen Commercial vehicles (VWCV) is an independent brand within Volkswagen Group and responsible for the development, assembly and sales of light commercial vehicles worldwide. In 2018 the brand delivered around 499,700 light commercial vehicles which were produced at sites in **Hanover (D), Poznan (PL), Wrzesnia (PL) and Pacheco (ARG)**. VWCV employs a global workforce of over 24,000 employees, around 15,000 of which work at the site in Hanover.

**Video about technology: The benefits of TITANUS® very early fire detection**





## ***Check: customer benefits of TITANUS®***

- ✓ *Gain valuable time thanks to the earliest possible fire detection*
- ✓ *Minimise damage by fire and other related, consequential damage*
- ✓ *Best possible personal protection and protection from production downtime*
- ✓ *Maximum levels of immunity against false alarms thanks to smoke development pattern detection*
- ✓ *Simple maintenance thanks to easily accessible detectors*
- ✓ *Certified LABS conformity, i.e. does not influence paint coating*



Safe and reliable:

# TITANUS®

*air sampling smoke detectors*

TITANUS® air sampling smoke detectors are fire detectors that actively take air samples from the monitored area thanks to a vacuum before they centrally analyse them. They essentially consist of a basic device featuring fan and detector modules as well as a connected pipe system with air sampling points. Each air sampling point is assigned to the same monitoring area as a point-type smoke detector according to DIN VDE 0833-2. In this process, TITANUS® is up to 2,000 times more sensitive than conventional smoke detectors and thus guarantees a valuable advantage in terms of the time to search for and eliminate the cause of a fire. Thanks to LOGIC-SENS® smoke development pattern detection and VdS-certified filter technologies TITANUS® additionally provides unprecedented immunity from false alarms.

Air sampling smoke detectors are installed centrally in an easy-to-access area. This measure reduces installation and maintenance costs. One TITANUS TOP-SENS® can also replace up to 144 point-type smoke detectors – a further cost benefit. A broad range of accessories to ideally adapt the system to the most diverse application areas rounds off the TITANUS® series. ■



**WAGNER knowledge portal**  
Technologies to protect from  
false alarms – detailed functional  
description



*“ It’s a massive advantage for us that we can safely monitor very large areas with a relatively small number of low-maintenance devices. ”*

*Ulf Strassburger, Specialist Planner for fire detection panels at VWCV*



# News from the world of WAGNER



## OxyReduct® protects “cool” national icon in the US

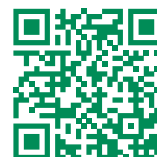
Fertile, volcanic soil, fresh melt water from the mountains, sunny days and cool nights: the US state of Idaho provides perfect conditions to cultivate potatoes. For this reason, the potato was officially declared a national icon in 2002. US Americans love this type of tuber vegetable and annually consume more than 60 kg per head – of course also as chips and fries. **Refrigerated warehouse operator NewCold is building an around 40-metre-high, highly automated deep freeze storage warehouse in the potato**

**state with a capacity of approximately 90,000 pallet slots for a manufacturer of potato-based products. As a cooperation partner, WAGNER is equipping the warehouse with the OxyReduct® oxygen reduction system.** It actively mitigates the risk of a developing fire – and frozen fries and chips will only be hot and crunchy once they are taken out of end consumers’ ovens or fryers. It’s the second fully automatic system NewCold operates in the US. WAGNER protects numerous of the operator’s systems around the globe.

## Fire prevention for the Guru

Austrian company aqipa refers to itself as the “Gear Guru”. It provides and markets premium accessories within the consumer electronics sector. Audio, computer and photo products will now be protected by the OxyReduct® oxygen reduction system. **WAGNER Austria equipped a 1,150 m<sup>2</sup> AutoStore small parts warehouse operated by the retailer featuring 33,000 box slots with the fire prevention system.**

Logistics company Swisslog was heading up this project as an expert in automated warehousing solutions. The project at aqipa was WAGNER’s first order for Swisslog in Austria.



**Watch the video now!**  
How fire prevention in the AutoStore warehouse works.







## Next generation of data security in Austria

**Built in only 17 months, with a footprint of 8,000 m<sup>2</sup> and an infrastructure that meets maximum security demands: Austrian telecommunications provider A1 inaugurated the Next Generation Datacenter in Vienna last year.** As IT and communication solutions are closely linked here, there are new demands in terms of data security, high levels of availability and IT systems' reliability. General contractor IBM commissioned WAGNER Austria to install

fire protection systems for earliest smoke detection involving air sampling smoke detectors – and an IG541 gas extinguishing system featuring WAGNER Austria's very own development, FirExting® *SILENT* sound suppressors to protect hard drives. "We were delighted to be a part of such a large-scale project", Herbert Remer, Managing Director at WAGNER Austria, says. A1 is Austria's largest service provider operating 13 individual data centres.

## Premiere in Greece: protecting feta and the like

The Greeks have been producing the popular brined, cured Feta cheese since the ancient times.

**Tyras launched into the dairy industry in 1986 – and in future the company will be protecting its products with Oxy-Reduct® systems by WAGNER.** WAGNER provided the entire fire protection system for a new high-bay warehouse in Trikala near Thessaloniki.

**In this process, TITANUS® air sampling smoke detector systems and an OxyReduct® system**



**protect a total area of 110,000 m<sup>3</sup>.**

"This is WAGNER's first order in Greece and we are proud to have established the country's first ever oxygen reduction system", Gerald Koller, Business Development Manager for Eastern Europe, reports. "Our partner from Bulgaria helped us bring the project to life." By the way, feta cheese is not only popular in Greece: every year more than 20,000 t of the delicacy are exported from Greece to Germany – and this figure is said to increase in the future.



## Earliest smoke detection for Bulgaria's largest warehouses

Bedding, solid wood furniture and other items of furniture: products made by Danish company JYSK are highly flammable and require a reliable fire detection system to protect them from fire. WAGNER was now able to implement this at the new JYSK distribution centre in Bulgaria near Sofia.

**Two high-bay warehouses with more than 120,000 pallet slots were equipped with highly sensitive air sampling smoke detector systems as part of the project.** "We used our TITANUS *PRO-SENS*® system", Gerald Koller explains as the Business Development Manager for Eastern Europe. "160 basic devices and 320 detector modules have been installed – planning and implementation were carried out as per VdS Directive 2095 in line with the insurer's requirements." Unsurprising then that so many devices were required – with a height of 43m and 16 levels both high-bay warehouses are the highest in Bulgaria.

JYSK supplies 270 branches throughout the Balkans from this facility.



Enormous heat exchanger wheels, so-called KyotoCooling®, guarantee energy-efficient cooling at the data centre. ▼



## Always in motion

Pioneering fire protection for KyotoCooling® at noris network AG

**WAGNER engineers particularly enjoy projects that challenge their developers' spirit: whenever standard solutions reach their limits. noris data centres in Nuremberg South and Munich East are exactly that kind of project.**

**Safety thanks to partnership**  
noris network AG has been building and operating cutting-edge, highly secure data centres for more than 25 years. WAGNER has been taking care of the fire protection at noris since 2002. As a team, they mastered quite a few challenging issues, modified, updated and enhanced existing fire protection systems. "We continue to be very busy", Christian Dupier says as the head of System Engineering at WAGNER if you ask

him about the current collaboration with long-standing customer noris network. By 2016 merely the first construction phase of the new high-performance Nuremberg South data centre had been completed and in September 2018 they already launched the second construction phase. "Earlier than scheduled", says noris CEO Ingo Kraupa, "as Germany and in particular the region around Munich and Southern Germany are lacking cutting-edge data centres." And the next project is already on the horizon: capacities in Nuremberg will be further enhanced. However, with all the new developments and extensions going ahead, we are also keeping an eye on fire prevention in existing buildings.

Consequently, WAGNER equipped the longest-running noris site at the heart of Nuremberg with comprehensive fire detection units in 2018.



◀ Ingo Kraupa  
CEO, noris network AG

### Turning the wheel

Enormous heat exchanger wheels make sure at noris data centres Nuremberg South and Munich East that so-called KyotoCooling® guarantees energy-efficient cooling within the facilities. An element with a positive effect on costs in normal mode (except for a few hot summer days the data centre can be operated without additional air conditioning) is a significant challenge for fire prevention. As a result of natural leaks



at Kyoto wheels, extinguishing gas would continuously escape from the data centre in the event that the nitrogen extinguishing system triggers. It was not possible to provide a reliable extinguishing. The holistic solution by WAGNER engineers was to implement a two-stage concept.

“The combination of the very early fire detection with a reduced pressure and safe oxygen reduction, as well as the inertisation of the protected area with OxyReduct®, that allows us to bridge the time to refill extinguishing cylinders, has us completely convinced.”

Ingo Kraupa,  
CEO, noris network AG

### Strong combination: traditional gas extinguishing technology with oxygen reduction

The two-stage concept combines traditional gas extinguishing technology with oxygen reduction, earliest possible fire detection and false alarm-proof fire detection to deliver maximum safety. This is how it works: the protected area is continuously monitored by TITANUS® air sampling smoke detectors. If they detect a fire at the earliest possible stage, oxy-

gen levels are initially lowered to a reduced target concentration by the nitrogen extinguishing system. Staff can still access these areas to search for and eliminate the cause, as the reduced oxygen level is unarmful. This target concentration can be maintained for as long as required thanks to the OxyReduct® oxygen reduction system as the system's nitrogen generators directly produce the required nitrogen on site from the ambient air to thus compensate for losses as a result of leaks within the building or at Kyoto wheels. Reducing the oxygen concentration significantly impairs the development of the fire meaning that ideally the fire is already put out at this stage. The data centre must not be de-energised and computing power also remains available in the event of an incident.

If TITANUS® devices continue to detect a fire, a second extinguishing cylinder is activated and the oxygen concentration is further lowered to consequently put out the fire. Thanks to OxyReduct® this second target concentration can be maintained for as long as needed until all causes of fire have been eliminated – even beyond the 10 minutes required for gas extinguishing systems as per VdS directive.

This two-stage fire prevention concept adapted to KyotoCooling® has already been installed at two noris data centres. A further system will be installed next year in Nuremberg.

### Creative, flexible and reliable

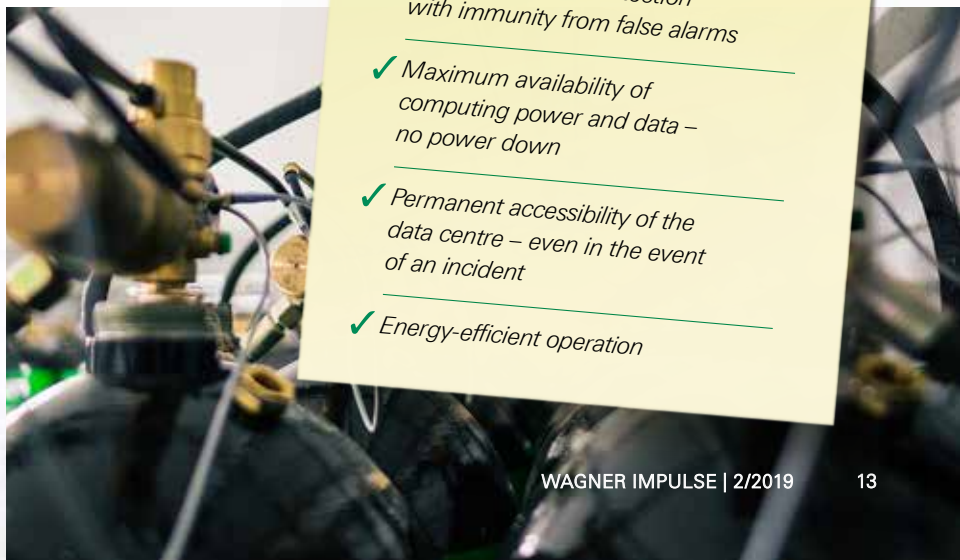
“We have been working successfully with noris for many years.

We both appreciate the efforts we invest”, Christian Dupier explains. The first OxyReduct® system was installed at noris as a traditional fire prevention system in 2002. Further projects followed until the decision was made in 2018 to update the first system and make it even more energy efficient. An N<sub>2</sub> extinguishing system was installed and the concept was fundamentally changed. The oxygen content at this data centre is now no longer lowered continuously. Oxygen reduction is used to maintain the nitrogen concentration suitable as extinguishing agent after the extinguishing system has been activated – similar to the principle applied at the data centre with KyotoCooling®. “Our systems are absolutely flexible and suitable for use in the most diverse protection schemes. If operators’ demands and requirements change, we can ideally adapt our technology to the new customer specifications”, Dupier continues.

Plans for the most recent prestige project Munich East already include an extension of the existing fire prevention system. A two-stage concept is also applied here. The second construction phase has just started and 130 additional extinguishing cylinders will be added to the installed gas extinguishing system. We will also enhance the OxyReduct® system by a further nitrogen generator. ■

### Check: customer benefits

- ✓ Very early smoke detection with immunity from false alarms
- ✓ Maximum availability of computing power and data – no power down
- ✓ Permanent accessibility of the data centre – even in the event of an incident
- ✓ Energy-efficient operation





# Earliest smoke detection *behind* *the scenes*

“To us, a fire at the Castle Theatre would be comparable to the incident at Notre Dame – just on a smaller scale. A catastrophe in terms of our cultural heritage.”

Hans-Dieter Schomaker,  
Facility Engineer at Castle Theatre







**Safely protecting visitors and staff, historic architecture, valuable sets and musical instruments from fire: TITANUS® air sampling smoke detectors have been doing exactly that for over seven years as part of an effective and subtle way at Castle Theatre in Celle, a town in Germany's Lower Saxony region.**

The Castle in Celle represents an impressive witness to the town's exciting history: the Castle Theatre is located at the heart of the baroque stately home, which was established in 1674 by George William, Duke of Brunswick-Lüneburg. Today the Castle Theatre is one of the oldest regularly used theatre buildings in Europe with a permanent ensemble. The horse-shoe-shaped auditorium was modelled on Italian 17th century stages while fire engineering behind the scenes meets contemporary standards: as part of the two-year restoration phase between 2010 and 2012 the TITANUS PRO-SENS® air sampling smoke detector system was installed at the Castle Theatre.

**Ideal safety levels for the audience, crew and monument**

The core aspect of the project was to line up the challenging architecture with effective fire protection without influencing the listed building. "Apart from protecting the architecture, the safety of our staff and the audience (who may be unfamiliar with the facility) are paramount", Roberto Langenhan explains as the Technical Director at the Castle Theatre. Maximum reliability and top levels of immunity against false alarms thanks to

TITANUS PRO-SENS® air sampling smoke detectors for earliest smoke detection to protect both the auditorium as well as the stage including drawing loft as well as roof structure above the auditorium. These systems have also been installed in the theatre's foyer and the lounge featuring the fireplace at the adjacent "Schloss-könig" [king of the castle] café, providing the audience with refreshments during the interval.

**Aesthetic appeal unaffected**

One significant advantage of TITANUS® air sampling smoke detectors compared with conventional smoke detectors is that they can be aesthetically integrated into the architecture without onlookers noticing they are even there. Consequently, low-noise air sampling smoke detectors influence neither the visual nor acoustic properties of this glamorous baroque theatre. Highly sensitive air sampling smoke detectors continuously take air samples from the ambient air which are then supplied to a sensitive detector module within the air sampling smoke detector. Optical scattered light smoke detectors then analyse the air samples for tiny smoke particles. This enables the earliest possible fire detection and safeguards action can be

**Check: customer benefits**

- ✓ *Highly sensitive fire detection*
- ✓ *Subtle integration into architecture – does not influence the aesthetic appeal*
- ✓ *Gain valuable time thanks to the earliest possible fire detection*
- ✓ *Reliable protection for persons and cultural heritage*
- ✓ *Very high levels of immunity from false alarms thanks to smoke development pattern detection*
- ✓ *Simple maintenance thanks to easily accessible detectors*
- ✓ *Very silent – particularly suitable for areas sensitive to noise, such as theatres*
- ✓ *Long service life – perfect operation for the last seven years*

taken to combat the fire in due time. The system simultaneously provides reliable, very high levels of immunity against false alarms. Thanks to the use of TITANUS® air sampling smoke detectors we can protect irreplaceable historic and cultural assets as well as human life. ■

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## WIN AMAZON GIFT VOUCHERS

If you would like to win an Amazon gift voucher worth €50, €100, or €150, just answer our quiz question:

***What is WAGNER's solution for earliest smoke detection?***

The solution of the quiz competition in the last edition of WAGNER Impulse 1/2019 is N2Fill. Congratulations to Dr. Peter Schiefen (Bonn), Karsten Kehl (Herbstein) and Volker Fahrenstueck (Melsungen)!

*Congratulations!*

Submit your response by **28.09.2019** at **[www.wagnergroup.com/en/impulse-competition](http://www.wagnergroup.com/en/impulse-competition)**. You can also scan the QR code with your smartphone to access the page.



The big WAGNER  
Impulse quiz

**amazon.com**

The correct answer and the winners' names will be revealed in the next issue of WAGNER Impulse. The names of the winners will be drawn after the closing date. The winner of the draw will be informed by e-mail shortly after. Persons over the age of 18 are eligible to enter. WAGNER Group employees and their families are excluded from participation, as are all those involved in the design and implementation of the competition. No cash awards will be made. The competition is not subject to legal recourse.

## Experience WAGNER Group fire protection solutions live!

**24/09/2019 – 27/09/2019**  
IMHX 2019, Birmingham (UK)



**12/11/2019 – 13/11/2019**  
protekt, Leipzig



**05/11/2019 – 07/11/2019**  
LOGISTICA, Utrecht (NL)



**13/11/2019 – 15/11/2019**  
Asia Cold Chain Show, Bangkok (THA)



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