



Nr. 728 | DECEMBER

# Bossard News

**Expert Design** | Our recipe for success for your best possible product ...  
**Smart Factory Logistics** | Order easily and intelligently by smartphone ...  
**Proven Productivity** | Unilamp brings light to the darkness ...



## EDITORIAL



### Dear readers,

The PMI is recovering. This is great news. Everyone is again dealing with the coronavirus. This is not so great news. Will the V-recession turn into a W-recession? After all, the manufacturing industry has still been spared from another lockdown as of the day when I wrote this editorial. So there is still hope that the economy will recover.

However, it may also be that when you read this editorial today, my statement is already out of date. Unfortunately this seems to be the new reality. Serious things change nearly daily and sometimes overnight. This requires a lot of flexibility, variable cost structures and short response times. Entrepreneurially speaking, this is definitely exciting and challenging.

I would like to draw your attention, dear customers, to some highlights in this issue.

In the Assembly Technology Experts column, we are presenting the Expert Design service to you. Here our engineers provide you with support in the development and design phase of your new product in all joining technology challenges so as to combine design and function in an ideal way with the aim of designing maximum quality products with the fewest possible individual parts.

Smart Factory Logistics goes mobile with Bossard Code next generation. You can control the entire ordering process via your smartphone. You can re-

cord orders online and offline. Maximum convenience and ease.

We are always amazed at how many customers have not yet really taken to heart that we achieve a major part of our sales with drawing parts, i.e. with custom special designs. Please take a look at the Product Solutions category in our world of drawing parts. You will be amazed at everything you can source from us.

We like to substantiate our claim of Proven Productivity with examples from practice. Please read the article about the company Unilamp.

Ladies and gentlemen, Advent and Christmas are just around the corner again. I do not feel like buying presents at all. I think a little bit of normality would be the best Christmas present for all of us.

I wish you happy holidays,

**PETER KAMMÜLLER**

**General Manager, Bossard Switzerland**

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Online

You can find the PDF edition of the Bossard News online at:  
[www.bossard.com](http://www.bossard.com)

OUR EXPERTISE MADE AVAILABLE TO YOU

## Useful Bossard online resources that you might not know about yet



Are you looking for technical data of the selected fasteners for your new product development? Or would you like to optimize the assembly of your connection solutions with detailed calculations? Bossard offers a variety of useful resources and tools to you online, which will help you make product and design decisions or show you potential savings.

### Technical information for connections

High quality technology is more than just a functional design. Every detail counts. Choosing the right fasteners, the right screw, nut or rivet can noticeably lower production and assembly costs. In our technical information, we provide you with our extensive knowledge in this regard. Various tables help you to convert different units and masses. You will also find a clearly arranged compilation of international standards and designations as well as explanations of technical terms used in bolting technology. If you have questions about the properties of screws of different strength classes and materials or if you are looking for assembly recommendations, you will find the answers you need here.

### CAD online portal

Bossard, together with the company CADENAS which specializes in this field, has created a CAD library of all catalog items to make work easier for designers by providing CAD models. The CAD library makes it possible to download comprehensive data for all Bossard catalog items with the corresponding technical specifications. Functions such as animations or two and three-dimensional detailed views help you to choose the right fastener. Explore our CAD online portal here:



### Online converter and computer

Bossard's computers and converters are designed for engineers, technicians, designers and students who deal with developing and assembling screw connections.

Bossard online converters can be used to very easily convert different units of measurement of fasteners, such as length, hardness, torque, etc. The online computers for design and production support the correct dimensioning and execution in joining technology. Additional online computers are available to you for technical design, such as to calculate screw-in lengths, tightening torques and preload forces.

Bossard online computers and converters are now also available as an app. This way you always have the practical tools at hand wherever you are.



*The online computers for design and production support the correct dimensioning and execution in joining technology.*

### Calculate your savings potential

Cost reductions are possible in the C-parts management at different places. You can use the TCO computers of our Assembly Technology Expert Services and Smart Factory Logistics to play through different scenarios and find out which of your processes can be optimized and how big the associated savings potential is.

ASSEMBLY  
TECHNOLOGY  
EXPERT



SMART  
FACTORY  
LOGISTICS





ENGINEERING

# Assembly Technology Expert

## SAFE AND HIGH-QUALITY PRODUCTS

# Expert Design: Our recipe for success for your best possible product



**It is a big challenge to design a safe high-quality product, despite the increasing time pressure and growing competition. While the function of a fastener may seem trivial, the selected material and the correct dimensioning are nevertheless decisive for the quality of the whole product. On the following pages, read on to find out why it is worth focusing on the fasteners from the start when designing your product.**

### **Assembly Technology Expert**

When developing a new product, our Assembly Technology Expert Services provide the best-possible solution for any joining technology challenge. With the Expert Design service – one of a total of six engineering services – we would like to very specifically help you to focus on the fasteners from the start when designing your product.

### **What is the Expert Design service?**

It's all about the quality and reliability of your end products. Bossard experts accompany you throughout the entire design process, from choosing the appropriate materials to producing prototypes to recommendations for a cost-efficient assembly process. You benefit during the product development phase as well as long after, for example from:

- Cost optimization during the design phase thanks to the ability to choose optimal fasteners and joining technologies
- Lower production costs thanks to faster assembly processes
- Process reliability for the entire service life of the application

But cost savings alone are not decisive. What is ultimately decisive for your success is that you have the right fastener at the right time and in the right place. Of course Bossard can also help you here. We provide you with comprehensive information for the technically-best solution and its efficient realization.

*“Focus on the fasteners from the start when designing your product. Bossard helps you to choose the right fasteners and joining technologies, helps you to shorten the time to market launch and thus optimize the development and product costs.”*

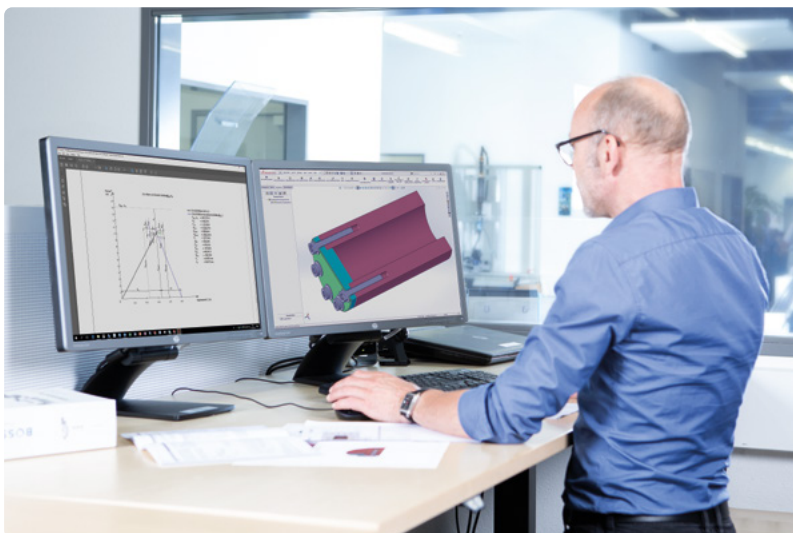
The design processes of your product's fasteners are developed by the engineers at our specialist centers for joining technology until they are ready for use.

#### **New addition to the Expert Design service**

Our goal is to design the best possible product for you. To be able to keep our promise, we are constantly developing. That is why the Bossard Group recently included 3D printing in its portfolio, which opens up many new doors as part of the Expert Design service. The advantages include the gained design freedom and additional cost savings thanks to faster development and prototype phases. We reported on this extensively in the last issue of the Bossard News. Visit our website for more information: [www.bossard.com](http://www.bossard.com)

#### **Want an example?**

The Expert Design service can be best explained using an example: Imagine that you want to develop a new product. You will soon see that these days all products must be designed as small and light as possible. This is already where the Expert Design services come into play, namely with calculating screw connections based on the VDI-2230 directive for the transmission of constant or alternating operating loads. The screw diameter can be optimally chosen or chosen with the smallest possible diameter in this way.





In other words: The screws are designed so that the connection part flawlessly performs the task intended and permanently withstands the operating loads that occur.

So for applications where you want to be truly certain that the quality and safety of your screw connection is guaranteed, our specially trained engineers are happy to help you. We take your specific assembly conditions and surface specifications into consideration and determine the necessary screw dimensions and strength classes.

You receive reliably calculated connections and the certainty that the defined fastener will withstand the tested conditions for the specified service life. This includes evidence of the load-bearing capability of the screw connection.

Our software-supported screw calculation according to the internationally recognized VDI-2230 directive not only provides all of the required information for your application, but also minimizes the error rate.

## Our Expert Design service consists of two parts:

### Design consultation

- Support when choosing the optimal joining technology and elements
- Design of fasteners
- Calculation of screw connections
- Error analyses of fasteners

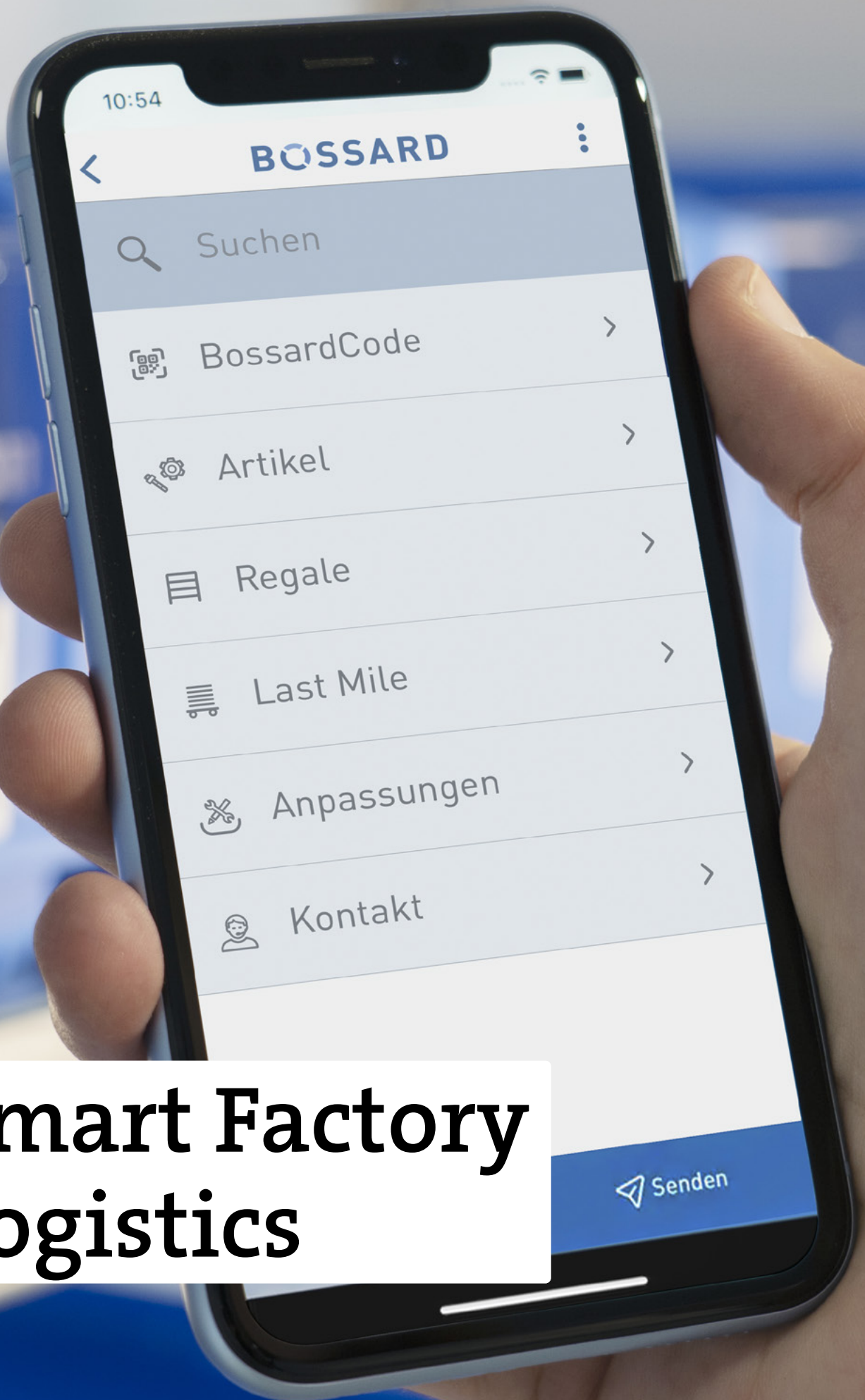
### Design platform

- Online converter and computer
- CAD online portal
- Technical information

The best thing about it: All tools on our design platform are available to you for free and around the clock. Simply visit our website: [www.bossard.com](http://www.bossard.com)

SCAN ME





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BOSSARD

Suchen

BossardCode

Artikel

Regale

Last Mile

Anpassungen

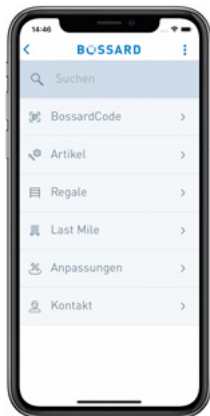
Kontakt

Senden

**Smart Factory  
Logistics**

## BOSSARD CODE

# Order easily and intelligently by smartphone



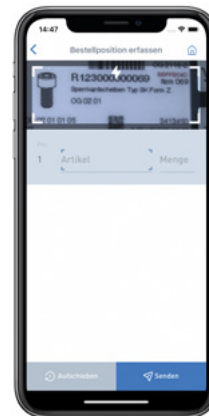
**Step 1:** Select the Bossard Code menu in the app.



**Step 2:** Record new order or open an existing order list.



**Step 3:** Quick and easy identification of pre-set locations.



**Step 4:** Intuitive and user-friendly order entry – also available offline.

It is even easier to order regularly used items with the new Bossard Code. Thanks to the integration into the ARIMS mobile app, orders can be made quickly and intuitively. The smartphone records the barcode or QR code label and transmits the order wirelessly.

And if that's not enough: ARIMS Mobile gives you real time information (update) from your production at all times – no matter where you are. Find your item faster than ever or check the status of your deliveries. With ARIMS Mobile, you have all the information you need in the palm of your hand.

## FEATURES



WIRELESS



MANUAL ORDER RELEASE - via app



OFFLINE ORDER RECORDING



ADAPTABILITY - Use of existing infrastructure



MAINTENANCE-FREE



ARIMS MOBILE – Access to the digital cockpit

## Your benefits

- Shortened order and delivery times
- Maintenance-free
- Real time information (update)
- Reduction of total operating costs
- Increased efficiency
- Enhance your profitability
- More time for your core activities

## Special offer

Replace your scanner solution by the end of this year with the new Bossard Code app and receive a 20% special discount on our ARIMS Mobile license for one year.

Visit our website to learn more:  
[www.bossard.com](http://www.bossard.com)

SCAN ME





PRODUCTS

# Product Solutions

## MARKET SEGMENT OF ELECTRIC VEHICLES

# Sustainable competitiveness for the electric vehicle market

Electric vehicles are revolutionizing the way we transport ourselves today and in the future. Innovative new market players are challenging the established industries and are taking their place in times when customers are increasingly focused on a sustainable CO<sub>2</sub> balance and social responsibility. Many new challenges result in this dynamic environment:

- Established and new providers are in a footrace for technical superiority, customer attention, product design, risk capital and ultimately for market shares.
- Product development cycles are becoming increasingly shorter.
- The production of successful products must be scalable.
- Technical failures and disappointments can quickly lead to market players disappearing. Safety and reliability are crucial success factors.
- Lightweight materials are important for reducing weight and increasing range. But new materials also require new innovative joining solutions.

At Bossard, we help you to make the right decisions from the start and to make your products competitive today and in the future.

### What does this mean for our customers from the electric vehicles market segment?



**Know-how:** We work with OEMs from the electric vehicle market, battery manufacturers and electric vehicle suppliers from all over the world. You will find a current reference in our new brochure (see the QR code below).



**One-stop shop:** Bossard offers over one million joining solutions, electric assembly accessories and control elements from inventory.



**Special parts:** Do you need special parts? From small modifications to our standard products to a complete redevelopment – we have the right solution for you. For additional information, please refer to the following article.



Do you need support with your product development? Our **Expert Design service** will help you to choose the right materials and fasteners. We also supply you with prototypes and small series.



With our **product range analysis**, we find options for streamlining your fasteners. An optimized bill of materials is crucial to reducing the total cost of ownership.



**Test laboratories:** We ensure the product quality of our suppliers with ISO-IEC 17025-accredited test laboratories in 10 countries around the world. You can also have your own products and applications tested there.



Ready for **series production**? With 70 Bossard branches around the world, short response and delivery times are guaranteed.



**Smart Factory Logistics:** Focus on your core expertise while we optimize your B- and C-parts management with a fully automated logistics system and make it more transparent.



**Many years of market experience:** Countless successful projects and many long-standing partners speak for themselves.



**Tailor-made solutions:** Rest assured that we will find the best solution for your individual requirements. No more and no less. Talk to us!

You will find a detailed overview of our solutions for the electric vehicle market in our brochure.

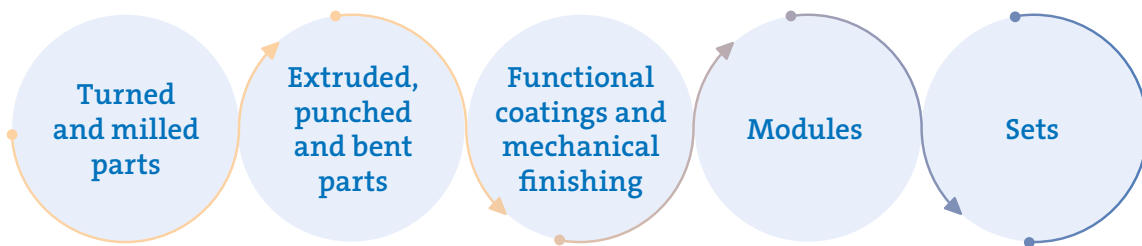
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## ADDED VALUE FROM ONE SINGLE SOURCE

# Special Parts from Bossard

As you perhaps know, you can get over one million standard products from inventory from Bossard. But did you also know that we are able to supply you with custom-specific special parts with our portfolio of global suppliers? Regardless of the manufacturing process, lot size, delivery time, logistics or quality requirements: We have the solution for you!



### Machining

Turned, milled and drilled parts allow for a high level of precision, low tolerances and complicated shapes. All common materials, such as machinable steels, non-ferrous metals and plastic, stainless steel and numerous special steels are available. Bossard can supply you with all desired lot sizes, dimensions and surface treatments.



Swivel arm

### Molded parts

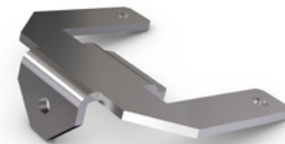
Molded parts are characterized by a high material utilization, short production times and increased strength. In addition, they are particularly cost-effective. The material, drive type, production tolerances and other comparable requirements determine whether a special piece can either be produced through cold forming or hot forging.



Shoulder screw

### Punched and bent parts

For punched and bent parts, we offer you all currently available manufacturing processes as well as all possible dimensions and surface treatments. Our partners are production specialists for all requirements.



Pinboard holder

**Our offer does not end with the production of your special part. With our functional coatings and a mechanical finishing, we give your individual solution the final touch.**

### Surface treatment

Bossard offers over 150 different coatings and finishings. Corrosion protection, optimization of the friction values, appearance, wear resistance – the reasons and applications are many. Our experts support you when choosing the optimal solution for your product.



Bossard coating AF 573

### Mechanical finishing

The mechanical finishing includes shortening elements, cutting threads, drilling connection and split-in holes, turning thin shafts and grooves and much more. Modifying standard products through mechanical finishing is often the fastest and easiest method to achieve an optimized and tailor-made product solution.



Turning of thin shanks and grooves

### Functional coatings

Functional coatings are system solutions for mechanically stressed fasteners, such as screws and nuts. Depending on the coating, they can assume a locking, securing (captive) or holding/sealing function.



Nystay® fixing coating

**But we can do even more for you: By request, we will supply you with pre-packaged assembly and accessory kits or even the finish assembled product.**

### Assembly and accessory kits

Bossard equips you with kits of the most varied components, precisely counted, neatly packaged and labeled or printed according to your requirements.



Assembly kit

**For more information,  
speak with your local Bossard  
contact partner and download  
our brochure:**

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PROVEN PRODUCTIVITY

## Bringing light to the darkness: Bossard as a strategic partner at Unilamp





The essence of light is one of the most important things in every person's life. That's the motto of our Thai customer Unilamp. We will show you how we support Unilamp – entirely in line with our motto "Proven productivity."

The company Unilamp is among the leading manufacturers of outdoor lighting solutions in Thailand. Every product that leaves the factory in Prachinburi, Thailand meets the highest quality standards.

To manufacture its broad range of products, the company needs a variety of different joining solutions. Thanks to our broad offering of joining solutions, our expertise in joining technology and our unique Smart Factory Logistics systems, Unilamp chose Bossard as a key strategic supplier.



**Bossard is unique and sets itself apart from other providers in aspects of the logistics systems, product solutions, fastening expertise and the great diversity of the product range!**



***“Bossard is one of the most important strategic suppliers for Unilamp.”***

*Pairoj Boonpasart, managing director of Unilamp, is more than satisfied*

What’s more: Using Bossard SmartBin systems in the Unilamp factory made a significant contribution to improving the company’s productivity and competitiveness. The fully automated system ensures the continuous flow in production. Manual processes, such as the continuous checking of current stock levels, are thus made superfluous.

The advantages of the SmartBin system are noticed throughout the entire company: Unilamp’s production agility improved thanks to shortened order and delivery times. It was possible to adjust the stock levels to the actual demand and the operational flexibility increased.

The improvements achieved can also be expressed in hard figures: The process automation using our Smart Factory Logistics system led to a time savings of 92% at Unilamp. The company’s total operating costs were reduced by 64%.

**Smart Factory Logistics helped us to streamline the inventory management in our own production.**



## About Unilamp

Founded in 1993, Unilamp is the leading Thai manufacturer of outdoor lighting solutions today. Unilamp's success is based on the accurate identification of customer requirements with respect to sustainability, reliability, design and functionality.

Thanks to their many years of expertise and the continuous development of new technologies, Unilamp has succeeded in creating energy-efficient and high-quality lighting solutions.

The company relies on a combination of intelligent environmental technologies, innovative design and intelligent work systems here. In this way, Unilamp's products meet the highest customer standards for design and comfort and at the same time contribute to reducing the environmental impact.

Unilamp exports its products to over 80 countries worldwide.

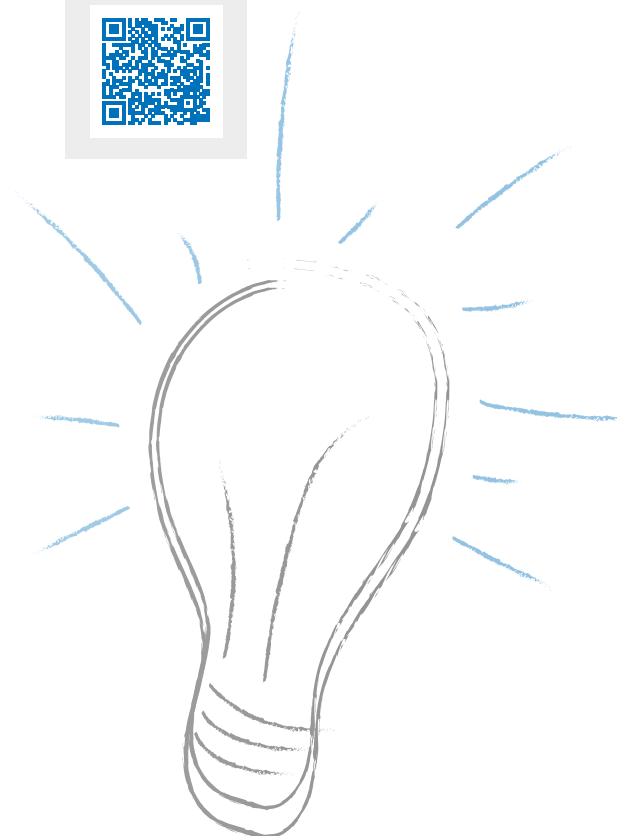
**To the Unilamp website:**

<https://unilamp.co.th/website/Forms/Home.aspx>



You can see the entire success story in English here:

SCAN ME



SUSTAINABILITY AND SOCIAL RESPONSIBILITY

Bossard is excited about the “Green Transport Label”



Switzerland

# EVERY FOURTH HEAVY GOODS VEHICLE IS TRAVELING EMPTY

About 25% of all kilometers driven daily by heavy goods vehicles are driven empty. This not only causes unnecessary CO<sub>2</sub> emissions, but also significantly stresses the traffic on our roads.

The Swiss start-up Pickwings offers affiliated transport service providers an ideal vehicle utilization. The automated system distributes the orders in the huge network, calculates the fastest, most efficient and optimal route and guarantees a sustainable route optimization.



## Fewer kilometers driven empty on our roads

Bossard also organizes its goods transports with the help of Pickwings and is supporting the sustainable transport solution on Swiss roads. We were awarded the "Green Transport Label" for this.

Pickwings awards the "Green Transport Label" to companies who significantly contribute to reducing CO<sub>2</sub> emissions by converting their goods shipments and who thereby promote climate protection.

We at Bossard are excited about the award!

# Qualify your employees in screw and joining technology

Practice-oriented specialist seminars with hands-on workshops will again take place in 2021 with the usual vigor about topics of screw and joining technology.

These include specialist seminars on multifunctional fasteners, corrosion, process-reliable connections or the new directive VDI/VDE 2637.

## Our seminars at a glance:

- Technical screw expertise
- Design of screw connections
- Calculation of screw connections as per directive DIN VDI 2230
- Multifunctional and thread-forming joining technology
- Assembly technology of screw connections
- Corrosion, corrosion protection and adhesive systems in joining technology

We are also happy to create a seminar that is tailored to your needs.

Simply ask us at:

[www.bossard.com/seminare](http://www.bossard.com/seminare)

## INSPECTION CERTIFICATES

# THE BENEFITS FOR YOUR COMPANY



### **DIN EN 10204**

DIN EN 10204 distinguishes between two types of confirmations of the delivered products. A confirmation of the compliance of the products with the requirements from the order is to be specified for all types of test certificates, but the confirmation of the test results is not stated. DIN EN 10204 does not regulate which tests mandatorily belong to the inspection certificate. This point is regulated by the product standards of the corresponding product. The representation of the inspection certificate is generally regulated. DIN EN 10168 serves this purpose, but every inspection certificate looks different.

### **Types of test certificate according to DIN EN 10204**

In the certificate of compliance with the order 2.1, the manufacturer confirms that the delivered product complies with the agreements or is compliant without providing information about test results. The factory certification 2.2, on the other hand, consists of the confirmation of compliance of the test results of the products supplied based on non-specific tests. The test certificates 2.1 and 2.2 are both issued by the manufacturer and may be dependent on the production department.

The inspection certificate 3.1 as per DIN EN 10204 is a confirmation of compliance with the test results of the products delivered by the manufacturer, independent of production, based on specific tests and specifications. An acceptance official of the manufacturer issues this confirmation.

The content of the confirmation from the inspection certificate 3.1 is also confirmed in the inspection certificate 3.2, but this not only certifies the manufacturer's acceptance official, but also an acceptance official of the purchaser or an acceptance official named in the official regulations.

### **Confirmation of compliance**

A confirmation of compliance is to be specified in every test certificate. This declares conformity of the delivered products with all of the requirements from the order and the technical delivery conditions contained.

### Confirmation of the test results

In the inspection certificates 3.1 and 3.2, the test methods and results used are evaluated with respect to complying with specifications from the order and/or the technical delivery conditions. This confirmation occurs in addition to the confirmation of compliance of the products delivered by the manufacturer.

### Acceptance official

The manufacturer authorizes an employee or an external organization, such as a testing laboratory, to perform the tasks of its acceptance official. This official may not be directly involved in the manufacture of the product.

If a purchaser requests that an inspection certificate 3.2 be issued, he must notify the manufacturer or the manufacturer's supplier in due time prior to acceptance who his acceptance official is. For this purpose, the purchaser must specify a contact address so that the manufacturer can get in touch with the acceptance official at the appropriate time to arrange a meeting. Such an acceptance official may be the ordering company's employee or belong to a third party organization and work for the purchaser by means of a service contract.



The company Bossard AG normally supplies an inspection certificate for the following application areas:

- Rail transport
- Power plants
- Cable cars
- Turbines
- Chemical plants
- Vehicle construction
- Medical technology
- Other industries and applications

Bossard AG is happy to provide its customers with the desired test certificate types. Since the inspection certificates can also be delivered at short notice or for smaller order quantities by Bossard AG, our customers remain flexible and productive. If a customer of Bossard AG wants an inspection certificate, our testing laboratory accredited according to ISO/IEC 17025 will be happy to issue this.

The accredited testing laboratory performs all of the tests relevant for joining technology:

- Dimensional checks
- Screw drives
- Mechanical properties (hardness/fracture torque/tensile test/test load)
- Material (spectral analyses)
- Corrosion protection coat (coating thickness measurement)

So that we can issue the correct test certificates, please inform us in advance of the type of certificates required and the tests to be performed.

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[www.bossard.com](http://www.bossard.com)