

NORKA

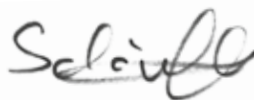


**STORIES
ABOUT
ERFURT.**

**“NORKA FINDS
SOLUTIONS:
WITH
DEVOTION,
PRECISION
AND
COMPETENCE.”**

For more than 70 years NORKA has been developing custom-made lighting solutions for demanding environments: harsh ambient conditions, extreme environmental influences and high quality requirements. As the market leader in our segment, we are represented in the whole of Europe – and beyond. Our solutions also transcend boundaries with their unique performance. Our asset: the luminaire family ERFURT. Launched in 1991, it is the linear luminaire for any application. Temperatures ranging from –40 to +65 degrees; waterproof, dust-proof, acid and alkali resistant as well as resistant to other influences. The long service life and reliability of our lighting solutions are legendary.

We achieve cost-effective results using the latest and proven technology and high-quality materials that visually and technically impress over the long-term. In a market environment with ground-breaking possibilities and ever shorter innovation cycles, we stand for guidance, sustainability and security in decision-making. We combine high-tech with tradition – and in a dialogue with our customers always find convincing solutions for the most difficult requirements.



Florian Schönfeld



Nicole Sass



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LÜTHI & PORTMANN MEAT PRODUCTS

The Swiss company relies on the safety of the BITBURG LED for the production of its meat specialities.



08

FIBA PASING

Brilliant visibility for DB Regio Bavaria thanks to complex light management from NORKA

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HOHN AIR BASE

Perfect visibility during aircraft maintenance with the powerful ERFURT LED HIGH OUTPUT



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ROTHAUS BREWERY

Our ERFURT LED show the traditional art of brewing in a new light



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COBURG LED



The reliable **single-battery emergency luminaire** for all cases.

BASEL LED



The safest solution for **explosion hazardous areas** conforming to zone 2 and 22.

ERFURT LED



The innovative all-rounder with **IP65**, a **swivable reflector** and **short gaskets**.

COESFELD



The **ammonia-resistant** and **fume-proof luminaire** for agriculture and animal husbandry.

COESFELD PLUS



The "wildlife-resistant" illumination solution with **IP69K** and a **DALI connection**.

BITBURG LED EXTREME



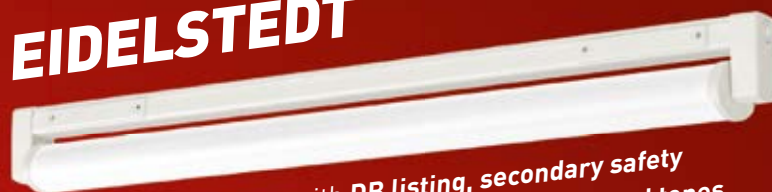
The extremely long-lasting version for permanent temperatures up to **+65 °C**.

BITBURG LED



The certified lighting solution for the food industry according to **HACCP/IFS and IP69K**.

EIDELSTEDT



The robust model with **DB listing, secondary safety extra low voltage** and **optimum rendering of red tones**.

ERFURT LED EXTREME



The luminaire for extreme temperatures ranging from **-40 °C to +65 °C** with a very long service life.

ERFURT LED HO

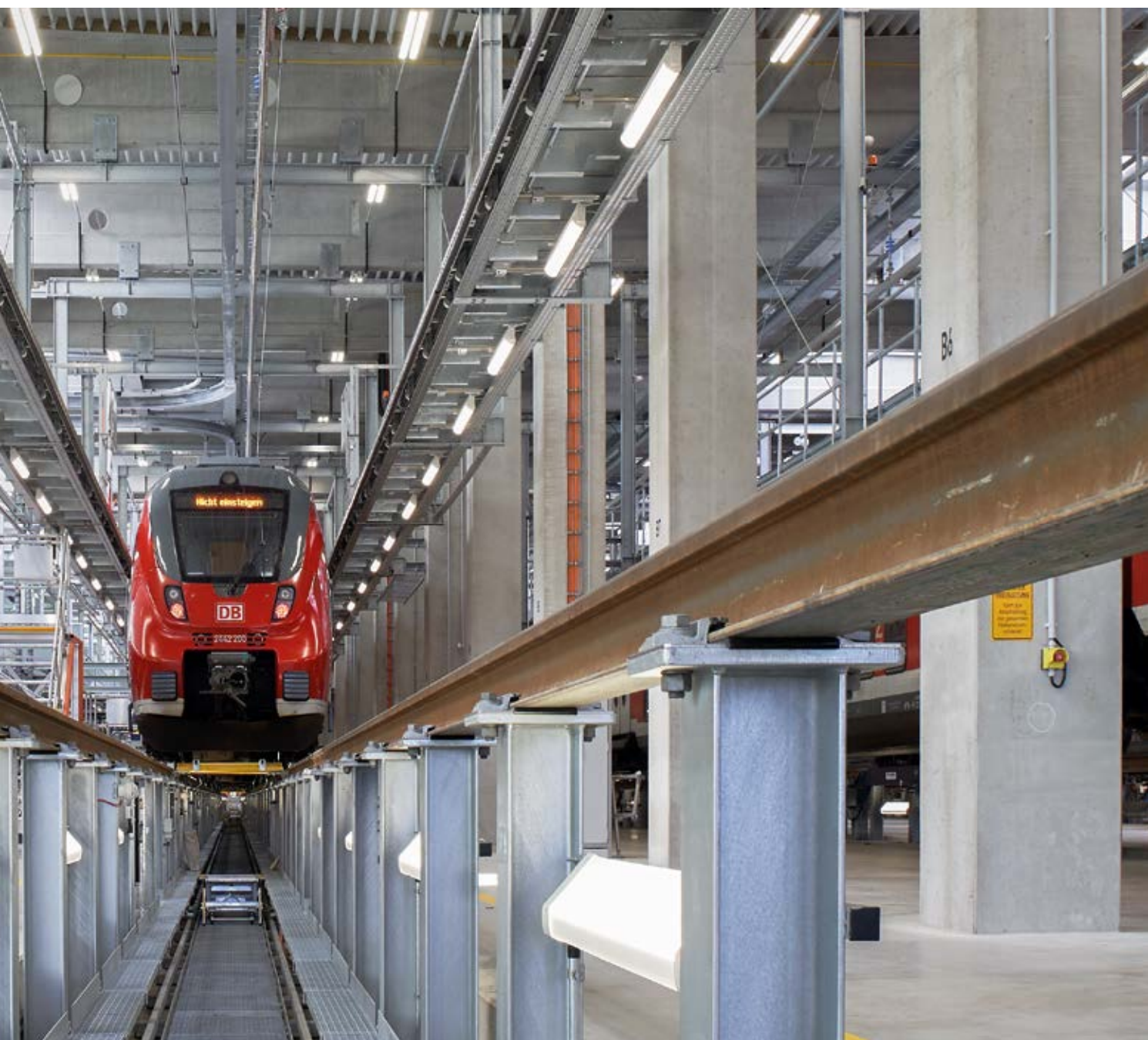


The efficient **high-output LED** with **high luminous flux** and an **even longer service life**.



BRIGHT PROSPECTS FOR DEUTSCHE BAHN

Major tasks require visionary solutions. NORKA has therefore realised a large-scale project together with Deutsche Bahn, which heralds nothing less than the future of light management.



How is maintenance actually carried out on trains? And where? Ideally in the new vehicle maintenance and treatment facility (FIBA) in Munich-Pasing because it is Germany's state-of-the-art repair and maintenance facility for trains. Locomotives, passenger carriages and electric multiple units are inspected and repaired from the roof to the wheels in the

207 m long and 58 m wide hall belonging to DB Regio Bavaria. This is done very carefully because ultimately safety is a top priority in rail transport. Optimum visual conditions are therefore an essential prerequisite for the approximately 150 employees.

That's why Deutsche Bahn adopted a new approach for the illumination of

the hall. A functional tendering process was initially conducted in order to find the best solution in terms of technical, economical and design aspects. The company required a complete lighting concept, a daylight-controlled control system as well as maximum energy efficiency and consequently cost efficiency.



ERFURT LED

The ERFURT LED is an all-rounder for industrial applications and areas with high safety requirements. Equipped with short gaskets and protection rating IP65, the surface-mounted ceiling luminaire reliably withstands moisture, dust and insects.

Its swivable reflector tube can be precisely directed towards the area where the light is needed – and the housing, electronics and other components can be specifically adapted to the project thanks to the wide variety of options. It couldn't be more flexible.

NORKA was able to convince the customer with another new approach: we offer a comprehensive concept from a single source from the project planning and execution planning through to the implementation. We don't just supply the luminaires but also provide the planning, control system, programming and even the switches and operating panels for the approximately 1600 light points.

MAINTENANCE UNDER OPTIMUM VISUAL CONDITIONS

The entire focus is on simplicity and efficiency in the FIBA. Many processes are digitalised and automated. The hall is equipped with state-of-the-art technology. Trains can enter the hall without the need for a shunting locomotive by means of the busbars running above the maintenance lines – and the innovative logistics provide spare parts, always close to the required workstation. Work on the trains is carried out at the same time on three levels in five parallel maintenance lines. NORKA ensures the best visibility at all levels so that no detail is overlooked by the engineers.

The current collectors of the railway carriages and air conditioners are maintained from the roofing work platforms at the top. A dangerous zone because the 15 kV traction current lines run above them – and a typical area of application for our twin-lamp ERFURT LED with a reflector tube. The robust luminaires are resistant to dust and dirt, corrosion-resistant and low maintenance. Their glare-free light distribution ensures that the mechanics can also really keep an eye on everything. ERFURT LED also provide illumination under the platforms – this time with a single lamp. They assume the general lighting of the hall and also offer optimum visual conditions for all work on and in the trains thanks to the swivable reflector.

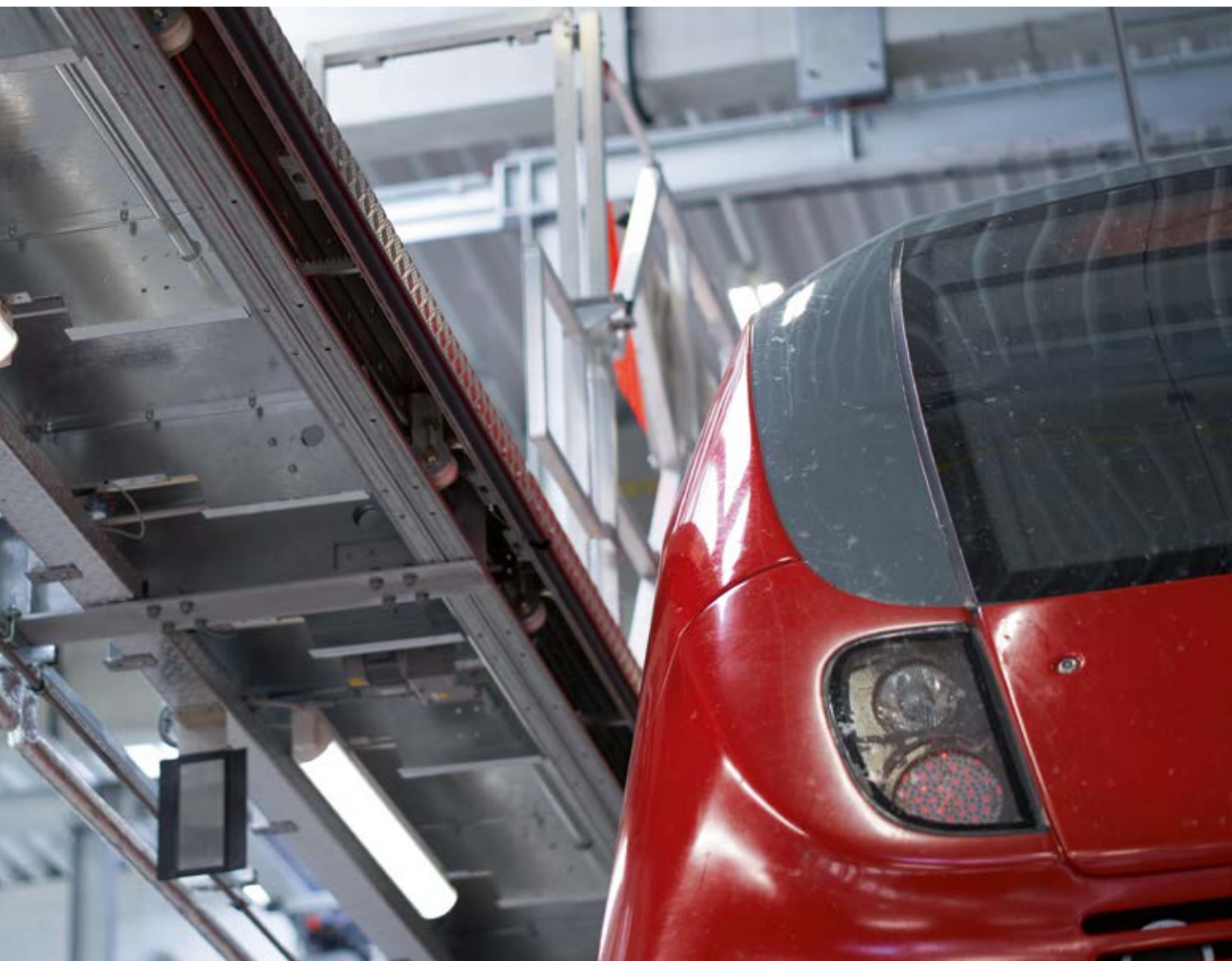
The work pits are located right at the bottom. Good illumination is particularly important here because the wheels and axles of the trains, amongst other things, are inspected for hairline cracks and material defects. Not a problem for our extremely robust FULDA LED with an asym-



*Top:
ERFURT LED provide optimum working light at the middle level.*

*Bottom:
No damage remains undetected, even in the trains, thanks to the high light quality.*







metric beam angle optimised to the pit width – because these are specifically adapted to the project so that they achieve the required 100 lx on the ground and 300 lx on the train in accordance with Deutsche Bahn specifications. And it is extremely energy-efficient: we have divided the lighting into functional clusters instead of illuminating the entire length of the pit. This way, lighting is only provided in the 20–50 m long sections in which someone is working.

This once again shows the NORKA expertise in lighting solutions. Brake dust, oils and lubricants would contaminate optical sensors and impair the functionality, so we installed HF sensors instead, which reliably detect presence using radar technology. We were also able to realise another special feature: gluing and paintwork is occasionally performed in one of the maintenance lines on track 721. The illumination level can be switched from the regular 300 lx to the required 500 lx for this purpose – at any time, simply through a control panel. This way, we provide the optimum visual conditions for every employee thanks to the clever distribution and control of the right luminaires.

A NEW LUMINAIRE FOR DEUTSCHE BAHN

NORKA is well-known for continually developing its products. Based on the experience from this FIBA project, we have not just built a new version of the ERFURT LED – we have also generated a new luminaire family for Deutsche Bahn: the EIDELSTEDT. It impresses with limited inrush current, protection against electric shock thanks to secondary safety extra low voltage as well as optimum

rendering of red tones with an increased R9 value (>46). Ideal for halls, workshops and work pits and particularly safe during installation and maintenance work. This way, it complies with Deutsche Bahn's strict requirements profile and is even listed in the Group 7 luminaire selection list. We can proudly say that we have practically developed a new conventional luminaire for trackside applications with the EIDELSTEDT.

WE EVEN CONTROL THE ENERGY COSTS

The illumination in the maintenance hall is just as efficient as its efficiency. Enormous savings potential is generated here due to the high number of luminaires, around 1500 units. On the one hand we achieve this with economical LED technology, which consumes approximately 60% less energy than conventional luminaires with the same illumination level. On the other hand – and this is where the special NORKA know-how comes into play – with the comprehensive XARA® lighting control system, implemented by NORKA Automation.

From luminaires specifically adapted to the project and a control system based on daylight to software-based maintenance management – the NORKA comprehensive lighting solution is designed to provide optimum visual conditions in every detail while ensuring maximum energy efficiency at the same time.

THE FEATURES AT A GLANCE

- Approx. 1600 luminaires
- Approx. 2100 DALI addresses
- 22 DALI single-battery pictogram luminaires
- 41 single-battery luminaires
- Approx. 120 radar and 32 daylight sensors
- 3 PLCs (ceiling and train roof illumination, pit illumination)
- 13 DALI masters
- 50 DALI expanders
- 1 switch cabinet

The clever solution: every track siding is controlled on the basis of daylight and every work pit via motion detection. With the help of NORKA daylight sensors, the illumination level is automatically adapted to the tracks and trackside areas depending on the incoming light. This way, we always achieve the same optimum brightness values – and consistently good visual conditions. The illumination levels, follow-up times etc. of all luminaires and sensors were individually programmed for this with approximately 2100 DALI addresses. The effort is worth it. Deutsche Bahn is also saving around 30% more energy thanks to the intelligent XARA® lighting control system. It couldn't be more efficient.

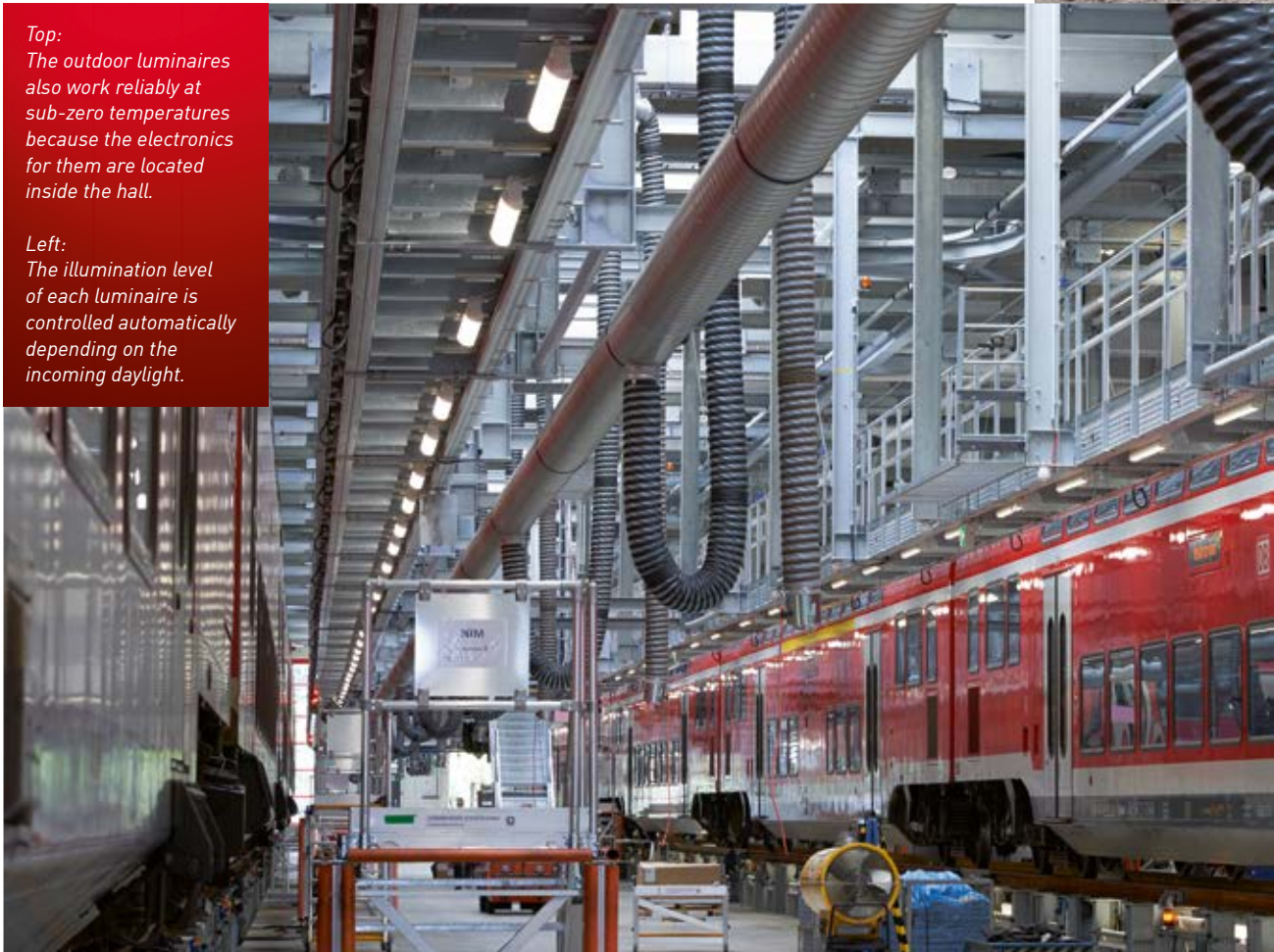
ALWAYS WITH AN EYE ON THE STATUS

The centralised control system is connected to the building control system. This way, the maintenance of the lighting system is also easy and efficient. The luminaires can not only receive control commands via DALI, but also transmit status information to the control centre. This enables comprehensive monitoring of the entire system. Both remote monitoring with error queries and remote maintenance are possible. Important parameters are recorded, visualised and evaluated. The control centre has everything under control at all times: How much energy is consumed. Whether all luminaires work. The level of the operating current and



*Top:
The outdoor luminaires
also work reliably at
sub-zero temperatures
because the electronics
for them are located
inside the hall.*

*Left:
The illumination level
of each luminaire is
controlled automatically
depending on the
incoming daylight.*





If the luminaires fail, 41 COBURG LED emergency luminaires provide sufficiently good visibility.



temperature of specific luminaires. And many other values, which help to ensure the operation of the luminaires and continually optimise the illumination.

NOTHING HAPPENS IN CASE OF AN EMERGENCY

In addition, all emergency luminaires are integrated into the XARA® lighting control system. A total of 22 DALI single-battery pictogram luminaires and 41 single-battery emergency luminaires in the COBURG LED range provide orientation in case of an emergency. We have designed the battery and control unit, amongst other things, to be separate from the LED to prevent an emergency occurring. This means that the batteries are not impacted by the waste heat from the LED and last for longer. Very safe: the regular statutory functional tests are carried out automatically via the XARA® lighting control system

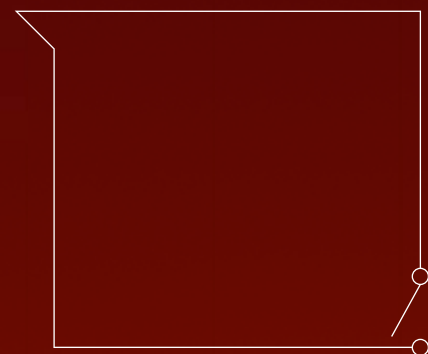
and the results are systematically documented in accordance with the standard specifications. This unique large-scale project realised by NORKA and Deutsche Bahn signifies a major step towards the digitalisation of light. With the networked lighting solutions, we are not only generating the best visual conditions for each individual employee, but also enabling demand-driven control and optimisation – and consequently entirely new options for maintenance management at Deutsche Bahn.

DO YOU WANT TO KNOW MORE?

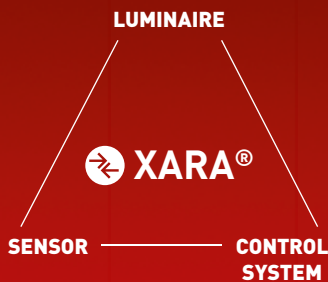
CONTACT

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PRETTY “STUPID”: OUR LUMINAIRES



PRETTY “CLEVER”: OUR XARA® LIGHTING CONTROL SYSTEM.

The secret of our reliable sensor control is easily explained: we consider our luminaires to be pretty “stupid”. A petrol station, which we realised with XARA® and ERFURT LED, shows how clever it is. The highlight: there are four independent DALI circuits – fuel supply, fuelling area and two cleaning areas – where just one luminaire in each case is equipped with a motion sensor and is triggered via DALI. Consequently, only these luminaires need to be configured and mounted at the appropriate place. All other luminaires are controlled via their sub-circuit – and simply light up. Should one of them fail, they can be replaced at any time with no addressing. This makes the handling on site extremely easy for the installer. Another clever solution from NORKA, which not only saves energy, but also time and money.

ADVANTAGES OF THE PASSIVE INFRARED SENSOR (XARA® ADVANCED)

- Multi-master compatible – multiple sensors possible in one DALI circuit
- Motion detection in 92 zones from a difference in temperature of 4 Kelvin, regardless of day/night
- Illumination level measurement 0 – 2.500 lx
- Easy configuration via the DALI bus using software
- Corridor function/follow-up time can be parametrised
- For use at temperatures ranging from –40 °C to +70 °C



TRADITIONAL ART OF BREWING IN A NEW LIGHT



The master brewers at Rothaus brew characterful beers of the highest quality around the clock. Powerful NORKA luminaires ensure clear visibility.

At Badische Staatsbrauerei Rothaus, a brewery owned by the German state of Baden-Württemberg, the art of brewing has been fostered with passion at the highest level since 1791. The well-known beer from Germany's highest brewery, the Tannenzäpfle, is a cult throughout the country – and in a place in the Upper Black Forest where beer was brewed under the simplest conditions, the delicious quality beers now mature in one of the most modern breweries in Germany.

But how can the special combination of traditional craftsmanship and innovation production methods be presented in the best light? To find out, our NORKA lighting experts started by asking questions: about where the luminaires are used, about the ambient conditions, about the special requirements. And, of course, also about the wishes and needs of the employees.

We developed a pioneering lighting concept on this basis, which perfectly complements the innovative focus of the brewery. The overall package



comprising luminaires, a lighting control system and sensors has been setting standards ever since in terms of visual conditions, safety, durability and efficiency.

PERFECT VISIBILITY IN A CHALLENGING ENVIRONMENT

The conditions in the brewery are extremely challenging even if this is not apparent from the tasty finished products. Extremely high moisture and temperatures in the cellar rooms and tunnel vaults have a constant adverse effect on the luminaires. The daily cleaning with spray water puts stress on the gaskets. Aggressive cleaning agents have a negative impact on the housings. However, the luminaires are still intended to provide continuous, homogeneous light that is pleasant on the eyes and optimally illuminates the rooms – even



A typical NORKA lighting solution: individually adapted precisely to the ambient conditions and implemented with very little effort on the part of the customer.

24 hours a day, five days a week, in the fermenting and storage cellars. This should all run smoothly and in accordance with the strict requirements for food and beverage production.

A lot of requirements, which we fulfilled not only with our many years of experience, but also with a typical NORKA solution: individually adapted to the conditions and yet easily implemented.

It soon became apparent that our ERFURT LED surface-mounted ceiling luminaires really come into their own here. Their perfect light distribution and glare-free lighting effect realised with the use of reflector tubes ensure optimum visual conditions for the brewery employees, and

for visitors marvelling at the mighty stainless steel storage tanks during brewery tours. Their corrosion-resistant housing made of high-quality polymer not only withstands the challenging climate in the brewery thanks to the protection rating IP65, but also prevents the ingress of water during cleaning. In addition, the economical LED technology achieves a sustainable reduction in power consumption.

ENERGY SAVING MADE EASY

Speaking of economical measures: with long-lasting LED luminaires and a customised lighting control system, NORKA is providing the brewery with a key component to achieve and comply with the goals of the energy management system implemented in

*Top:
High moisture and daily cleaning do not have a constant adverse effect on the ERFURT LED.*

*Right:
The brewery employees enjoy clear visibility thanks to the medium beam, glare-free light.*







2015 in accordance with ISO 50001. The savings potential is impressively reflected in the illumination of the two stairwells connected to the production. Sensors register motion in the area and only switch on the luminaires when the light is needed. They switch off again automatically after defined time intervals. This way, employees can walk around easily in the stairwell at any time without having to worry about the lighting.

The stairwell lighting was implemented with MÜNCHEN LED, which impress with their particularly flat housing and good illumination – and with XARA® motion sensors integrated into the luminaire. The advantages of this design are obvious: the sensor is also protected in accordance with protection rating IP65 and the system works without an external interface. This makes cleaning easier and enhances comfort.

Another simple system solution from NORKA, which reduces energy costs and makes an important contribution to the environment at the same time.

UNPACK, INSTALL AND RUN

The recessed mounting of these NORKA Plug & Play luminaires was also just as easy. All parameters, such as lighting times, were already agreed in advance with the responsible people and configured from the factory. All luminaires could therefore be installed in-house at the brewery and were ready to use immediately. In addition, the luminaires in the connection tunnels and in the stairwells were connected to the central battery – and have also been illuminating the escape routes ever since in compliance with the standards. The reduced maintenance requirements of the LED and the elimination of lamp changes also perfectly round off our solution for the brewery from an economic perspective.

All in all, we have implemented an impressive overall package for the Rothaus Brewery, which excels in all areas with high light quality, reliability and energy efficiency. Typically NORKA.

**DO YOU WANT
TO KNOW MORE?**

CONTACT

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ERFURT LED



AREAS OF APPLICATION

Polymer luminaire for surface ceiling mounting with LED lamps, single or twin lamps. For use in industrial applications and areas with special safety requirements.

MOUNTING

Individual or row mounting. Ceiling installation using two stainless steel mounting clamps, variable mounting distance. Quick-mounting pressure cap with LUCON® luminaire connection system optionally available. Suspension system possible.

LIGHTING TECHNOLOGY

With reflector tubes that can be swivelled independently made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with an internal aluminium reflector (MIROSILVER®). Reflector tube can be locked in increments of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two access covers, two cable entries M20 on the face side and 4 x 1.5 mm² through wiring. 2 kV transient filter.

HOUSING

Weatherproof and UV-resistant luminaire housing made from fibreglass-reinforced polymer, similar to RAL 9010. Can be used for indoor and outdoor areas according to protection rating IP65 (IP67 optional). Thermally separated lamp and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

IP65

IP67

CE



LUCON®

IK 04
PMMAIK 09
PC

MORE INFORMATION:

norka.de/erfurt-led



**SOME CLAIM
THAT WE
ARE NOT
COMPLETELY
WATERPROOF**



ERFURT LED LUMINAIRE, 1.2 M LONG WITH SHORT GASKETS; GASKET LENGTH APPROX. **0.4 M**



CONVENTIONAL DIFFUSER LUMINAIRE, 1.2 M LONG; GASKET LENGTH APPROX. **2.6 M**

OUR SHORT GASKET SYSTEM TELL A DIFFERENT STORY.

When we radically shortened our luminaire gaskets more than 65 years ago, many people thought we were crazy. Our solution is simple yet ingenious: our luminaires offer a particularly low target surface for moisture, dust and insects thanks to special closures and minimum sealing lengths. This makes them significantly more waterproof and reliable than any conventional design and we can guarantee safe, permanent and completely weather-resistant sealing. This is anything but crazy.

ADVANTAGES OF SHORT NORKA GASKETS

- Permanent sealing against moisture, dust and insects
- Permanent protection of the internal components
- High sealing pressure through mechanical screw rings
- Gasket materials adapted to the respective application
- Age resistant and form-retaining
- Resistant to chemicals as well as to acidic or alkaline atmospheres

PERFECT VISIBILITY ON THE AIR BASE



When the Transall C-160 returns home from international duty, there is a lot of work to be done at the NATO Hohn Air Base in Germany. NORKA ensures the optimum visibility.

There's lots of action in the hangar of Hohn Military Air Base. Here, where Air Transport Squadron 63 (LTG63) is based, near Rendsburg in Schleswig-Holstein, the legendary Transall transport aircraft of the German Armed Forces are maintained, inspected and repaired, if necessary. Engines, chassis, electronics and each individual rivet is inspected and repaired if necessary, before the aircraft, fondly nicknamed the "bumble-

bee", takes off again, fully loaded with supplies, spare parts, troops or military post – for other military air bases throughout Germany or even on their way to Africa.

In order to ensure the safety of the aircraft and crew, all this work must be carried out with the utmost care – and the hangars must be optimally illuminated. However, the old existing system with its 1000W metal halide

lamps (HIT) was rather outdated and no longer state of the art. Its high energy consumption incurred unnecessary costs. Dust and fluctuating temperatures adversely affected the luminaires – depending on the time of year and weather conditions. The entire system was outdated. It was therefore high time for a new modern lighting system. A clear case for NORKA LED.



ERFURT LED HO

Wherever there are special demands placed on the illumination level due to the high mounting heights, the ERFURT LED HIGH OUTPUT with its high luminous flux ensures optimum visibility – also in the long term – because even extreme conditions cannot adversely affect the luminaire thanks to its extra long-lasting components, 4 kV transient filter and high temperature resistance ranging from $-40\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$. We even offer an 8-year warranty.





A PROVEN ECONOMICAL SOLUTION

As a manufacturer of high-quality specialist luminaires, NORKA was awarded the contract to realise illumination solutions for the buildings 05, 13 and 31, which offer pleasant working light and are efficient, maintenance-free and long-lasting at the same time. This last demand in particular was a decisive criterion. Due to the enormous height of the hangar, a special elevated work platform had to be specifically brought in to change each lamp, which would involve immense effort and additional costs.

Once we had taken a closer look at the conditions on site, we determined that this required a particularly powerful solution: the 4-lamp ERFURT LED HIGH OUTPUT 3. But not just one, a total of 132 units – 60 of them in the 120 m long and 50 wide main hangar and 36 of them in the two smaller adjacent hangars.

The luminaires with a narrow beam design were installed with a mount-

ing height of 16 metres for optimum visibility in the high buildings. The swivable reflector tubes were individually aligned to ensure consistently clean and glare-free illumination. The required durability is achieved with a clever design: dust, insects or moisture cannot penetrate into the luminaires thanks to short gaskets and closed reflectors. All components are also designed for temperatures ranging between -40°C and $+40^{\circ}\text{C}$. A 4 kV transient filter reliably absorbs harmonic waves. And last but not least, the extra long-lasting drivers – one for each lighting module – additionally increase the operational reliability. All this makes the luminaire extremely reliable so we have even extended the warranty to 8 years.

The immediate advantages of the new NORKA LED can already be illustrated from the figures: over 52,000 lumens per luminaire with a power consumption of only 388 watts now provide high-quality light in

every corner of the hangar. There is even considerably less weight on the roof of the hangar because each luminaire weighs only 12.7 kg. In short, we were able to improve the illumination, optimise the light distribution, extend the service life of the system and reduce the running costs with relatively little effort – and finally even showcase the Transall aircraft in the best light.

**DO YOU WANT
TO KNOW MORE?**

CONTACT

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ERFURT LED HIGH OUTPUT



AREAS OF APPLICATION

Polymer luminaire for surface ceiling mounting with LED lamps, single, twin or four lamps. For use in industrial applications and in areas with special safety requirements and special demands on the illumination level from great mounting heights.

MOUNTING

Individual or row mounting. Ceiling or wall fixation using two stainless steel mounting clamps with variable mounting distance. Quick-mounting pressure cap with LUCON® luminaire connection system (optionally available). Suspension system possible.

LIGHTING TECHNOLOGY

With reflector tubes that can be swivelled independently made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with internal aluminium reflector (MIROSILVER®). Reflector tube can be locked in increments of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two cable entries M20 on face side, 4 x 1.5 mm² through wiring. Two access covers. L80 B10 > 100,000 h at +40 °C. 4 kV transient filter. 8-year warranty.

HOUSING

Weatherproof and UV-resistant luminaire housing made from fibreglass-reinforced polymer, similar to RAL 9010. Can be used for indoor and outdoor areas according to protection rating IP65 (IP67 optional). Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

IP65

CE



LUCON®

IK 04
PMMAIK 09
PC

MORE INFORMATION:

norka.de/erfurt-led-ho



WE DELIBERATELY LEAVE CERTAIN THINGS IN THE DARK

AND PROVIDE LIGHT ONLY WHERE IT IS NEEDED.

Twist it as you like: NORKA ERFURT LED provide light for you exactly where it is needed. The swivable reflector tube can be rotated by hand at any time into the desired position, without any tools whatsoever in finely set 10° steps and with an extra large swivel range. This means that the luminaires can be mounted, for example, in easy accessible, maintenance-friendly positions. The light direction is then simply aligned to the respective area or also specifically directed from the viewing angle to avoid glare. Perfect for optimising light distribution in a room and reducing the light connection points, installation

costs and installation and maintenance work at the same time. A bright outlook, don't you think?

ADVANTAGES OF SWIVABLE REFLECTORS

- Light can be adjusted in any direction
- Avoids glare
- Reduces light connection points
- Fast, easy maintenance





BITBURG LED

Our safest solution for production facilities and suppliers in the food and beverage industry. The luminaire is certifiable in accordance with HACCP/IFS due to the robust design with captive parts.

It even withstands high-pressure cleaners and aggressive cleaning agents thanks to the highest protection rating IP69K. Best to be on the safe side.

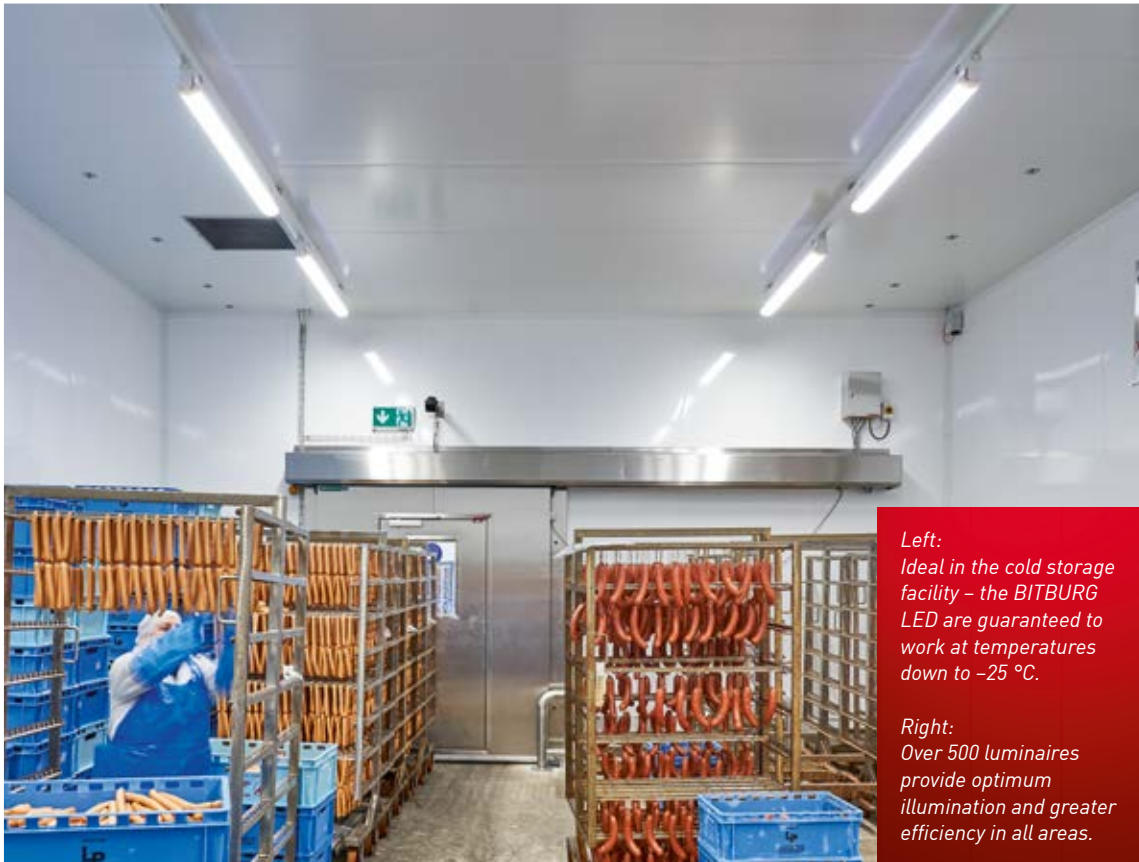
Quality is a top priority at Lüthi & Portmann Fleischwaren AG – for products as well as in production. The decision for NORKA luminaires is simply logical and coherent.

First-class meat products from Lüthi & Portmann have been bringing great pleasure to the tables of Swiss people for decades. The former country butcher from the canton of Bern is today one of the largest meat processors in the country and supplies both wholesalers and commercial butchers. The uncompromising high standards of quality are the basis of this success. It starts with the cattle that mainly come from the region and by no means ends with the careful processing. The converted and extended production halls at the company's headquarters in Diesswil near Münchenbuchsee, where around 150 tonnes of fresh meat is dissected, boned, dressed and packed – usually through to the finished retail packaging – is fitted out accordingly with state-of-the-art equipment.

The requirements profile for the lighting in particular is very high here. In addition to optimum lighting conditions, which are always taken for granted at NORKA, it was imperative to fulfil the company's specifications in terms of durability and reliability – and also the very strict legislation for the production and processing of food products. In these circumstances, the decision for the BITBURG LED was easy because there was only one possible solution for Lüthi & Portmann for the illumination of the production areas: the best.

SOME RISKS SHOULD BE RULED OUT BEFORE THEY OCCUR

The statutory provisions for hygiene and safety in the production areas of the meat processing company are



strict. Contamination needs to be avoided wherever raw and unpackaged food is being processed. Accordingly, the design of the lighting must also be safe. At worst, splinters could get into the production cycle – and the consequences would be fatal: even the smallest foreign body poses a huge risk to the health of consumers. Product recalls are very expensive. Compensation claims are virtually incalculable – and last but not least, the company's good reputation is also at stake.

Lüthi & Portmann could exclude these risks from the outset with the BITBURG LED. The luminaires comply with the strict IFS Food (International Featured Standard) requirements set by the company and are also certified for use in the fresh meat processing sector in accordance with the HACCP concept for the production of safe

food. In practical terms, this means that each luminaire is equipped with a shatterproof and impact strengthened cover made of special PMMA. The housing is extremely robust with a captive cover and screws. There is no longer a risk of parts falling off a luminaire. In addition – and this is also a special NORKA feature – the housing is coated with a special protective varnish. This permanently prevents, for example, glass fibre particles being washed out of the profile during cleaning. This guarantees the integrity of the first-class meat products – at least on the part of the lighting.

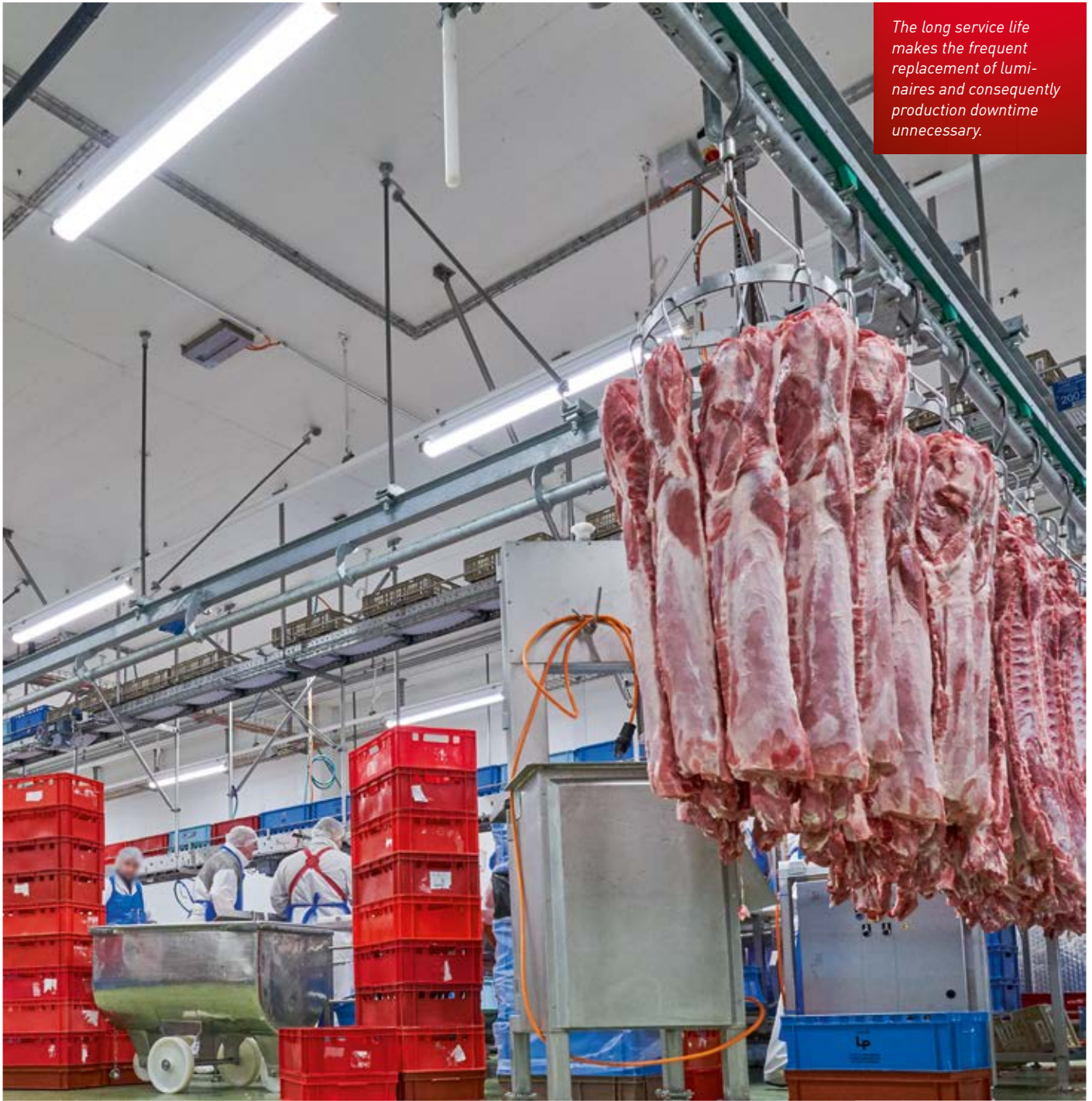




**ONLY ONE THING WITHSTANDS
THIS INTENSIVE CLEANING:
OUR LUMINAIRES**

An additional challenge in a butchery business: all production areas must be thoroughly cleaned at the end of a shift on a daily basis in order to ensure the hygiene of the products. The rooms, systems and also the lighting are sprayed with sometimes aggressive and antibacterial foam cleaning agents and then rinsed off again with high-pressure water. The luminaires must not only endure these extreme conditions, but also permanently withstand them. It would be impractical to replace the luminaires during production and this could only be done with considerable effort and high costs.

But there is nothing that our luminaires couldn't withstand. There is only one protection class that interests us in these conditions: the highest. The BITBURG LED remain reliably waterproof even during cleaning with a pressure up to 100 bar and a hot water temperature up to 80° thanks to the protection rating IP69K. The luminaire housing and all other components are resistant to conventional cleaning agents. In addition, all luminaires are designed to facilitate the removal of contamination or microorganisms, such as bacteria, fungi or viruses through cleaning and disinfection processes. All this makes them so resilient that they glow pristinely like of the first day, even after many years.



The long service life makes the frequent replacement of luminaires and consequently production downtime unnecessary.

AN INVESTMENT THAT PAYS OFF

It quickly became clear in daily use that it had paid off to convert the ceiling lighting for the production areas to BITBURG LED that our partner, Regent Beleuchtungskörper AG, realised together with Gfeller Elektro AG from Hinterkappelen. From the optimised illumination to the enhanced

safety, longer service life and the low maintenance costs to the improved energy efficiency, the new lighting has already proven itself in all respects. Quality simply pays off.

DO YOU WANT TO KNOW MORE?

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BITBURG LED



AREAS OF APPLICATION

Polymer luminaire for ceiling and wall surface-mounted luminaires for HACCP/IFS applications with LED lamps, single lamp. For use in production facilities and suppliers in the food and beverage industry.

MOUNTING

Single or row mounting. Ceiling installation using two stainless steel mounting clamps, variable mounting distance. Captive end caps.

LIGHTING TECHNOLOGY

Reflector tube that can be swivelled made of PMMA Transopal® (impact strengthened) or PC Tropolal® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in increments of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two access covers, two cable glands on face side (M20) and 4 x 1.5 mm² through wiring. 2 kV transient filter.

HOUSING

Acid, alkaline and fuel-resistant luminaire housing made of fibreglass-reinforced polymer, similar to RAL 9010. Can be used in indoor and outdoor areas according to protection rating IP66 and IP66. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP69K. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber. Profile including coating for increases resistance against acids, bases, and cleaning agents.

IP66

IP67

IP69K

CE

IK 04
PMMAIK 09
PC

MORE INFORMATION:

norka.de/bitburg-led



FOR INSTANCE, TO ENSURE THE RELIABILITY OF OUR EMERGENCY LUMINAIRES.

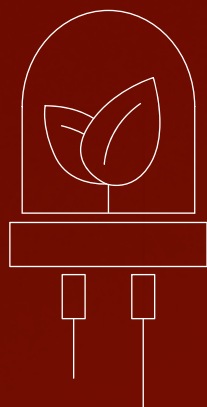
There is no reason to panic any longer if there is suddenly a power failure. Our COBURG LED helps with orientation even in battery-powered emergency mode because we have significantly improved its functional reliability with a simple trick: we have separated the heat source from the control system and battery. The LED in the reflector tube, driver and battery are in a housing. This means that the waste heat from the LED no longer affects the temperature-sensitive components, thus reducing the heat load by approx. 10 °C. A practical side-effect: the battery can be replaced quickly via an easily accessible cover. But sometimes it's better to go separate ways.

ADVANTAGES OF THERMAL SEPARATION

- Separate chambers for the battery and driver in the luminaire profile
- Heat load around 10 °C lower compared to conventional diffuser luminaires
- Very long battery service life over and above the 4 years stipulated by DIN EN 60598-2-22
- Quick replacement of the battery via the cover during maintenance



**SOMETIMES
SEPARATION
IS THE BEST
SOLUTION**



SUSTAINABILITY IS NOT THE ONLY AREA IN WHICH WE ARE ONE STEP AHEAD OF OTHERS



OUR ERFURT LED HELPS THE ENVIRONMENT AND SAVES MONEY.

We lead the way when it comes to sustainability because when it comes to reducing costs, energy and CO₂ emissions, the ERFURT LED is hard to beat. It consumes up to 60% less energy than conventional luminaires thanks to the very precise lumen packages – even up to 90% less with the XARA® lighting control system. It has an extremely robust housing that virtually never needs replacing – and if it does, we supply a spare part. Its reflector tube and RAPDEX driver are extremely long-lasting and can be replaced easily. The thermal separation between the lamp chamber and driver chamber makes it even more resilient and, on request, even stronger components can also extend the maintenance intervals. By the way, we manufacture more than 80% of all components ourselves. This way, we avoid long transport routes and actually know the origin of the raw materials. In short, the ERFURT LED pays off – even in the long term.

THE SUSTAINABLE ERFURT LED

- Energy-saving LED with up to 60 % less consumption
- Energy saving of up to 90 % with the XARA® lighting control system
- Extremely long-lasting – with the ERFURT LED EXTREME L80 B10 > 100,000 h up to 65 °C
- Very high-quality components
- Optionally replaceable RAPDEX driver
- Replaceable reflector tube

DO YOU WANT TO KNOW MORE?

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WE PREVENT SPARKS FLYING

BASEL LED, THE LUMINAIRE FOR EXPLOSION HAZARDOUS AREAS.

Sometimes it only needs a single spark and an explosion occurs – for example, in production areas within the chemical industry or where there is combustible dust in the air, such as in mills and silos. The risk is widespread because gases, vapours or dust generate a potentially explosive atmosphere in many process plants. Naked flames are automatically prohibited here – but even an electrical pulse can ignite the air. But thanks to the explosion-proof BASEL LED, the risk has already been banned because it complies with the ATEX directives for equipment and protective systems for use in explosion hazardous areas, thus protecting employees and systems – and your customers have one burning problem less thanks to NORKA.

ADVANTAGES OF THE BASEL LED

- Explosion-proof single lamp LED surface-mounted ceiling luminaire
- Complies with the ATEX directives for industrial applications conforming to zone 2 and zone 22
- Weatherproof and UV-resistant luminaire housing made fibre glass fibre-reinforced polymer
- For use in indoor and outdoor areas according to protection rating IP67
- Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber
- Thermally separated lamp chamber and driver chamber

**AMMONIA CAN
BE REALLY
CORROSIVE**





THE COESFELD KEEPS MANY PIG STIES GOING.

The air quality is usually really poor if there are animals in the stable. The pungent odour is caused by ammonia, a colourless toxic gas, which is produced through the decomposition of nitrogenous substances from urine and faeces. But a matter that is a real “stinker” for many people, is a question of operational reliability for us. Ammonia corrodes polymers and electronics, making gaskets porous, and can change the colour and translucency of conventional light sources. But with NORKA, there is no need to worry because we have also developed a reliable luminaire for this application: with the COESFELD luminaire, all components

are even guaranteed to withstand constant exposure to ammonia – and this quite clearly makes it our best horse in the stable.

ADVANTAGES OF THE COESFELD/COESFELD PLUS LUMINAIRES

- Can be used in stables and aviaries with high ammonia levels and special safety requirements
- Resistant to ammonia and weathering, fume-proof
- Suitable for intensive cleaning
- Different colour temperatures

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