PFLITSCH

PASSION FOR THE BEST SOLUTION

solution

CUSTOMER MAGAZINE 01 | 2022

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Systems and solution provider
Cable entry
Cable protection
Safety
Ease of installation
Certification
All from under one roof
Standard and special solutions
Development partner
Scope of engineering
Vertical integration
Delivery performance
Made in Germany
Innovation leader
Social responsibility

Plant I

Trunking Competence Centre
Customised cable routing
Component assembly service
Quality product
Durability
Ease of installation
Delivery reliability
Development know-how
Dedicated points of contact
Sustainability
Precision
Made in Germany
Innovative force
Work-life balance

Plant II

Editorial

DEAR CUSTOMERS, BUSINESS PARTNERS AND FRIENDS,

Our current overall economic situation couldn't be any more "delicate". That said, every crisis offers opportunities for further development and innovation. It's precisely in such difficult times as these that people rise above themselves, courageously go down new paths and take on responsibility. And what we are currently seeing in our company is this connection between challenges being forced upon us from outside and the development of new potentials within our company. PFLITSCH continues to grow, and we are setting a new course for a successful future. This development affects the way we work together, how sustainable our actions are and the measures we take to make your everyday working life a little easier. The aim is to share knowledge, to expand future markets such as electromobility and to further improve our delivery performance. In short, it's all about you!

Today, we invite you to discover the many tools we have put in place to boost our teamwork. At the same time, we say thank you for being such a big and important team player.

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SEMA makes light work of cutting cable trunking

PFLITSCH's entire cable-routing system impressed in every respect.

The SEMA Technology Group creates sophisticated solutions for metalworking of the highest standards. In order to increase efficiency and productivity in its cable-routing work, the Group was looking for an effective and practical solution. Since SEMA is a "Champions League club", the decision was taken to go with a cable-management expert who is just as much on the ball as SEMA: PFLITSCH.

SEMA constructs complex, custom-built metalworking machinery for demanding industries in which huge numbers of cables need to be installed.

Complex highly versatile plants

The SEMA Technology Group, based in Traunkirchen, Austria, has been developing and manufacturing top-quality, sophisticated machine tools for more than 30 years: ranging from standard and customised machines for metalworking to deburring and cleaning systems and automated production lines. A 200-strong workforce generates annual sales in the region of 40 million euros. "It doesn't matter if our clients need to machine aluminium, steel, forgings, castings or stampings. We always have the right machines for the job," says Dipl.-Ing. Johannes Weiermair, Chief Technical Officer and authorised representative at SEMA. Half of SEMA's customers are car manufacturers and their suppliers – with a global footprint. But the portfolio also includes machine tools for industry and the energy sector.

Roundabout route to cable laying solution

SEMA builds these machines precisely in line with each client's requirements – with up to a hundred drives and scores of control modules. "The complexity of our machines means we often have to run thousands of metres of fibre-optic and copper cables, as well as fluid lines, safely through and around the machines," explains Weiermair. A very labour-intensive process, in which, in the past, cutting, sawing and grinding of the cable trunking components involved a great deal of noise and metal dust – and a high risk of injury. "What's more, our fitters kept having to go to the workshop to work on the trunking, so as not to contaminate the assembly areas around the machines by cutting the trunking 'on-site' and not get in the way of other colleagues working there," adds Markus Schögl, Head of Electrical Installation. Eventually, SEMA's management team →

realised that preassembling the cables by hand was not efficient – especially since this task was outsourced to an external supplier.

Save on effort – not on quality

This is where Stephan Kadanka, PFLITSCH's field sales representative in Austria, identified starting points for optimising his client's cable-laying processes. He discussed his ideas for potential improvements with SEMA's own experts and convinced them of the benefits of PFLITSCH's total-solution system during a live, hands-on demonstration he gave on site. But it was PFLITSCH's payback calculator that tipped the scales. Based on the average workload, this tool enables us to calculate the actual level of savings that can be made. The bottom line is that PFLITSCH's coordinated system of trunking and machines pays for itself very quickly because it saves a lot of time and effort. "However, it was also important for us that the quality of the cable routing meets our high standards," emphasises Johannes Weiermair.

Our compact PIK-Trunking is used for laying cables and lines at the lowest installation level. Cable protectors at edges and cut-outs prevent cables from becoming damaged.

The MiniCut was mounted on a mobile workbench, so that it can be moved easily and quickly to any assembly location.

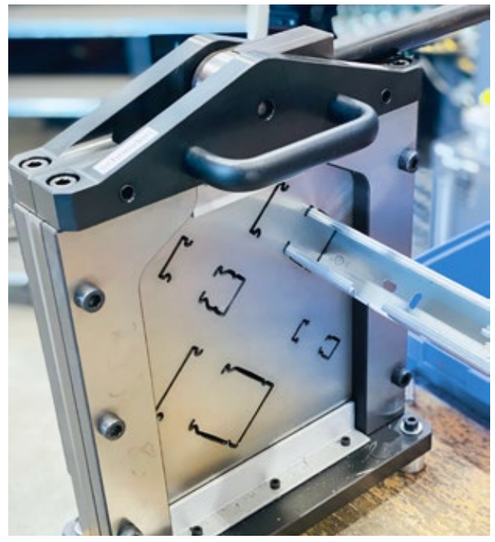
Smart cable routing for made-to-measure efficiency

For safe cable routing, SEMA now puts its trust in PFLITSCH's PIK-Trunking. "We're installing trunking with a small cross-section to route, for example, individual cables to sensors and actuators, while wider trunking systems are being used to run large numbers of cable," Schögl explains. PFLITSCH Installation Trunking (PIK for short, from the German name) is available in ten cross-sections from 15 mm x 15 mm to 200 mm x 60 mm. It combines the advantages of the large trunking systems equipped with a cover with a compact design. Thanks to the creases in its side walls, PIK-Trunking is lightweight yet still inherently very stable. "This is important when we have to bridge longer distances in a plant," says Schögl. Unlike cabling systems that use piping, PIK-Trunking can be opened along its entire length, making it easier to insert additional cables or upgrade an installation. The cover is simply clipped on and sits securely even when the trunking is installed vertically and subject to vibration. PIK also leaves nothing to be desired when it comes to customer-specific cable laying – thanks to elbows, T connections and other accessory fittings. Connectors ensure equipotential bonding between all trunking components, while separating walls keep power and data cables apart in accordance with requirements. The PIK sections are either screwed together or are assembled using retaining clips into which they are simply clipped, giving a certain amount of leeway for adjustments.

The battery-powered notching tool for making lateral cut-outs was also very well received by SEMA's fitters, as it can also be used to cut already assembled trunking components.

Coordinated system gives you that cutting edge

The PFLITSCH MiniCut, one of three models that make up PFLITSCH's machine portfolio, immediately caught the eye of SEMA's fitters, who were greatly impressed. That's because it makes cutting trunking sections unbelievably simple and safe. "In next to no time, our fitters push the trunking body and cover into the respective contour in the cutting plate, fix the section of trunking and cut it to length by operating the lever. Since the cuts have clean, low-burr edges, there's also no need for time-consuming reworking, and there's no danger of people being injured or cables becoming damaged," confirms Markus Schögl. Another advantage over sawing is that the trunking keeps its shape. To enable the MiniCut to be moved easily and quickly to any assembly location, SEMA has quite simply mounted it on a mobile workbench. Using the new MiniCut, trunking can be cut cleanly to length to anything from 15/15 mm to 60/60 mm. The machine can be equipped with either a lever, an electrohydraulic battery-powered drive or a mains-operated/battery-powered hydraulic unit. Since very little physical effort is needed, the cutting process becomes child's play even with a manual drive. The battery-powered PFLITSCH notching tool is used to make lateral cut-outs for cable outlets, a process that is possible even with trunking sections that are already installed.



The MiniCut's cutting plates can be configured with customer-specific cutting contours, eliminating the need to swap the cutting plate when you need to cut different cross-sections.

Not only is SEMA extremely happy with the coordinated system of cable trunking and machine, it also greatly values the support provided by its new partner and the sound advice of PFLITSCH's sales representative Stephan Kadanka. Schögl's main takeaway: "Since we are supplied directly by PFLITSCH, we benefit from uncomplicated workflows and short delivery times. As a result, there's no need for us to stock up with large quantities of cable trunking. For us, this whole package is crucial, because it aligns with our company philosophy."

Welcome to the Knowledge Web

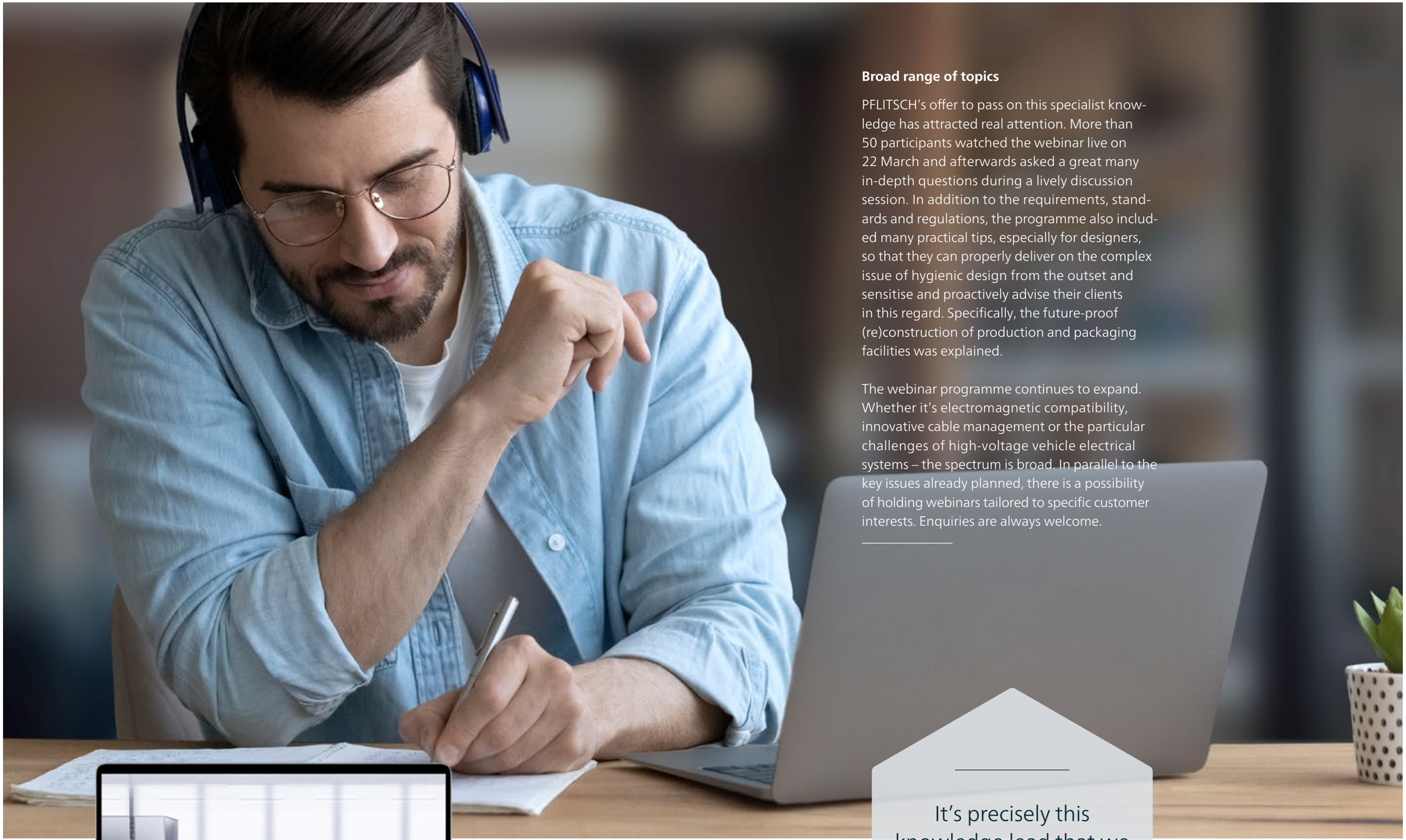
With customers' needs firmly in mind, PFLITSCH continues to expand its series of online seminars.

Sharing knowledge – that is the key idea behind PFLITSCH's latest customer webinars. The focus is particularly on current issues, as was the case at the most recent webinar on Hygienic Design in the food and pharmaceutical industries, which was held in March.

Specialist for future markets

"We have been intensively involved in the issue of Hygienic Design for so many years, and we have an impressive range of products for this segment, such as the blueglobe CLEAN Plus and specialised cable trunking and cable protectors. From working closely with our users and our intensive involvement in this growth market, we know the needs and specifics of the industry. It's precisely this knowledge lead that we wanted to share. We have deliberately expanded our target audience to speak to engineers, designers and project managers, as well as specialists and executives, buyers and students," says Heiko Emde, Market Segment Manager for Food & Pharma at PFLITSCH.

The decision to focus on more than just the select clientele for this latest webinar was well received. *"Our day-to-day work goes far beyond just products. We are a solution partner and work very closely with a large number of customers, constantly taking new ideas on board. It goes without saying that we consistently align our product offering with our customers' requirements and also delve deeply into application-related areas. Many of our innovations are developed specifically to meet these requirements. Consequently, we have a great deal of background knowledge, especially in future markets such as Hygienic Design,"* explains Stephan Kadanka, PFLITSCH's field sales man in Austria, who was pleased with the high turnout of participants from his home territory. ⟶



Broad range of topics

PFLITSCH's offer to pass on this specialist knowledge has attracted real attention. More than 50 participants watched the webinar live on 22 March and afterwards asked a great many in-depth questions during a lively discussion session. In addition to the requirements, standards and regulations, the programme also included many practical tips, especially for designers, so that they can properly deliver on the complex issue of hygienic design from the outset and sensitise and proactively advise their clients in this regard. Specifically, the future-proof (re)construction of production and packaging facilities was explained.

The webinar programme continues to expand. Whether it's electromagnetic compatibility, innovative cable management or the particular challenges of high-voltage vehicle electrical systems – the spectrum is broad. In parallel to the key issues already planned, there is a possibility of holding webinars tailored to specific customer interests. Enquiries are always welcome.

> It's precisely this knowledge lead that we wanted to share.
>
> *Heiko Emde*

Now it’s official:

High satisfaction ratings among PFLITSCH customers.

The degree to which our customers are satisfied is an extremely sensitive seismograph of our success. For this reason, customer care is a top priority at PFLITSCH. To be absolutely sure and to be able to systematically boost our satisfaction ratings on the basis of reliable data, we are very proactive in asking our customers for their opinion on how we are doing. We have recently conducted a repeat survey and the first evaluations are already available. Between November 2021 and January 2022, we successfully enlisted 338 customers to give their assessment. The survey was conducted by the Institut für strategische Marktforschung ISM (Institute for Strategic Market Research) based in Seevetal-Hittfeld, near Hamburg, our partner for qualified surveys, including subsequent analysis.

The results have confirmed that our efforts have been worthwhile. We gained an overall rating of “very satisfied” and have made further improvements in many aspects compared to the last survey conducted back in 2017. As such, we have met the target we set for ourselves. After all, the primary purpose of measuring customer satisfaction is to better understand customers’ requirements and identify problems at an early stage. The high degree of participation in this survey is also worth noting: we recorded a response rate of eleven per cent. For comparison: for mailings of this type, the response rate is generally in the low single-digit range; two or three per cent is actually considered to be good.

Consistently good ratings

The rating system uses grades that range from 1 for “very good” to 5 for “poor”. 1s and 2s are considered very high satisfaction levels. Customer satisfaction ratings of 2.5 and higher reflect a need to introduce improvement measures. Our overall satisfaction rating lies between 1 and 2. A majority of our customers, 71 per cent, confirmed their high level of satisfaction with us by awarding more than 85 out of 100 points. Back in 2017, we were well below this figure, at 60 per cent. Nevertheless, we still achieved a top score. This is also confirmed by statistics expert and proprietor of ISM, Dominik Wolff: *“I haven’t seen ratings that top this in any of the other studies we have conducted to date.”*

Constructive criticism welcome

Despite this higher-than-average result, we are still taking a close look at the feedback we received from our customers. We did the same after the 2017 survey and then made adjustments to key levers in order to get even better – adjustments that paid off. This time, too, we asked our customers to express their wishes and criticisms and to provide suggestions. A wide variety of topics were covered, from product and service quality to greater and improved online presence. The most important quality highlighted was our ability to deliver. After all, we have succeeded in maintaining our usual high standard of delivery performance despite the extremely difficult conditions prevailing right now. Once again, our conscious decision to buck the trend and not to outsource production, even in part, to Chinese suppliers in order to save costs has paid off. The fact that we manufacture our products domestically in Germany guarantees our ability to deliver reliably to our customers and is a cornerstone of our delivery performance.

A detailed analysis of these requirements and a comparison with measures that have already been implemented in the meantime or are currently in the planning stage is underway. The teams responsible have been activated specifically for this purpose. Even if this survey has failed to reveal any great need to take action, we are nevertheless striving to become even better.

Keeping electromobility up and running – and charged

PFLITSCH cable glands for high-voltage vehicle electrical systems and the charging infrastructure.

The decision to focus more strongly on the growing electromobility market has proven to be the right one for PFLITSCH. For example, we have already developed cable glands specifically to meet the special requirements of the high-voltage electrical systems of commercial vehicles powered by an alternative drive system – glands that make these vehicles safer. We are now turning our attention to the charging infrastructure sector, too.

By focusing on the electromobility sector, we have once again demonstrated our forward-looking customer and market focus – as we did previously with the food, pharmaceutical and rail industries. This growing future market is of interest to us in two respects. On the one hand, we have succeeded in creating sophisticated cable glands and cable entries for the HV electrical systems of commercial vehicles with alternative drive systems that precisely reflect the needs of the industry and our customers: thanks to effective screening attenuation and a high current-carrying capacity, these products ensure maximum safety. On the other hand, the charging infrastructure opens up a new area of application for our cable glands – especially as this area is currently the subject of massive expansion in the wake of the rapid growth in electromobility.

To illustrate the potential, here are a few figures: across Europe, there are plans to install some 15 million chargers – an investment volume amounting to USD17 billion. In the USA, it's 13 million chargers and a total investment of USD11 billion, and in China, 14 million chargers costing USD19 billion.

Focus on charging stations

In contrast to the applications of our cable glands in the HV electrical systems of commercial vehicles, their use in infrastructure is focused on public and private charging stations that can be used to charge cars and trucks. A basic distinction is made between two standard charging modes and the corresponding charging infrastructure. Charging at public charging stations or home EV chargers ("wallboxes") is primarily in AC charging mode; the charging cable is permanently connected to the charger. Rapid charging, on the other hand, is conducted in DC charging mode; here too, the charging cable is permanently connected to the charger. In both cases, the cable entry where the charging cable enters the housing can be subjected to a great deal of stress and strain when it is being hooked up to vehicles. This can lead to the connection between the charging cable and the mains supply cable inside the housing becoming damaged or separating. This makes PFLITSCH's blueglobe gland – with its extraordinarily strong strain relief – the number one choice for this application.

Since the cables of the charging station or wallbox for AC charging are relatively thin, a normal blueglobe made of polyamide is quite sufficient. The wallbox made by German manufacturer PRACHT is a good application example.

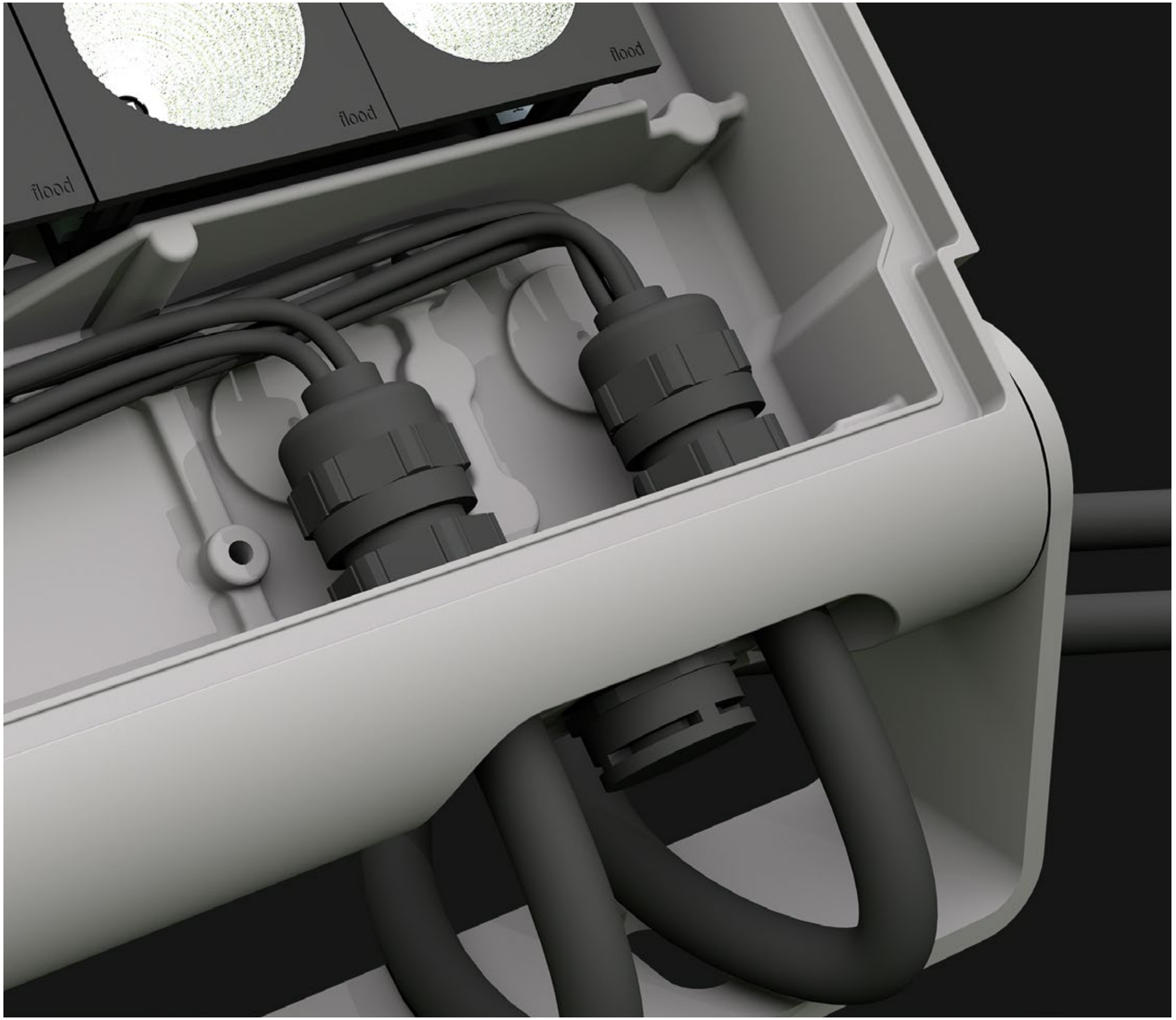
In contrast, however, effective EMC shielding may be required inside charging stations designed for rapid charging due to the high current levels involved. This, then, is the domain of the blueglobe TRI: its unique TRI spring ensures reliable 360° contact with the cable shield and the minimal amount of assembly work saves both time and costs. In addition to these "standard" applications, our special expertise is repeatedly in demand when it comes to solutions to highly specific requirements for cable entries in charging stations, as the following example shows. ⟶

Charging station and wallbox for AC charging, charging station for rapid DC charging.

The manufacturer of a rapid charging station uses an integrated cooling line to cool the charging cable. The challenge facing us: how do you ensure optimum strain relief without squeezing the cooling line and impairing the cooling effect? Our solution: the blueglobe with two HTS sealing inserts.

When intrinsic values matter

A special challenge arose in connection with the design of a wallbox. Private users generally favour the wallbox because it takes up little space and a certain degree of elegance to its design is particularly important to them. To take account of this aspect, we offer our customer, the wallbox manufacturer, the option of installing the blueglobe inside the box. This preserves the elegance of the box's design – and at the same time guarantees strain relief for the charging cable.

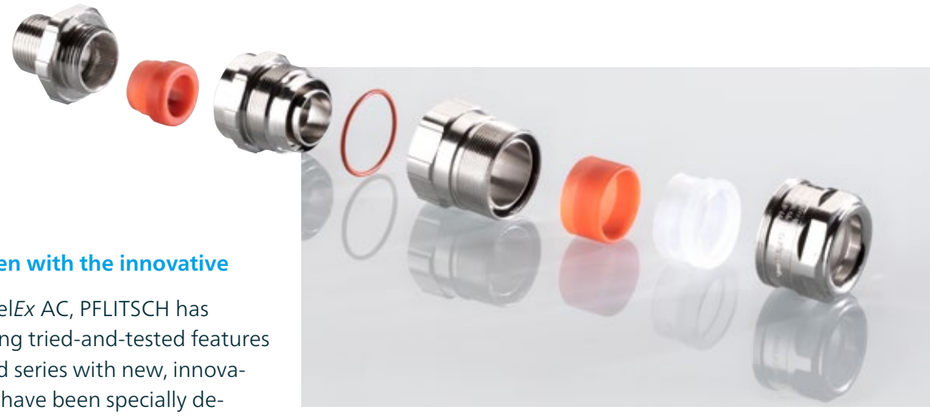


Internal mounting of the blueglobe in a wallbox to preserve the elegance of the box's design.

Level*Ex* AC cable gland

Maximum explosion protection: Level*Ex* AC

The new Level*Ex* AC cable gland from PFLITSCH represents a logical extension of the company's Level*Ex* series and is used to feed armoured cables into enclosures. Designed for use in potentially explosive atmospheres, it is suitable for industrial onshore, offshore and marine applications. For this purpose, special attention was paid to fulfilling protection types "Ex-e" for increased safety and "Ex-d" for flameproof enclosure. In the case of increased safety, the aim is to prevent the potentially explosive atmosphere from igniting and also entering the enclosure. The flameproof enclosure, on the other hand, prevents an explosion inside the enclosure from propagating to the outside, where it would cause further detonation in a potentially explosive atmosphere. In addition, the Level*Ex* AC has a deluge seal – a type of seal that has passed a water deluge test in which components are exposed to the effects of typical marine and offshore conditions.



The PFLITSCH Level*Ex* AC cable gland for armoured cables.

Combining the proven with the innovative

In the case of the Level*Ex* AC, PFLITSCH has succeeded in combining tried-and-tested features from the Level*Ex* gland series with new, innovative components that have been specially designed to both safely accommodate the armouring of the cables and facilitate quick and easy assembly. For instance, PFLITSCH adopted the compact design of the cascading sealing principle used for the head thread of the Level*Ex* gland launched back in 2018. When it came to accommodating the cable armouring, it was decided to use double crimping, which seals both the outer cable sheath and the inner insulation. At the same time, the Level*Ex* AC is designed to allow SWA cables (steel wire armoured), AWA cables (aluminium wire armoured) as well as SWB cables (steel wire braided) to be used.

Using armouring for strain relief

The cable armouring provides both the ground connection and extremely good strain relief. The exceptionally high degree of mechanical strain relief provided by the Level*Ex* AC is the result not only of full-circumference "soft squeezing", but also of the double crimping used to clamp the armouring. As such, this great strain relief results from the requirements laid down in the standard. With regard to clamping, PFLITSCH's engineers have come up with a small innovation to provide greater clarity and further optimise a product that already offered quick and easy assembly. When assembling conventional AC cable glands, the gland always has to be assembled first and then disassembled again to check that the armouring is correctly positioned. With the double-cone principle, the system has to be pulled apart to see if the armouring is correctly seated in its final position. PFLITSCH's solution makes all the difference: two opposing windows inside the gland allow the fitter to see the positioning of the armouring.

Technically and economically superior

The Level*Ex* AC will go to market in Q3 of 2022. In addition to its technical performance characteristics and high IP 66/IP 68 protection ratings – which are now standard at PFLITSCH –, it will have all important approval certificates, such as ATEX and IECEx. Preparations for gaining EAC, CCC and Kosha approvals are currently underway. We're aiming for the AC variant to have the same set of certifications as the Level*Ex*. This includes UL certification for the North American markets, which the variant for use with non-armoured cables gained only a few days ago. The overall picture is rounded off by the easy assembly and excellent price-performance ratio for which the Level*Ex* series is known.

- The Level*Ex* AC fulfils protection types "Ex-d" for flameproof enclosure and "Ex-e" for increased safety.
- Protection classes IP 66 and IP 68, plus deluge test in acc. with DTS01:91
- Equipment Group II, Categories 2 G2 1D, Zone 1, Zone 2, Zone 21 and Zone 22
- Approvals: ATEX, CCC, EAC, IECEx, UL and DNV
- Double sealing (outer cable sheath and inner insulation) with silicone seal for use in potentially explosive atmospheres
- Wide range of application and temperature range
- Gland body: brass and stainless steel
- Thread: metric and NPT

Curious as to how
PFLITSCH's solutions
drive electromobility forward?

Go here to learn more:
www.emobility-pflitsch.com

PFLITSCH
Passion for the best solution

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Electromobility doing well – with SMEs.

PREISTRÄGER
Großer Preis des
MITTELSTANDES

The drivers of electromobility are small and medium-sized enterprises. One third of the supplier industry alone, numbering 200,000 employees, is located in North Rhine-Westphalia.

Like us at PFLITSCH, the expert for industrial cable management. We recognised the needs of electromobility very early on and worked with our customers to develop specific solutions. And because we have repeatedly set milestones in other sectors as well and the company as a whole is in many respects a role model, the Oskar Patzelt Foundation has awarded us the "Großer Preis des Mittelstandes 2020" (SME Grand Prix).

NRW Minister of Justice Peter Biesenbach (left) and NRW Minister of Economic Affairs and Digitalisation Andreas Pinkwart (right) congratulated PFLITSCH's two Managing Partners Mathias Stendtke (2nd from left) and Roland Lenzing (2nd from right) on winning the "SME Grand Prix" award.

PREISTRÄGER Großer Preis des MITTELSTANDES

CABLE GLAND SPECIALISTS HONOURED WITH THE SME GRAND PRIX AWARD

NRW ministers see PFLITSCH as a model company – focus on entry into electromobility

HÜCKESWAGEN – At a special ceremony on 13 October, PFLITSCH – the cable gland and cable trunking solutions provider from Hückeswagen in North-Rhine Westphalia – received the SME Grand Prix award in the presence of two NRW ministers, local politicians and guests from the business world. The company took the opportunity to announce its entry into the electromobility market as a supplier.

The Oskar Patzelt Foundation's "Großer Preis des Mittelstandes" (SME Grand Prix) is regarded nationwide as one of the most coveted business awards for small and medium-sized enterprises. The motto for this year's competition was "Setting Milestones". With a history of success going back more than 100 years, it was a motto that **PFLITSCH** can identify with absolutely. Now in its fourth generation as a family-owned and managed firm, **PFLITSCH** combines tradition and innovation in a highly specialised product range. "We're delighted to have been named a SME Grand Prix winner. Even more so because the jury doesn't base its decision solely on figures but on five aspects of successful corporate governance," declared Managing Partners Roland Lenzing and Mathias Stendtke at the ceremony in Hückeswagen, which was professionally moderated by Edwina de Pooter, the well-known singer, dancer and actress. "To be successful, we need teammates, a good team," Roland Lenzing said. And Mathias Stendtke added: "Team spirit means being able to delegate, means being able to trust others, being able to deal with different characters and differing opinions." And that is precisely what has been practised at **PFLITSCH** for over a hundred years. The company is a technology leader and the inventor of industrial cable glands. "Wherever cables have to be routed safely and securely into an enclosure, at particularly sensitive transitions, on machines in industry, on sterile cleaning devices for surfaces, in the food and pharmaceutical sectors and in countless other places too – that's where our products are used, worldwide," Stendtke explained, commenting that **PFLITSCH** regards itself as a progressive solution provider with an instinct for future trends. "For instance, to further improve our delivery capability, we invested in a second production facility two years ago and in a modern high-bay warehouse the year before that," Lenzing continued.

A FASCINATION FOR ALL THINGS NEW COUPLED WITH COURAGE, FORESIGHT AND HARD WORK

The NRW state government's decision to send two ministers to attend the ceremony was a sign that "we see you as a model company that has made a name for itself in the international markets as a technology and quality leader," Professor Andreas Pinkwart, Minister of Economic Affairs and Digitalisation, emphasised in his laudatory speech. He stressed North Rhine-Westphalia's commitment to electromobility, citing cell research at Battery Campus Münster, activities at RWTH Aachen University, the E-Go electric vehicle and the 60,000 charging stations dotted around the region. "We're very much indebted to firms like **PFLITSCH**, who are willing to invest and are open to new markets."

Professor Andreas Pinkwart, NRW Minister of Economic Affairs and Digitalisation, emphasised the importance of small and medium-sized enterprises for NRW in his speech and explained their relevance for issues such as electromobility, the future of which hinges crucially on SMEs like PFLITSCH and their ability to innovate, as well as on the growing expansion of research alliances.

Peter Biesenbach, North Rhine-Westphalian Minister of Justice, stressed the courage, foresight and sheer hard work of the **Pflitsch** family as well as the company's Managing Directors past and present and also its employees; after all, as the long-serving member of parliament for the Hückeswagen constituency, he could almost be described as a contemporary witness. "You've always had a fascination for all things new, which is how you came to invent the industrial cable gland, for example." **PFLITSCH**'s management insisted on personally accompanying the two ministers on a tour of the modern production facility after the official part was over.

SOLUTIONS FOR ELECTROMOBILITY

Nearly 5,000 enterprises were nominated for this year's SME Grand Prix and **PFLITSCH** is proud to be among the winners. "It's an important award and renewed confirmation that our commitment is working," Lenzing observed. The business is still family-owned and managed to this day and an employer of 300 people, with its own global distribution network. In anticipation of future demand, the focus is now on electromobility as the next growth market. **PFLITSCH** has developed special cable glands for this purpose, to enable safe current discharge from the high-voltage systems.

Professor Uwe Baake, Head of Product Development at Mercedes-Benz Trucks, treated guests at the event to an insight into the world of commercial vehicles at his company, which is determined to end sales of diesel-powered trucks in Europe, Japan and North America – its key main sales regions – by 2039 at the latest. "We've just started series production of the eActros, our battery-electric truck. With a range of up to 400 kilometres and a gross weight of 19 or 27 tonnes, it's a typical truck for supplying to supermarkets." A 40-tonne version for long-haul traffic is all set to follow in 2024. "Starting in 2027, a modern hydrogen-based truck with twin fuel cells will be ready for road use too." Ranges of a thousand kilometres or more will hopefully be achievable by then." He is looking very confidently to the future and welcomes this kind of constructive cooperation with partners like **PFLITSCH**. "After all, we need innovative suppliers like you to bring our trucks to the market punctually and reliably."

Prof. Uwe Baake, Head of Product Development at Mercedes-Benz Trucks, presented an exciting insight into electromobility in relation to commercial vehicles plus a brief perspective of the industry's future.

UL certification granted for the Level*Ex*

PFLITSCH has received official confirmation of it having gained UL Listed certification for the Level*Ex* cable gland used to feed in cables in Ex-d and Ex-e applications.

Underwriters Laboratories is one of the world's best-known independent certification organisations for product safety. The UL seal is particularly important in the US market, because the product liability laws here are even stricter than in Europe. Unlike the UL Recognized certificate, which is issued for components parts of a product, the UL Listed certificate applies to entire products. For this purpose, the product in question is subjected to even more testing. In addition to the UL certificate as expected, the Level*Ex* has also gained the following important certificates: VDE, Ex, IECEx, CE, RoHS, DNV, CCC and KCs.

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CCC approval for ATEX/IECEx products

PFLITSCH products meet the highest safety standards – and now CCC approval, too.

We are pleased to announce that we have gained official Chinese CCC certification for all of our ATEX-/ IECEx-approved products. All 13 certificates are available in English and Chinese and can be downloaded free of charge from our website.

How to manage exchanging digital product data

As part of Industry 4.0, all digital processes from design, ordering and manufacturing to documentation and marketing will become even more closely interconnected. This will render the automated exchange of standardised digital product data ever more important. At the same time, the demands on data quality are increasing. This is no easy task, as a growing wealth of data has to be processed in more and more departments. PFLITSCH has identified this challenge and interviewed Monika Braun, the company's own master data manager, on this vital subject.

Ms Braun, what is your professional background?
_*M. Braun:* I am a trained construction mechanic and mechanical-engineering technician. When I first began my career, I worked for a long time in the aircraft industry, then later in the automotive industry, where I was responsible for development projects, among other things. Most recently, my job has been to manage the handling – in particular, the integration and processing – of CAD data in PLM systems, that is, product lifecycle management systems.

What is the purpose of master data in general – and specifically the digital twin?
_*M. Braun:* Here at PFLITSCH, we want to use the digital twin – that is, all digital data that comprehensively and precisely describes an actual product – to optimise, i.e. simplify and accelerate, our workflows with customers and wholesalers. This concerns two tasks in particular: On the one hand, wholesalers who sell PFLITSCH products to the end customers also process the commercially relevant data of the products. They map their digital twins in the form of article numbers, package contents, photos, etc. in their store system, so that the customer can get as precise a picture of the product as possible based on this data.

On the other hand, large industrial customers specifically request technical product data such as the 3D CAD data and material data because they further process PFLITSCH products by installing them in their own products, e.g. in charging stations, machines, robots or control cabinets. This means it is very important that they have as much and the most precise data as possible available to them at an early stage of the process so that they can integrate these digital twins into their design process. →

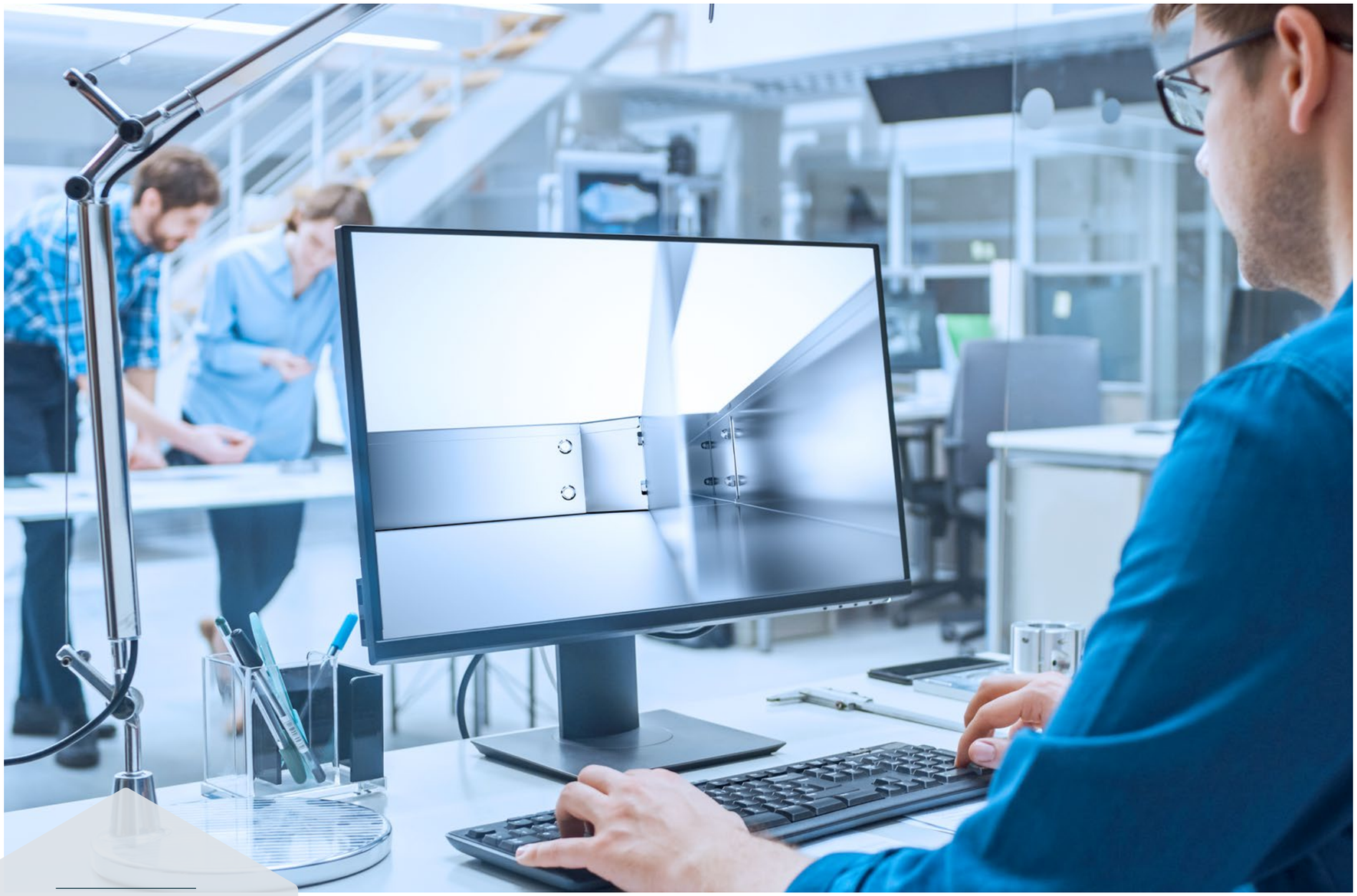
What data sources are used to create a digital twin?
_*M. Braun:* At PFLITSCH, it's the ERP system that acts as the initial source of the master data. However, that alone is not enough. This is because it is not suitable for managing design data such as 3D data, article photos or drawings. That's why the master data is also intelligently processed in our PIM system, which we use to compile catalogues and our online product search engine. We then export the processed product data, i.e. the digital twins, using common exchange formats and make them available to our customers and wholesalers.

As a master data manager, how do you go about generating the master data?
_*M. Braun:* I am, as it were, the central point of contact for all product data provided by many different departments and interfaces within the company. In addition to technical data from product management, such as thread sizes and materials, this includes technical drawings from the Design department, 3D data from R&D, as well as image data and product descriptions from Marketing and commercial data from Accounting, Purchasing and Sales.

How do you ensure that the data is always up-to-date?
_*M. Braun:* All our employees at the relevant interfaces feed their data directly into our ERP and PIM systems. Responsibility for the quality of our data therefore also lies to a certain extent with each individual employee – they must make absolutely sure that the data they enter is up-to-date data. For control purposes, we constantly carry out random checks at various points, and detect and correct possible discrepancies in the data as part of our work on the catalogues.

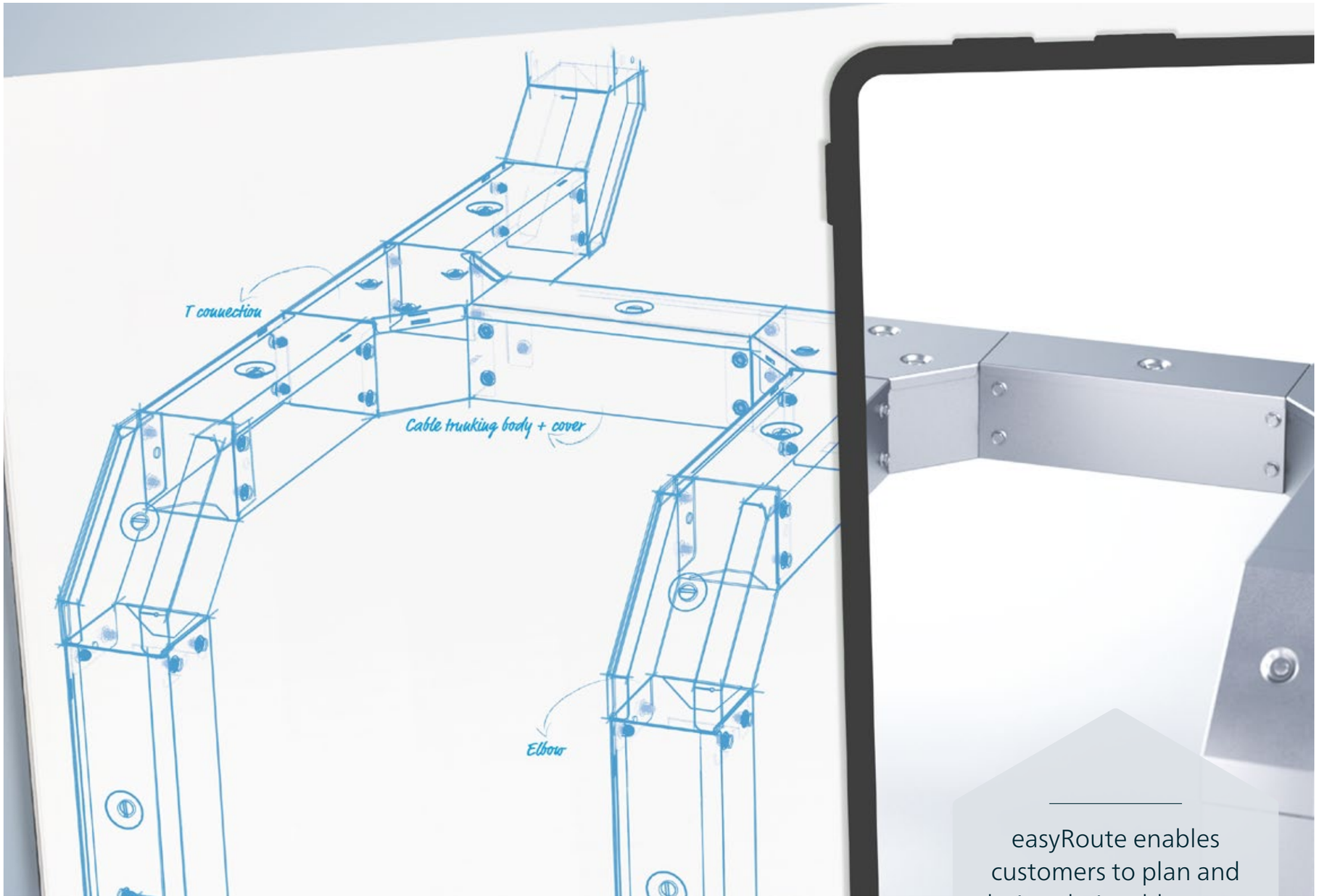
What is the biggest challenge with respect to digital master data?
_*M. Braun:* Everyone who creates digital data does so in their own language and their own system, so to speak. To ensure that our customers and wholesalers are in a position to receive the data securely and process it reliably, we use uniform data structures and formats that meet the global classification standards ETIM on the wholesaler side and ECLASS on the industrial-customer side to create and exchange the data. But that's not all. At PFLITSCH, we play an active and leading role in shaping these classification standards. On the one hand, we are a member of ETIM, the classification initiative of the wholesale trade, while on the other hand, we are also a member of the ECLASS association's working group so that we can actively promote the standardisation of products and services within the industry. We are a big proponent of the need for those who deal with products on a daily basis as manufacturers to participate in these classification bodies.

How does classification work?
_*M. Braun:* In each standard, products such as a cable gland are classified into main groups and classification groups. This is done using ⟶



CAD data of all PFLITSCH cable trunking components available as digital twins.

Monika Braun



codes for describing properties and characteristics, which vary from class to class. For example, a cable gland is described by a different group of characteristics than those of a light bulb.

There are various answers possible for the characteristics: these can be free-text fields, as is the case with article descriptions, which allow the manufacturer to accurately describe their product. Then there are pre-formulated answers for certain characteristics, e.g. for materials or colours. The various possible answers are developed in committees and working groups of the classification initiatives.

How do customers access the data?
_*M. Braun:* We provide each customer with the product data they require – which we have prepared in BMEcat format (catalogue exchange format) – plus image material and 3D data. As a rule, this request is made via the account manager. In addition, some data is already freely available, namely the 3D data from our CADENAS component library on our website. Against the backdrop of Industry 4.0 and the increasing degree of connectivity, we are working to make it even easier for customers to access our data. Both BMEcat data and images etc. will soon be available for download from our myPFLITSCH portal. All our customers need do is register. Should they then still have some very specific wishes, we will of course do everything we can to fulfil them.

> easyRoute enables customers to plan and design their cable routes themselves.
>
> *Monika Braun*

What is your own personal highlight with regard to product data or digital twins at PFLITSCH?
_*M. Braun:* As part of our cable trunking operation, we provide our customers with easyRoute, an extremely practical and effective CAD tool that allows them to plan and design their cable routing themselves. They can use easyRoute to embed their entire trunking layout in their machine environment and conduct a collision check. We then manufacture ready-to-install cable trunking component assemblies based on this design data. To this end, easyRoute gives customers access to our CADENAS component library, in which the CAD data of all of our cable trunking components is available quasi as digital twins. They can look at each component on the computer, check whether it's suitable, and incorporate it into their digital cable trunking layout. This demonstrates very clearly how much added value is gained by digital data, which in itself has no intrinsic value, when deployed in practice.

Focus on delivery performance

How PFLITSCH supports the supply chain.

Without cable glands, an electric bus or train isn't capable of travelling a single inch or a multi-million dollar production line can't be put into operation.

So the demands made on PFLITSCH's ability to deliver across the full range of the 34,000 or so individual articles that make up its product portfolio are enormous. That is why PFLITSCH ensures at all levels that its products enjoy firstly excellent availability and secondly fast delivery performance. Automation and digitalisation – in a fully integrated system ranging from production to the automated small-parts warehouse – help us to achieve this. →

Production performance comes before delivery performance

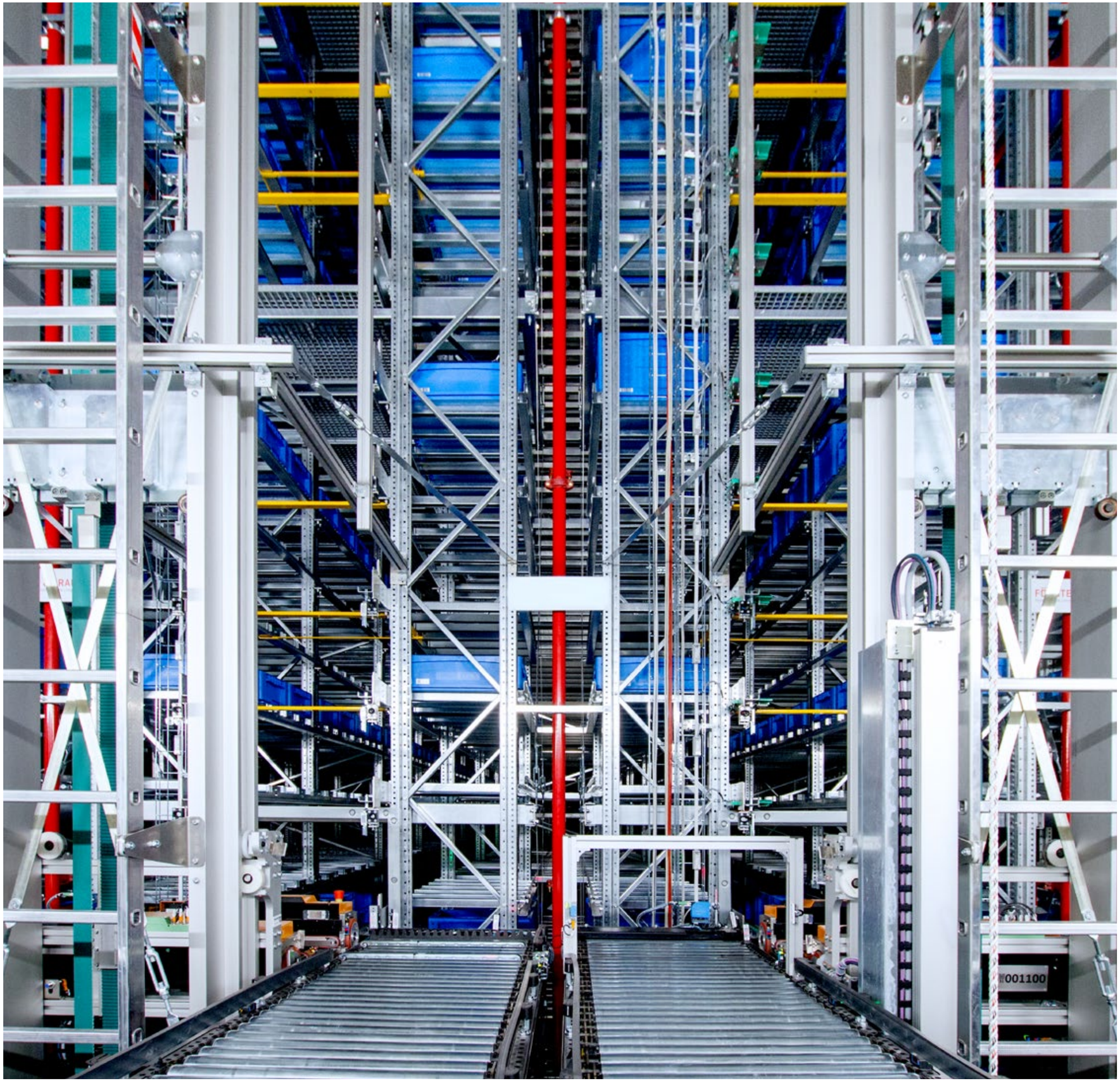
All products from PFLITSCH are “Made in Germany”. The cable glands and cable trunking are manufactured by some 300 employees in two plants. There is a very high degree of vertical integration. Upstream suppliers are for the most part from the local region to keep distances short. Thanks to long-standing partnerships based on trust and backed by delivery guarantees, production is always assured.

Inventory comes before delivery performance

The fastest logistics in the world are worthless if there are no goods to shift. That’s why PFLITSCH takes care to keep inventories at a good level, even if that means tying up a lot of capital. Many customers operate with a just-in-time or Kanban system or order on a project basis and therefore have little to no stock. If PFLITSCH, as their supplier, weren’t able to deliver, production would cease. The coronavirus pandemic has also shown that good stocks of goods and pre-products help when sections of the workforce are ill or in quarantine.

Order performance comes before delivery performance

The best ordering process is one that is fully automated. PFLITSCH is working intensively on perfecting this. The foundations of such a process are an ERP, a PIM and a warehouse management system. First of all, digital product data, together with digital data exchange, make it simple to search for the right products – or even to plan using 3D CAD data. The next step is for the customer to place their order request via digital parts lists or the shopping cart function on our website. Once the offer has been approved, the order is stored in the systems and processed accordingly. At all points, automation prevents errors and speeds up processes. ⟶



In-house logistics performance comes before delivery performance

Cable glands account for a large part of PFLITSCH's product range. They come in numerous models and variants. Orders for larger projects are complex and consist of dozens of different items. The bottleneck here is the need for fast picking: With a classic high-bay warehouse, storing and retrieving such small parts would take far too long and, with around 34,000 different article numbers, a manual warehouse would require an extremely large amount of space – and mean the warehouse staff would have to walk countless miles every day! The solution is an automated small-parts warehouse. PFLITSCH has had such a warehouse in full operation since 2018. The workers in the shipping department retrieve the goods at four picking stations, pick them and scan the article barcodes, with this last step documenting the handling of the orders in the warehouse-management and ERP systems.

The small-parts warehouse provides 25,000 storage spaces on 700 square metres of net floor space and was built by Förster & Krause from Remscheid, which is just down the road. Five rack aisles and 28 levels are sufficient for this purpose. Instead of high-bay stackers, battery-powered microshuttles are used. These 40-kilogramme, mini platform trucks whizz through the aisles fully automatically at around 8 km/h, managing 500 storage and retrieval operations per hour. On their platform, they transport strong, quiet-roll, double-base Euro stacking containers from BITO, which are equipped with barcodes.

Of course, such a system also requires the use of cable glands and trunking during its construction and these obviously come from PFLITSCH: Wire-tray, PIK- and Industrial-Trunking have been installed. ⟶

Transport links come before delivery performance

From Hückeswagen to anywhere in the world – and fast! It takes just 15 minutes to reach the motorway from Hückeswagen, and it's only 35 kilometres as the crow flies to Cologne-Bonn Airport – one of the largest hubs for air freight in Europe. Thanks to this excellent transport link and our certification as a "known consignor" by the German Federal Aviation Office, which ensures fast processing at the airport, we can guarantee that customers receive their goods speedily.

Your UKCA certificate, please!

PFLITSCH successfully navigates the post-Brexit switch from CE to UKCA.

Driving on the left, vinegar on their chips (French fries), and units of measurement that defy the decimal system – the British have always been known for cultivating a certain eccentricity. Brexit has once more brought home to us this pronounced tendency towards quirkiness. But while the UK's decision to withdraw from the EU has by no means anything to do with the proverbial British sense of humour, it has without doubt led to some new and significant challenges.

Especially for companies like PFLITSCH and their customers who export to the United Kingdom, "new" regulations have come into force with regard to the movement of goods. As a result, we are forced to overcome new bureaucratic hurdles – such as UKCA certification for our products. But there's no need to worry. We have already taken the necessary steps to acquire this new certification so that our customers do not find themselves at a disadvantage, and nor do we. However, since the relevant British authorities still need some time to get the necessary processes up and running, there will be a correspondingly long transition period in order not to cause harm to their own economy.

UKCA replaces CE in the UK

In the past, while the UK was still a member country, a declaration of conformity and CE certification were all that were required for goods to be exported to the UK from within the EU. The country's exit on 31 January 2020 also means it has broken away from EU-wide, uniform regulations for many products for which the CE marking has been obtained. A new mandatory declaration of conformity is now required. Instead of the CE (Conformité Européenne) marking, products that we supply to the United Kingdom – that is, England, Northern Ireland, Wales or Scotland – will need to bear a UKCA mark (UKCA = UK Conformity Assessment) confirming our products' compliance with UK legislation.

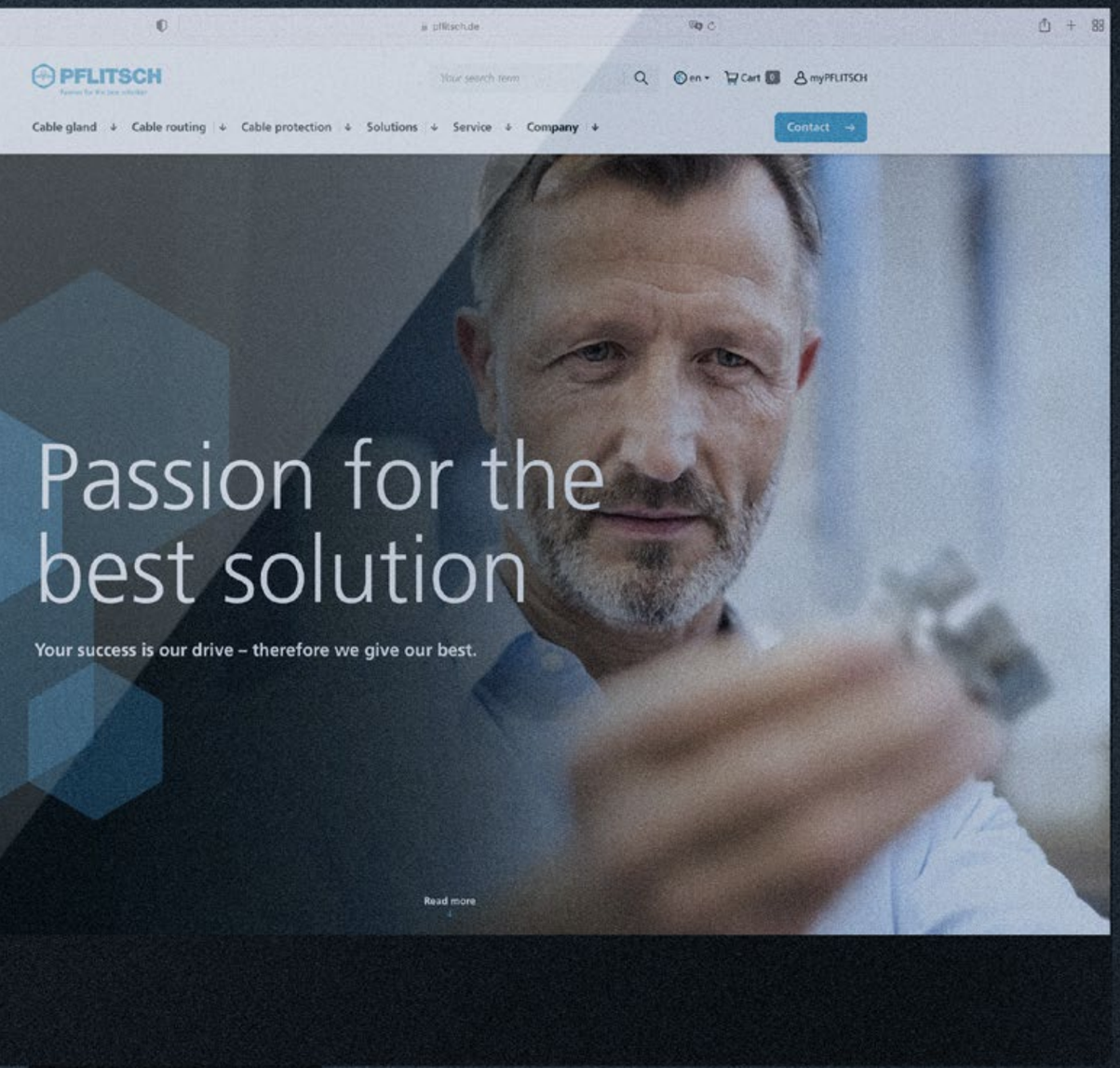
CE marking valid until the end of 2022

At the time these new requirements and regulations for UKCA conformity came into force, they were essentially the same as those for the CE marking. However, as UK product regulations evolve over time, we at PFLITSCH foresee that products will be subject to modified or new requirements that deviate from those of the EU, and which manufacturers and exporters will have to comply with. During a transition period that will run until the end of 2022, the CE marking will continue to be recognised for most products – according to the UK Department for Business, Energy and Industrial Strategy. Since the beginning of 2022, PFLITSCH has also been printing the UKCA logo wherever the CE mark appears on labels. In addition, the article descriptions in our sales documents and on our labels are now in both German and English. As such, PFLITSCH is already well positioned on an international level.

UKCA and UKEX – new certifications

In addition to UKCA Declaration of Conformity, Ex products will in future also require a separate UKCA 'Ex' (UKEX) certificate. We have already gained UKEX certifications for our blueglobe and blueglobe HT cable glands. The relevant certificates are now available for free in the download area of our website.

UK CA 2503



The new PFLITSCH website

Order the right products simply and reliably.

Time is money – this is also true when it comes to implementing mechanical and plant engineering projects. And it starts with ordering the components required. To help our customers order the right products – as easily, quickly and reliably as possible – PFLITSCH has completely redesigned and relaunched its website. ⟶

With the aid of numerous digital tools, such as the free easyRoute cable trunking planning software, the 3D CAD data of all cable-trunking and cable-gland components, as well as comprehensive technical descriptions, PFLITSCH enables its customers to select precisely the products they need straight from the new website. For the more complex a project is, the greater the challenge of correctly assembling the required products.

Genuine product-selection aid

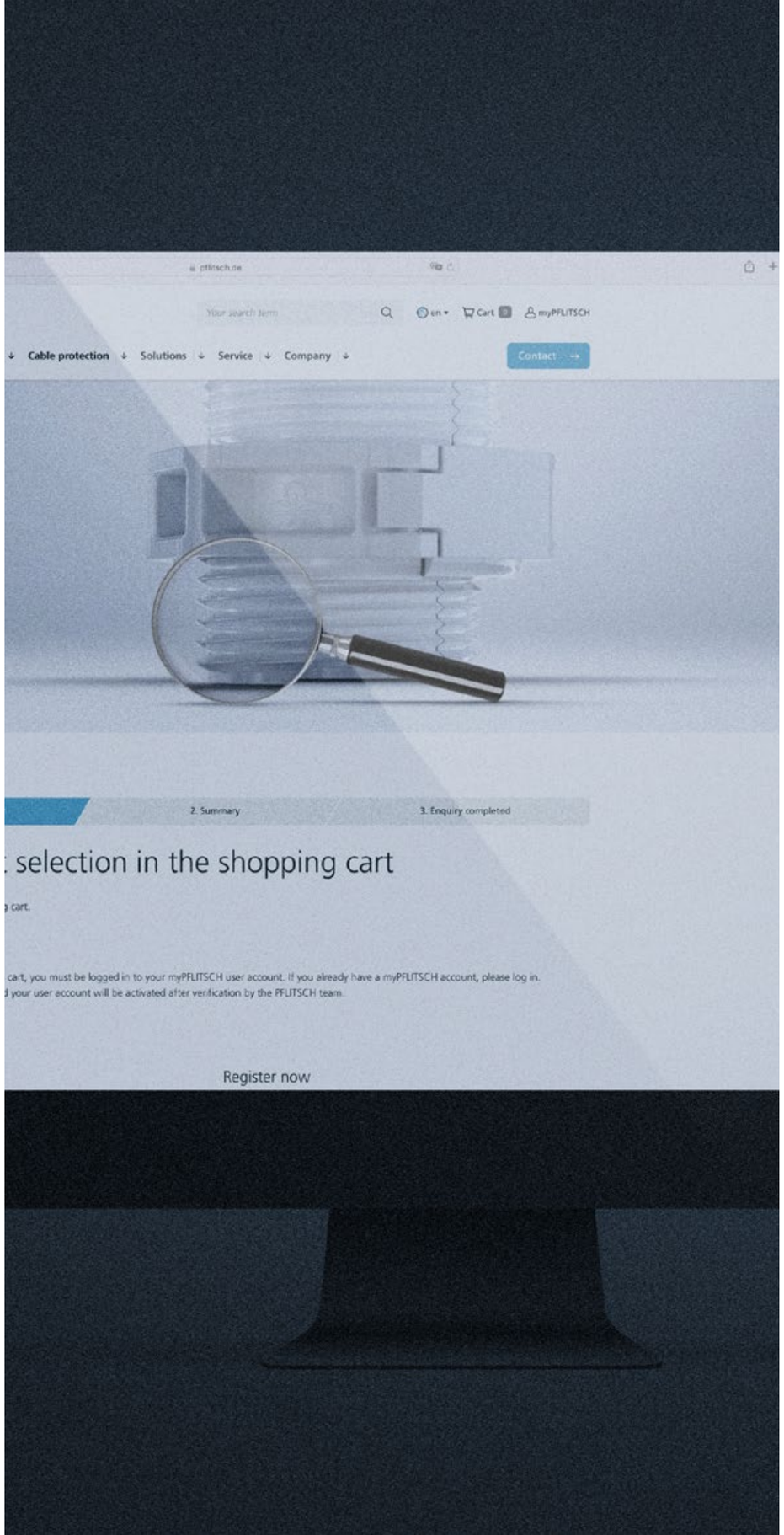
The new iteration of pflitsch.de enables interested parties to find precisely the products that are perfect for their project in next to no time. For example: Hygienic Design cable glands for food production plants. A separate menu item titled “Solutions” leads to the industry-specific products recommended by PFLITSCH, including their technical information sheets and accessories. The prospective customer can then place the products they want in the shopping cart and – after registering in the myPFLITSCH customer portal – submit them as an order request.

Product search with more than 20,000 articles

The smart product search function enables customers to find the right PFLITSCH cable gland for their particular application in no time at all. All they have to do is select their application area or product category and, if necessary, refine the search results by using filters for parameters such as materials and sealing ranges. The appropriate products are then displayed with all their technical specifications and can be added to the shopping cart.

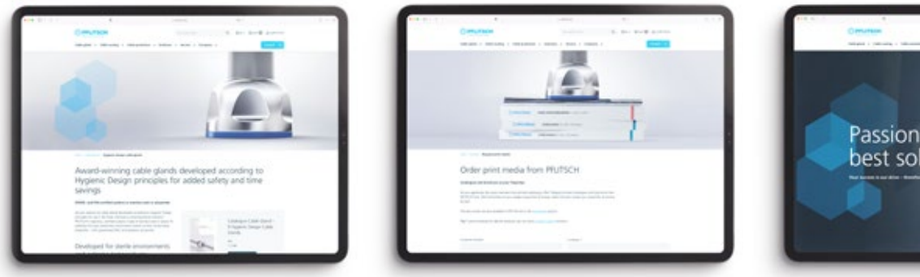
Order controls by professionals

At PFLITSCH, shopping cart requests made via the website are not automatically converted into an order. Instead, they undergo an order control by PFLITSCH account managers. In this way, PFLITSCH ensures that the customer always receives the perfect solution for their application. After this order control has been completed, the customer is sent appropriate optimisation proposals, together with a tailored quote – all within 24 hours of submitting their shopping cart request.



Downloading catalogues, brochures and technical reports

Interested parties and customers who are looking for comprehensive information on PFLITSCH products – from product features and product advantages to technical details and order numbers – will find what they want in PFLITSCH’s download area. All of this information can be found in our catalogues and brochures, which you can download as PDFs for free. In addition, we recommend that you download our technical reports, which offer interesting insights into practical applications.



New PFLITSCH design

PFLITSCH is constantly developing. The new website has been created entirely in line with PFLITSCH’s new corporate design and branding. The PFLITSCH design combines elements of technical precision with a clear structure and a focus on the benefits our products and services bring to our customers.

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Customer Magazine GB | 07.2022 | 149850 | 149895+

PFLITSCH
Passion for the best solution