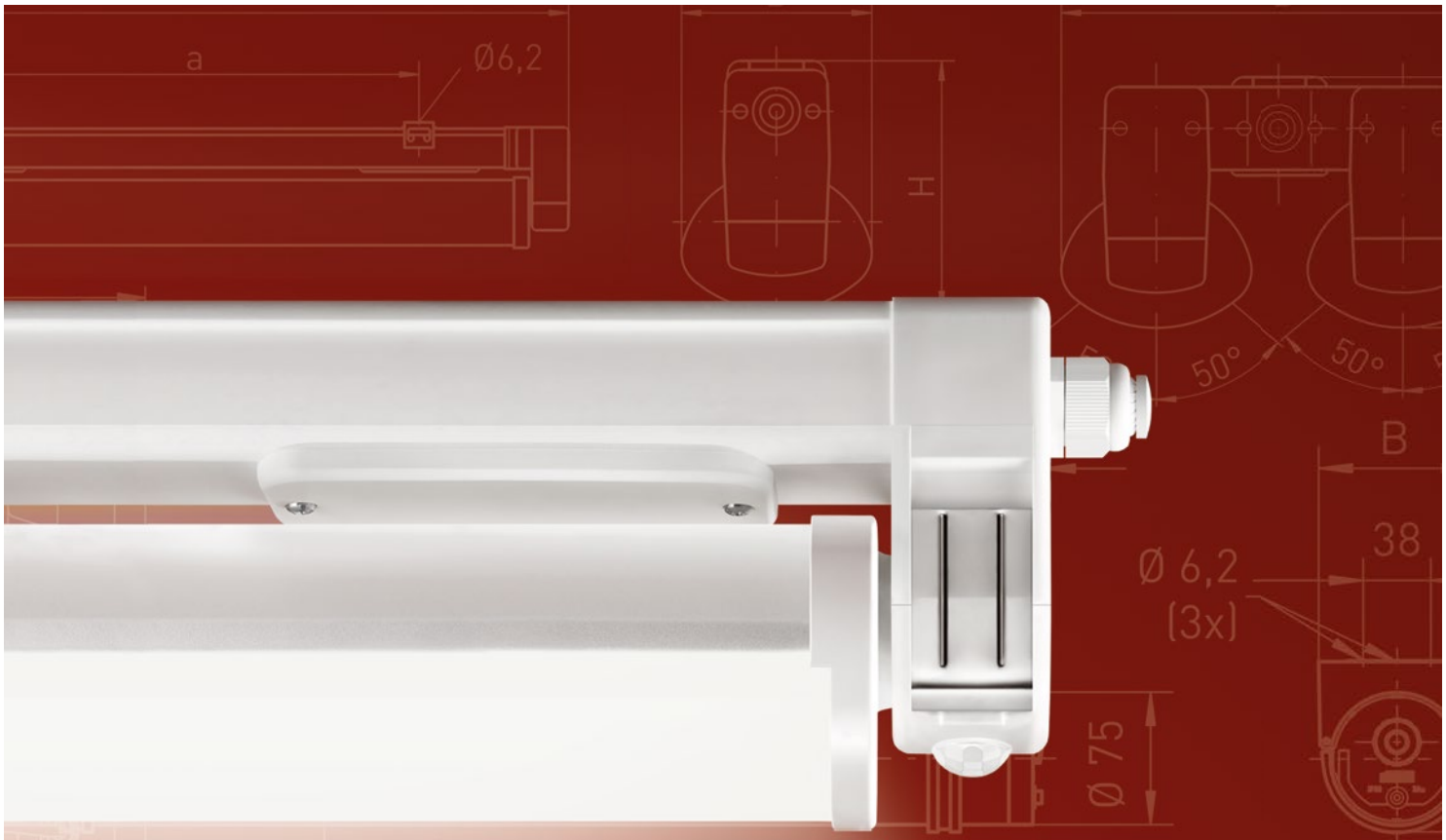
NORKA



STORIES ABOUT ERFURT

OUR LINEAR LUMINAIRE FOR (ALMOST) ANY APPLICATION

Our specialist area is optimum customised illumination solutions for demanding environments: harsh ambient conditions, extreme environmental influences and high quality requirements.

Our asset: the ERFURT luminaire family. Launched in 1991, it is the linear luminaire for (almost) any application. Temperatures ranging from -40 to +65 °C; waterproof, dust-proof, acid and alkali resistant as well as resistant to other negative influences. From food production to maintenance areas and waste water treatment – our ERFURT and its derivatives are in just the right place in many environments.

ICE facility in Hamburg-Eidelstedt 08

Rothaus Brewery 14

Hohn Air Base 20

REQUIREMENTS & SOLUTIONS

06

Sustainability
Our luminaire housings are designed to ensure a long service life. That is why you can replace the interior almost every NORKA luminaire – this exchange is especially easy with easy eXchange.

12

Efficient & intelligent
LEDs significantly reduce energy consumption compared to old systems. An XARA® light control system gain boosts the energy-saving potential and increases user convenience.

18

Excellent seal tightness
Water, dust and insects not only look unsightly in luminaires but they also have an impact on the luminaires' service life. Short gasket lengths provide a particularly small contact surface.

ERFURT LED – DERIVATIVES

IP 65 | IP 67 | IK 07 PMMA | IK 09 PC

COBURG LED

> Polymer luminaire with a reflector tube (can be swivelled ±30°)
> With NORKA easy eXchange for easy replacement of LEDs
> The emergency luminaire for any application.

IP 65 | IP 67 | IK 09 PC

BASEL LED

> Polymer luminaire with a reflector tube (can be swivelled ±30°)
> For explosion hazardous areas conforming to zone 2 and 22

IP 65 | IP 67 | IK 04 PMMA | IK 09 PC

ERFURT LED

> Polymer luminaire with a reflector tube (can be swivelled ±50°)
> Innovative all-rounder with short gaskets

IP 65 | IP 67 | IK 04 PMMA

COESFELD

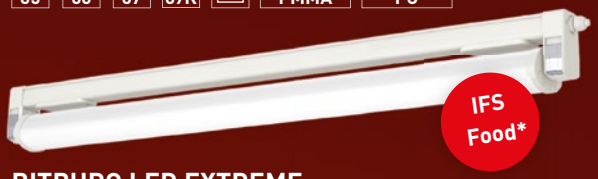
> Polymer luminaire with a reflector tube (can be swivelled ±30°)
> Ammonia-resistant
> Suitable for agriculture and animal husbandry

IP 65 | IP 67 | IP 69K | IK 04 PMMA

COESFELD PLUS

> Polymer luminaire with a reflector tube (can be swivelled ±30°)
> Ammonia-resistant
> Suitable for intensive cleaning processes with high-pressure cleaners

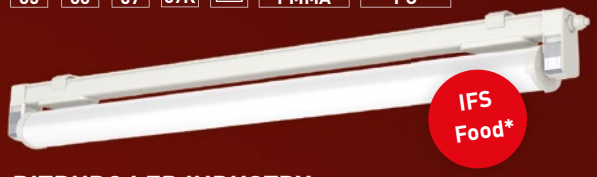
IP 65 | IP 66 | IP 67 | IP 69K | IK 04 PMMA | IK 09 PC



BITBURG LED EXTREME

> Polymer luminaire with a reflector tube (can be swivelled ± 30°)
> Suitable for intensive cleaning processes with high-pressure cleaners
> Long service life (100,000 h), can be used at temperatures up to +65 °C

IP 65 | IP 66 | IP 67 | IP 69K | IK 04 PMMA | IK 09 PC



BITBURG LED INDUSTRY

> Polymer luminaire with a reflector tube (can be swivelled ± 30°)
> Suitable for intensive cleaning processes with high-pressure cleaners
> Long service life (75,000 h), can be used at temperatures up to +55 °C
> Particularly high efficiency

IP 65 | IP 66 | IP 67 | IP 69K | IK 04 PMMA | IK 09 PC

BITBURG LED

> Polymer luminaire with a reflector tube (can be swivelled ± 30°)
> Suitable for intensive cleaning processes with high-pressure cleaners

IP 65 | IK 04 PMMA | IK 09 PC

EIDELSTEDT DB

> Polymer luminaire with a reflector tube (can be swivelled ± 50°)
> Robust model with DB (German Federal Railway) listing, secondary safety extra low voltage and optimum rendering of red tones

IP 65 | IP 67 | IK 04 PMMA | IK 09 PC

ERFURT LED EXTREME

> Polymer luminaire with a reflector tube (can be swivelled ± 50°)
> Long service life (100,000 h), can be used at temperatures up to +65 °C
> Particularly high temperature

IP 65 | IP 67 | IK 04 PMMA | IK 09 PC

ERFURT LED INDUSTRY

> Polymer luminaire with a reflector tube (can be swivelled ± 50°)
> Long service life (75,000 h), can be used at temperatures up to +55 °C
> Particularly high efficiency

IP 65 | IP 67 | IK 04 PMMA | IK 09 PC

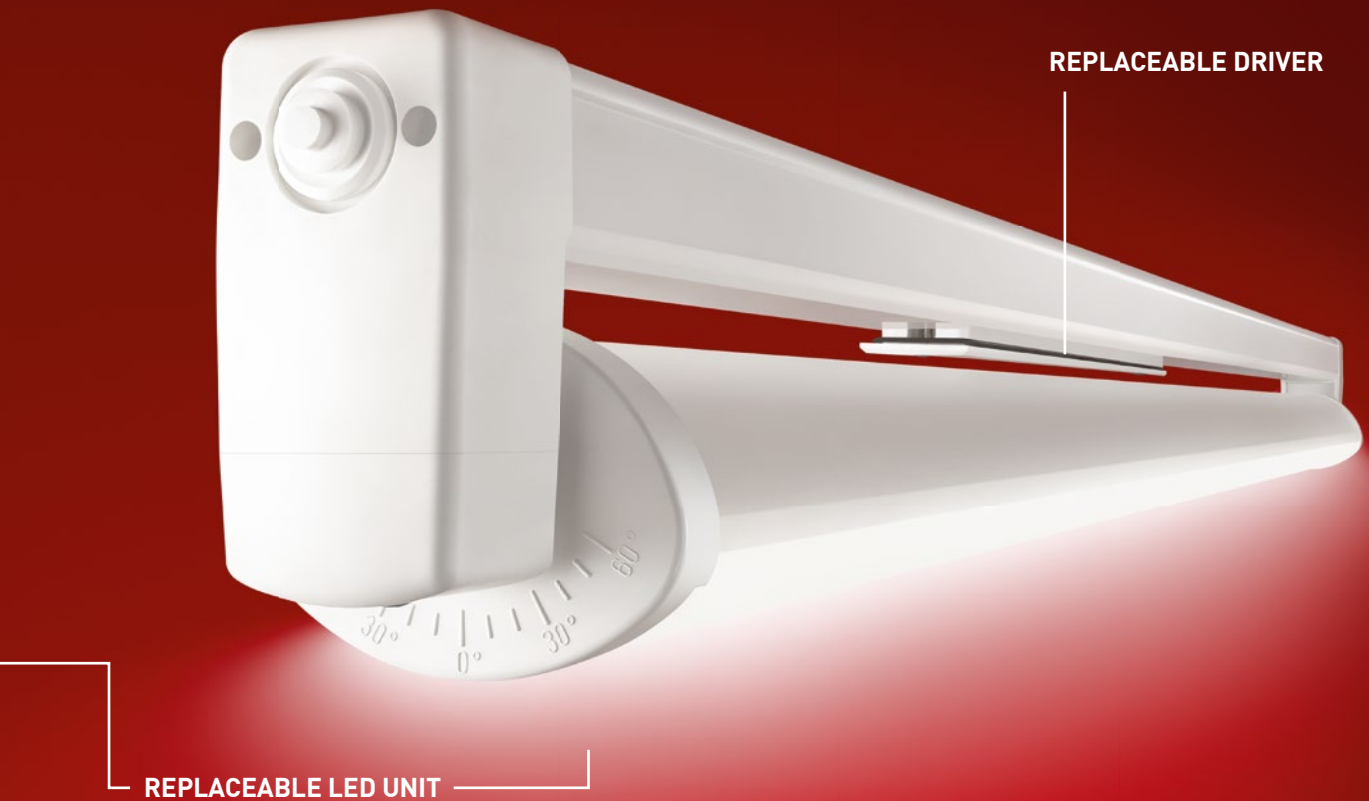
ERFURT LED HIGH OUTPUT

> Polymer luminaire with a reflector tube (can be swivelled ± 50°)
> Even longer service life
> Particularly high luminous flux

*IFS Declaration of Conformity available
Available with **easy eXchange**

easy eXchange – FOR SUSTAINABLE LIGHT

THEY CONTINUE TO ILLUMINATE



OUR ERFURT LED DERIVATIVES HELP THE ENVIRONMENT AND SAVE MONEY.

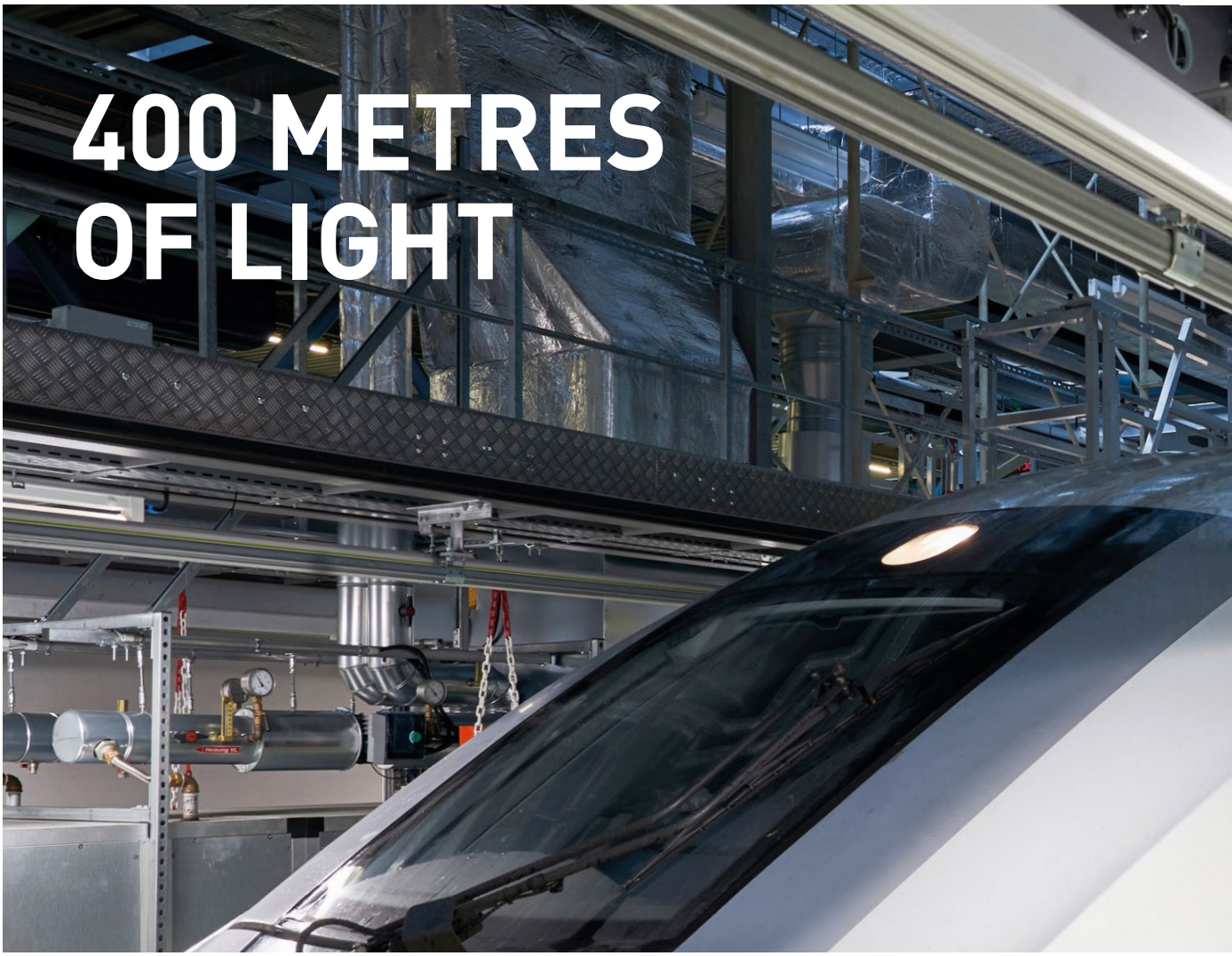
NORKA luminaires are designed for use in the most demanding environmental conditions. Above all, they stand out for their long service life and high resistance to a wide range of chemicals and other environmental influences. They are luminaires built to last.

Due to their excellent durability, NORKA luminaire housings often outlive the life cycles of the built-in electronic components. It therefore makes sense to think about the future as well: NORKA luminaires are generally designed to allow for the replacement of electronic components.

The replacement is really convenient with luminaires fitted with our ▫ easy eXchange components. The installed luminaires can be made "fit for purpose" again, thus avoiding unnecessary new purchases, saving installation time and conserving resources.

By the way, we manufacture more than 80% of all the components for our ERFURT LED derivatives ourselves. This way, we avoid long transport routes and know the origin of the raw materials.

400 METRES OF LIGHT



Deutsche Bahn is investing heavily in long-distance transit and upgrading its facilities for the latest ICE train generation – including the ICE facility in Hamburg-Eidelstedt

Deutsche Bahn has entered a whole new league with the ICE 4: never before have the trains of the ICE range been as long as those of the fourth generation. The maintenance areas for the 346-metre-long trains are now being extended and optimised. Of course, efficient and flexible NORKA lighting systems also play their part in this. Just how can be seen in Hamburg-Eidelstedt.

It has to be quick. It takes 60 minutes to inspect a complete ICE 4, i.e. the sides of the carriage body, the roof and also the chassis from below. Every two days, Deutsche Bahn's current flagship rolls into the inspection hall to be checked for damage or wear by expert staff. This happens in the designated ICE facilities, for example, in Hamburg-Eidelstedt, where they have specialised in ICE trains since 1991.

UPGRADE WITH A COMPLETELY NEW LIGHTING SYSTEM

Deutsche Bahn had two of the eight maintenance tracks in Eidelstedt upgraded especially for the ICE 4 – at a total cost of around 87 million euro. The trains can now be approached from below to replace the underfloor batteries. The power units, which are placed on the roof, can also be easily reached thanks to a special folding platform. To make sure that all this runs effectively, a new lighting system has been installed as well with NORKA EIDELSTEDT luminaires. The facility was previously equipped with conventional luminaires. In the course of the modernisation, LED-based luminaires have now been installed for the first time, as well as a comprehensive, demand-oriented lighting control system.

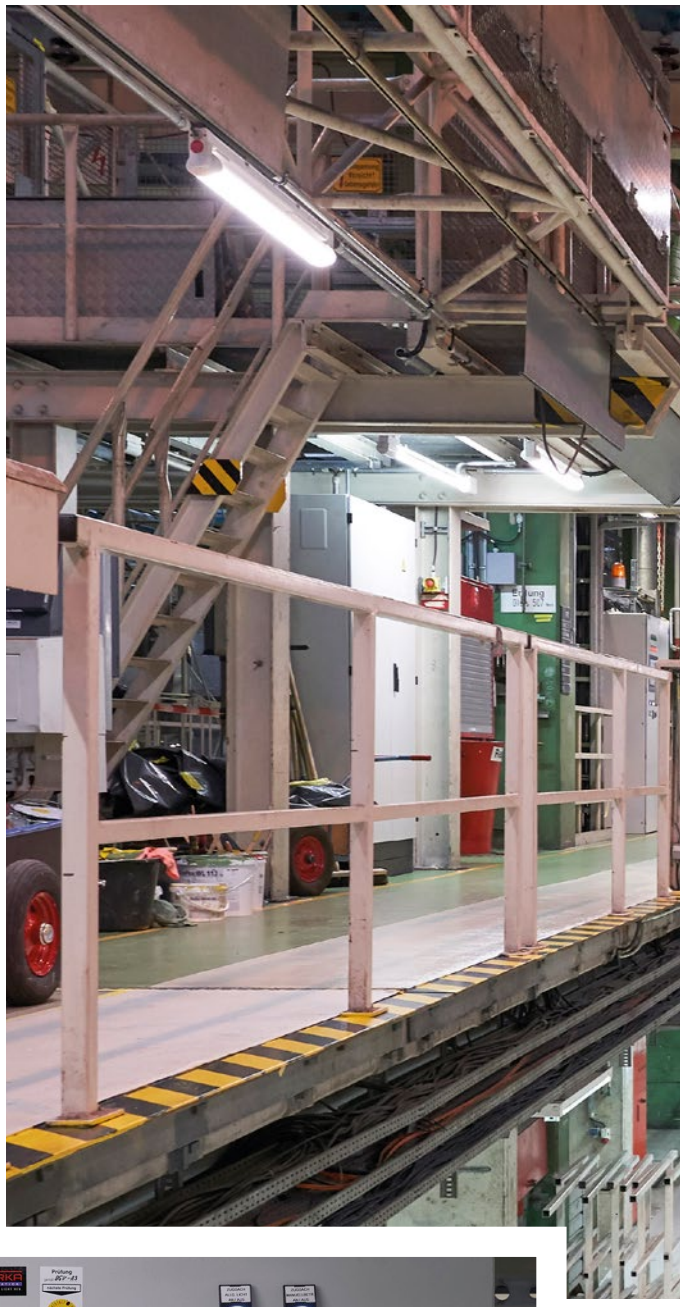
Top: The new ICE 4 requires an upgrade of the ICE maintenance centres due to the modified design. Bottom: Uniform light with a high colour rendering index is essential for inspections.

PROJECT: ICE FACILITY IN HAMBURG-EIDELSTEDT

NORKA'S WORK AND SAFETY LIGHTING

The task proved to be far from simple, but decidedly challenging in both major and minor ways. To ensure that the batteries of the trains are accessible and can be replaced from underneath, the building services on the lowest level had to be moved upwards. In collaboration with the specialist planners, NORKA developed an optimum illumination solution that specifically allowed for this, addressing the three working levels of roof, carriage body and underfloor.

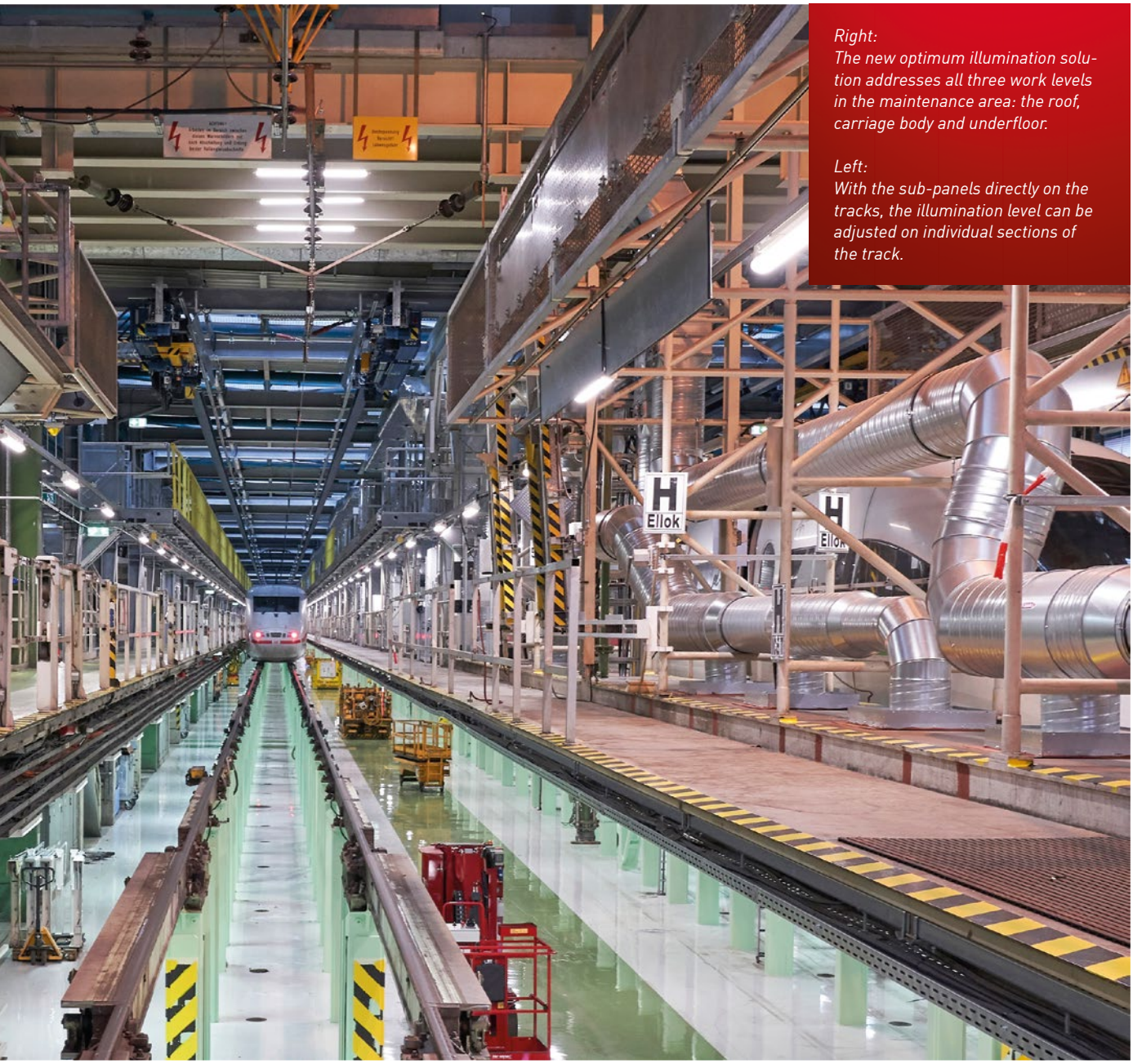
The single-lamp NORKA EIDELSTEDT luminaires take on the task of actually producing the light. In order to guarantee the target illumination level of 150 lux (300 lux even in the roof area), a total of 448 wide beam and 156 medium beam versions of the EIDELSTEDT type m1200 were installed. But that's not all: in addition to this work lighting there was the safety lighting consisting of 282 wide beam and 52 medium beam EIDELSTEDT luminaires installed whose group batteries provide the power supply. The safety luminaires are equipped in such a way that testing can be carried out centrally and their function is ensured in an emergency.



CONSIDERABLE COST CUTS WITH LED

The special LED modules in the luminaires optimise the colour rendering of red tones thanks to the increased R9 value (>77). This meets the specific requirements of Deutsche Bahn – as does the integration of SELV (Safety Extra Low Voltage) control gear that supplies the LED modules. The EIDELSTEDT luminaire is DALI-compatible, equipped with quintuple through wiring and two control lines.

Converting to NORKA's LED technology alone reduces the running costs of the lighting system by 40 to 50 percent. In addition, the long-lasting LED lamps save money due to lower maintenance costs. A further reduction in operating costs is achieved by the intelligent, automatic and daylight-dependent control of the luminous flux.



Right:
The new optimum illumination solution addresses all three work levels in the maintenance area: the roof, carriage body and underfloor.

Left:
With the sub-panels directly on the tracks, the illumination level can be adjusted on individual sections of the track.

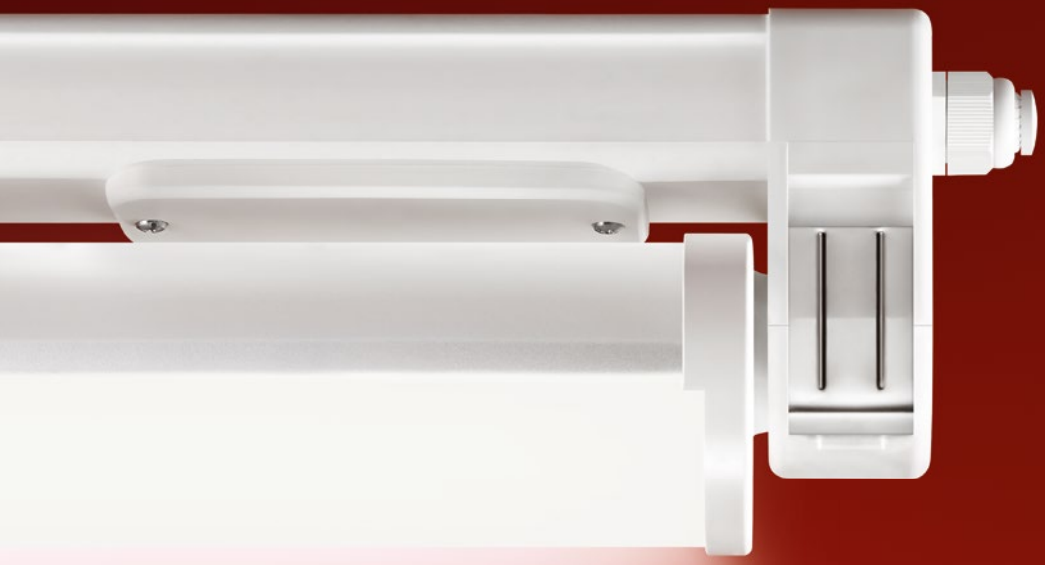
CONTROL WITH CENTRAL AND DECENTRALISED PANELS

The lighting control system was specially designed for the project by the partner company NORKA Automation – the very length of the installation itself made this necessary. A central control panel serves as the core of the control system, which displays, controls and also checks all operating states. At a distance of 100 metres from each other, there are sub-panels directly by the tracks, which can be used to operate the sectors to the left and right of them.

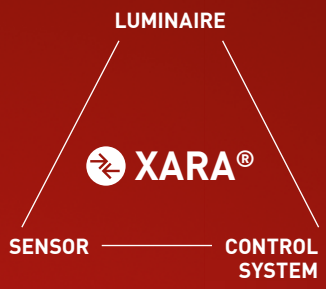
The sub-panels allow staff to increase the illumination level where it seems necessary, for example, when working on specific details. After ten minutes, the system automatically switches back from maximum illumination to the daylight-supported standard mode with 150 lux. And while the underfloor level is permanently illuminated for safety reasons, the light on the roof level is only activated when the working platform is released for use.

THINKING AHEAD TO EXPANSION

By the way, NORKA has already thought ahead: the lighting system, including the control system, has a modular design. This means that the upgrade of the remaining six maintenance tracks in Hamburg-Eidelstedt could be achieved quickly. After all, the control system that has now been installed could simply be supplemented by further sub-panels and the additional NORKA luminaires could be integrated in the same way.



PARTICULARLY EFFICIENT: OUR LUMINAIRES



EVEN MORE EFFICIENT:

Our XARA® lighting control system

NORKA luminaires are already geared toward efficiency but it is possible to go the extra mile with a well-thought-out lighting control system. Incidentally, it also increases user convenience. From motion detectors to schedules and daylight sensors, there are a variety of ways to control the lighting and, at the same time, significantly reduce energy consumption. With a wide range of possible functions, the XARA® lighting control system offers the right solution for your project. High requirements in terms of functionality, protection rating and the vibration and impact resistance of components are the order of the day for NORKA. With XARA®, we also rely on long lasting components that are as robust as those used for NORKA luminaires. XARA® sensor technology can be structurally incorporated into selected products. Due to the recessed mounting, the sensor technology is discreetly incorporated and protected from extreme ambient conditions. A perfect combination and everything from a single source: the concept, products and implementation.

But it is not only the efficiency of a lighting system that benefits from a clever control system. Users can also look forward to a gain in terms of convenience: For example, a central panel for all mounting points and light scenes, automatic status messages or automatic balancing of the illumination level in the event of a fault.

Based on a few basic principles such as a corridor function, light scenes or motion and daylight-dependent control, a wide variety of solutions can be developed and scaled to almost any size – whether in the factory hall, production or on the platform.
NORKA finds solutions: With devotion, precision and competence.

TRADITIONAL ART OF BREWING IN A NEW LIGHT

PROJECT: ROTHAUS BREWERY

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.

High moisture and daily cleaning do not have a constant adverse affect on the ERFURT LED.

PERFECT VISIBILITY IN A CHALLENGING ENVIRONMENT
The conditions in the brewery are extremely challenging even if this it not apparent from the tasty finished products. Extremely high moisture and temperatures in the cellar rooms and tunnel vaults have a constant adverse affect 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 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.

PROJECT: ROTHAUS BREWERY

Top:
Particularly bright: Rothaus Brewery also never loses sight of the energy costs thanks to efficient LED technology and a motion-sensitive control system.

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

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 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.


10
ZKL 3
APV

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 water-proof 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 "bumblebee", 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 1000 W 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.

PROJECT: HOHN AIR BASE

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 mounting 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 °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.

In the high buildings, the ERFURT LED HO offer a pleasant work light and are efficient, maintenance-free and long lasting at the same time.

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, thanks to extra long lasting components. We even offer an 8-year warranty.

FLEXIBLE LIGHTING ALIGNMENT

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

SAFE LUMINAIRES FOR THE FINEST MEAT

Quality is a top priority 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.

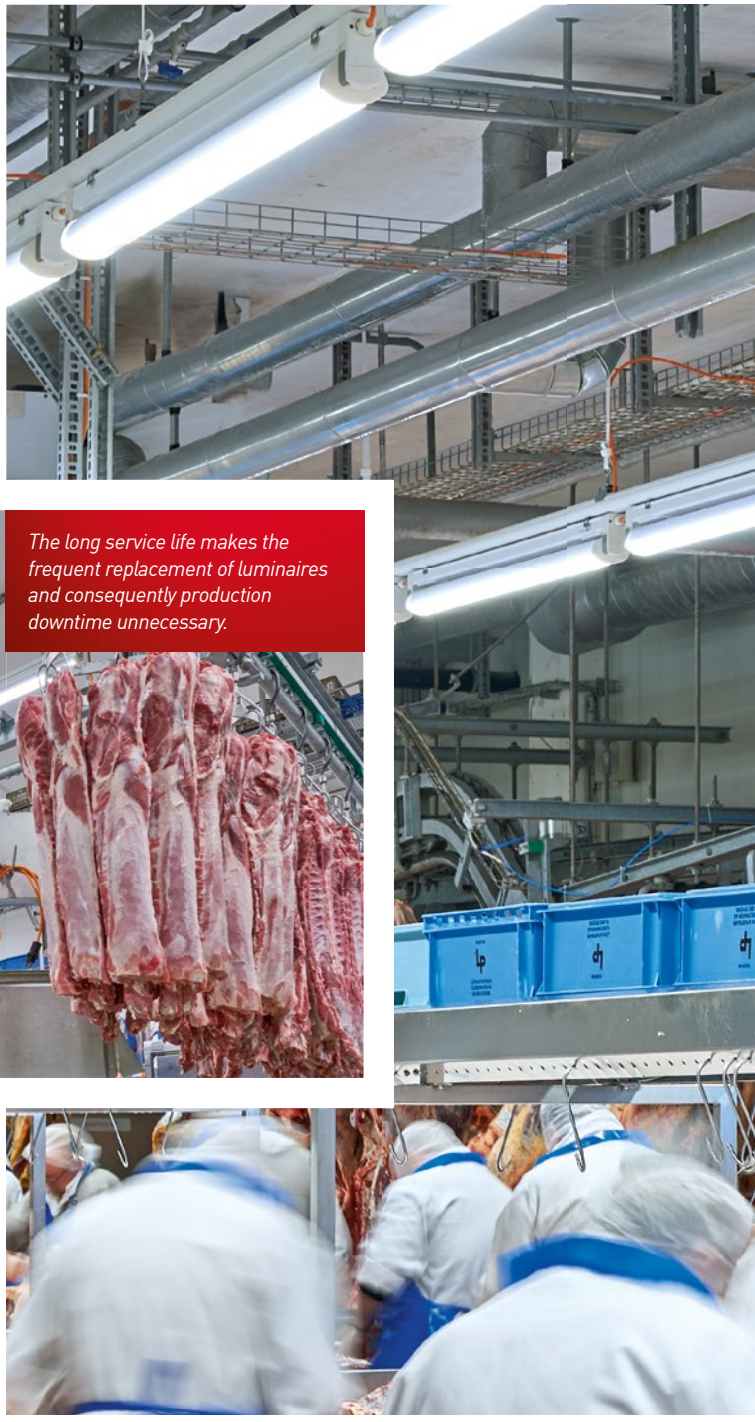
The requirements profile for the lighting in particular is very high here. In addition to optimum lighting conditions, which are always taken for granted at NORKA, it was imperative to fulfil the company's specifications in terms of durability and reliability – and also the very strict legislation for 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.

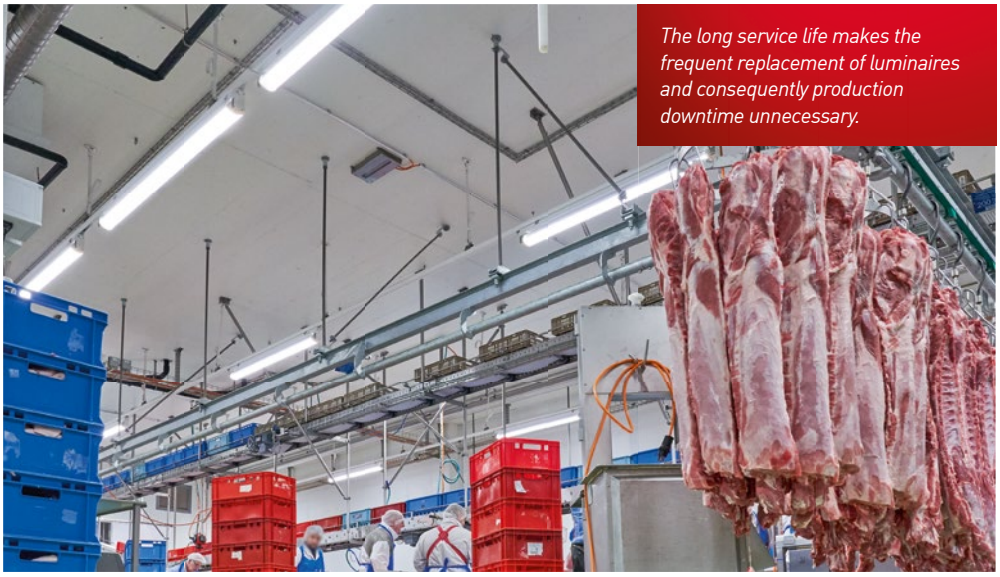
Ideal in the cold storage facility – the BITBURG LED are guaranteed to work at temperatures down to –25 °C.

PROJECT: LÜTHI & PORTMANN MEAT PRODUCTS

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.





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

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.

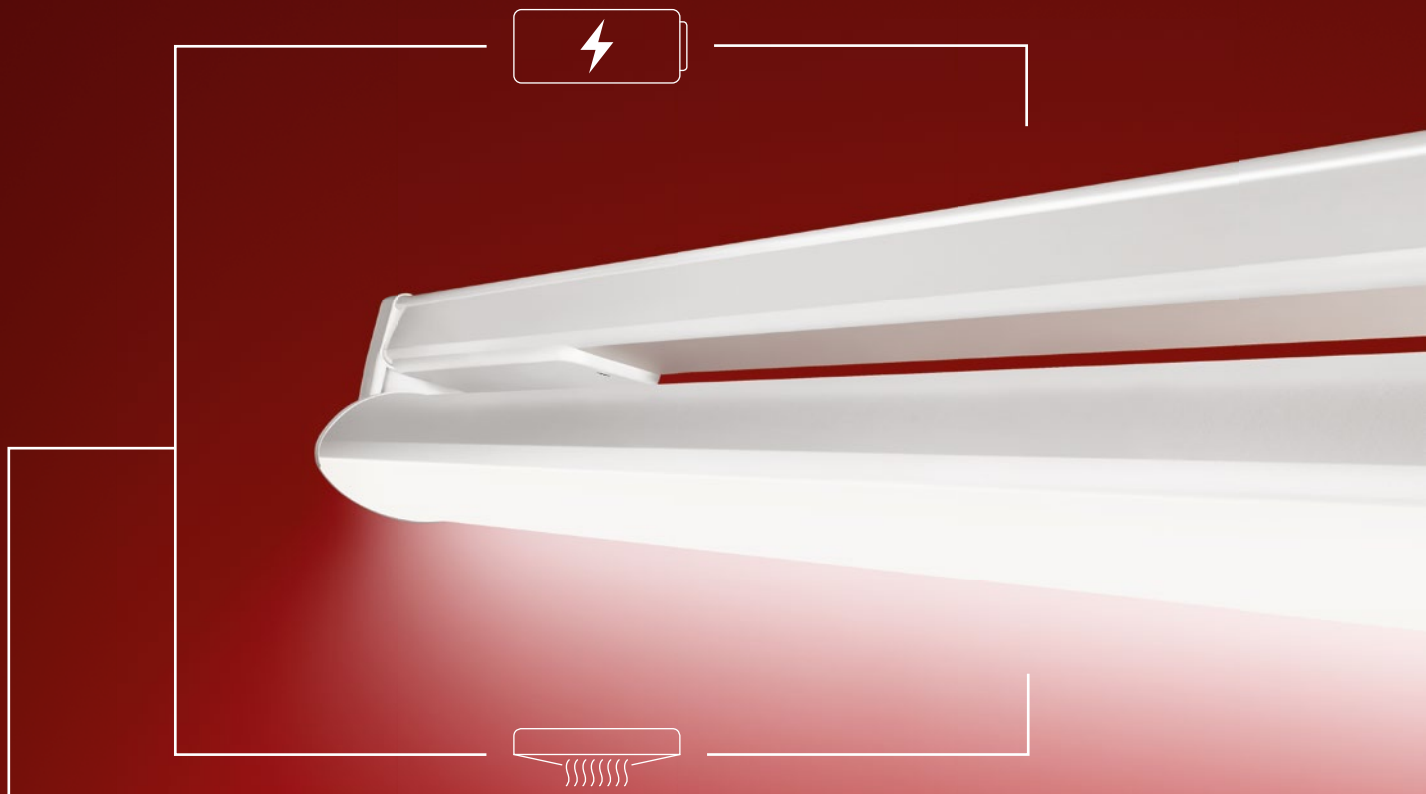
But there is nothing that our luminaires couldn't withstand. There is only one protection class that interests us in these

Over 500 luminaires provide optimum illumination and greater efficiency in all areas.

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 °C 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.

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.



EMERGENCY LUMINAIRES SPRING INTO ACTION WHEN THERE IS COMPLETE DARKNESS.

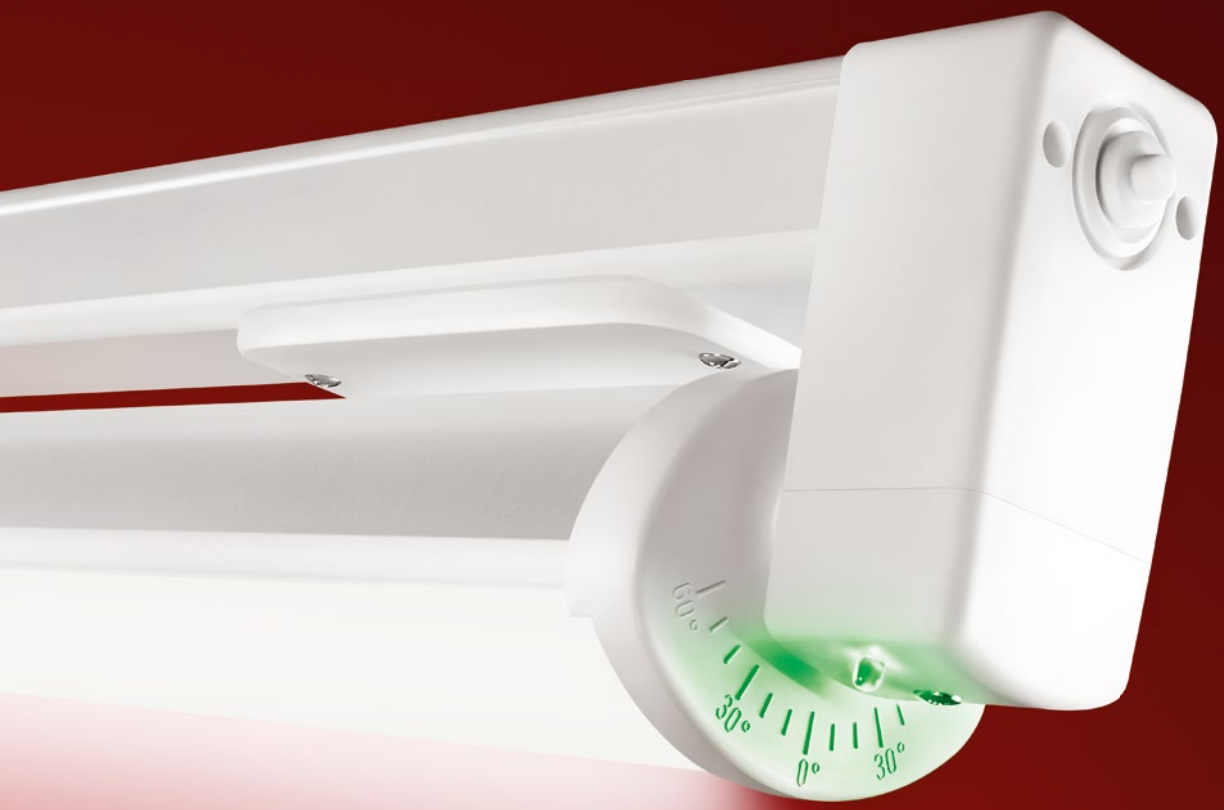
Power failure and the lights are off – a scenario that can usually be handled at home without major problems is a dangerous situation in publicly accessible areas and at the workplace. To avoid panic and injuries, sufficient visibility for visitors and staff must be ensured at all times.

Emergency lighting comes into play here: Single-battery or central battery systems spring into action when the voltage on the mains power drops. They allow the safe exit from workplaces and buildings in general.

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 the battery – the keyword is "thermal separation".

The LEDs are in the reflector tube, driver and battery in the housing. This means that the waste heat from the LEDs no longer affects the temperature-sensitive components, thus reducing the heat load by approx. 10 °C. Also convenient: The battery can be replaced quickly through an easily accessible cover.

But not only our COBURG LED jumps into the breach when necessary: A large number of NORKA luminaires can be upgraded for central battery systems. To enable the necessary testing and monitoring of emergency luminaires, a monitoring module suitable for the selected emergency lighting system can be installed in many luminaires on a project-specific basis. Many NORKA luminaires can also be designed as single-battery emergency luminaires. Simply get in touch with us!



SOMETIMES ONLY THEY LIGHT UP...

OPTIMAL LIGHT IN A HARSH ATMOSPHERE

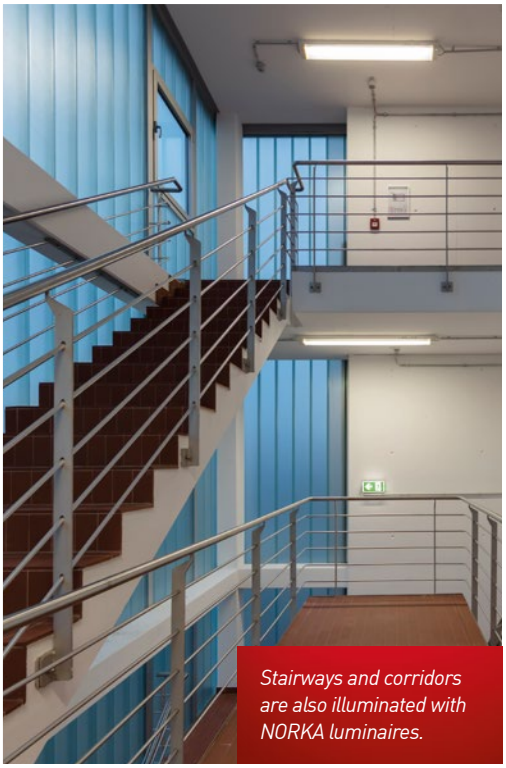
The ERFURT LED is used in the machinery halls, which is reliable even in chemically aggressive environments.

Energy-efficient, centrally monitored and controlled and long lasting: NORKA delivers the lighting system for the new building of the large-scale Köhlbrandhöft waste water treatment plant in Hamburg.

At the Köhlbrandhöft sewage treatment plant, 150 million cubic metres of waste water are treated annually before they flow into the Elbe River. The water comes from private households and from industry or is mixed water from precipitation. 556 pumps, 250 employees and myriads of busy micro-organisms take care of the biological purification.

Despite the enormous volumes, the waste water treatment plant is self-sufficient in terms of energy; in other words, it produces its own electricity – from digester gas, sewage sludge, wind and the sun. All efforts are focused on maximising energy efficiency – including at the lighting level, for example, in the new grit treatment hall and the equally new screening building. Both the general lighting and the safety lighting have been completely designed with LED luminaires from NORKA.

ERFURT LED luminaires are used in both machinery halls as this type of luminaire also performs reliably in chemically aggressive atmospheres. The corridors and stairwells are equipped with the NORKA MÜNCHEN LED luminaires; SCHÖNEFELD is used as the escape route luminaire. As a lighting specialist for tough environments, NORKA tests its materials for resistance to various chemical substances. But not only the luminaires themselves, but also the associated mounting rails are designed for maximum resistance, of course also with regard to sewage



Stairways and corridors are also illuminated with NORKA luminaires.

gases. That's why explosion-proof elements were also installed in part at the Köhlbrandhöft waste water treatment plant.

Some of the luminaires are equipped with batteries – any necessary function and runtime tests can be carried out automatically, centrally and at defined time intervals in accordance with EN 50172/VDE 0108. All of the results are documented in compliance with standards. This feature was expressly requested by the owner and operator of the waste water treatment plant, Hamburg Wasser. NORKA resolved this part of the requirement specification at control level.

All the luminaires in a building converge in the central control cabinet, which is supplied completely pre-wired by NORKA Automation. The touch panel in the front of the cabinet can be used to manually override the automatic system if necessary, for example, when local maintenance work is due or the lighting time profiles need to be adjusted.

Each of these switching units links its information through defined interfaces to the primary central process control system of the waste water treatment plant. This allows status data and error messages to be received centrally in the control room; from there, queries can be made and maintenance staff can be given automated work orders.

This project exemplifies how much synergistic potential can evolve from a comprehensive solution developed by NORKA. In addition to the specific selection of suitable luminaires and emergency lighting, this particularly includes the conception of the control system and its programming, the energy distribution and ultimately the specific support of the planners.

FOR EXPLOSION HAZARDOUS AREAS

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 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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