www.bossard.com

BOSSARD
Proven Productivity

Nr. 726 | JUNE

Bossard News

Expert Assortment Analysis | Rationalization of C-parts ...
Product Solutions | Process-optimized lifting of loads ...
Proven Productivity | Are your products hitting the market in good time?

EDITORIAL

Dear readers,
The year 2020 will go down in history. After recent good economic years, we all expected that 2020 would be a somewhat more challenging and less dynamic market environment. But I never imagined the whole world coming to a complete standstill.

It cannot yet be clearly estimated whether and/or how quickly the economy will completely recover. But the lockdown also offers us opportunities to thoroughly question certain issues. We shouldn't let this opportunity pass by us. I can imagine that I will arrive at some insights that I previously lacked the imagination for.

Please read in our Company News column what the Bossard Group has done for many years when it comes to sustainability. A great deal has been done, but it hasn't been talked about much.

If you have the feeling that you tend to use too many different fasteners in your company, I can tell you that you are certainly right. I can also console you: You are not alone. I would also like to inform you about the report on our "Expert assortment analysis" service. This is a guided process where we systematically scan your assortment, and together with you find opportunities to (often) greatly reduce the product variety of your assortment. Reduced complexity means reduced costs.

The SmartLocker is an access-controlled locker where you can lock up very valuable parts, but still logistically manage using the same system. In addition, the products that are removed can be directly and electronically assigned to a cost center.

The threaded carrying bolts from Halder are actually very smart new products. Very secure, an efficient assembly and standardized size, just to mention a few advantages, are enough to make you curious.

In our practical example, we will show you the cooperation with the customer Lonati from Italy. By implementing Smart Factory Logistic, Bossard was able to greatly help the customer to reduce the effort for handling C parts.

Dear ladies and gentlemen, I wish you a warm early summer that in a challenging environment may still bring you many joyful moments.

PETER KAMMÜLLER
General Manager, Bossard Switzerland

bomi@bossard.com

CONTENTS

Online

You can find the PDF edition of the Bossard News online at:
www.bossard.com

PROVEN SUSTAINABILITY

In terms of sustainability

The Bossard Group has been committed to a sustainable corporate development for generations. We developed our sustainability model Proven Sustainability to express this basic principle.

Sustainability – it's not a fast moving trend

Sustainability is becoming increasingly important for more and more companies – it's the same for our customers. A simple example: When a customer comes to us with logistics problems, they usually want to simplify entire processes and save costs and time. Of course a restructuring should also make progress in terms of sustainability. It'd be hard to find a stakeholder who would accept a reorganization that goes in the wrong direction in terms of sustainability.

A model for sustainability

We are convinced that we will meet our customers' increasing expectations in terms of sustainability and social responsibility with our offering of products and services. This is exactly what we would like to illustrate with our "Proven Sustainability" model. The model is derived from our business model and "Proven Productivity" customer promise and in turn builds on the well-known interplay of product solutions, Assembly Technology Expert and Smart Factory Logistics. However, the focus is on holistically optimized and resource-conserving processes.

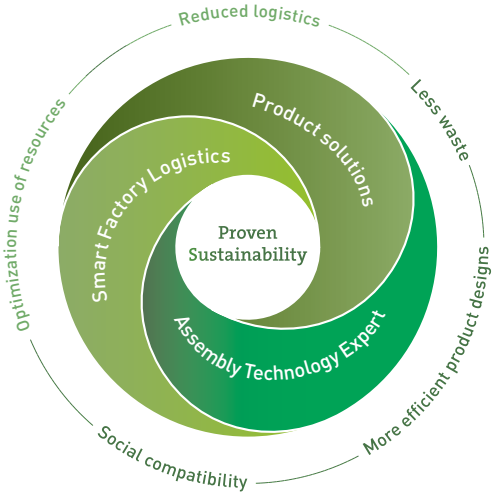
From Proven Productivity to Proven Sustainability

The model underscores the fact that Bossard is not only a provider of high-quality fastening solutions for the economic use of materials and energy.

Rather our holistic Proven Productivity concept repeatedly unleashes surprising potential among customers: By utilizing our engineering and logistics expertise, we uncover savings opportunities in various areas, such as in product design, on the production line, in B and C-parts supply and in the composition of the product range. To bring it down to a common denominator: Our technical and technological expertise favors leaner processes in the corporate world completely in keeping with the concept of sustainability.

To read the complete report:

SCAN ME



Targeted personnel deployment
- Better work-life balance
- Specialized training and advanced training

Optimized use of resources
- Optimal and efficient use of raw materials
- Optimized and coordinated process steps

More efficient product designs
- Resource-saving products
- Leaner assembly process

Reduced logistics
- Less fuel consumption
- Fewer CO_2 emissions

Less waste
- The best quality, fewer rejects
- Less packaging material

SPECIAL CIRCUMSTANCES

General assembly with social distance

The 47th annual general meeting of Bossard Holding AG took place this year under special circumstances: At the headquarters of Bossard Holding AG in a small group and with a lot of distance.

Extraordinary situation

As in past years, this year's general meeting was to be held on April 8, 2020 with the shareholders at the prestigious Theater Casino Zug. However, the coronavirus (COVID-19) and the measures adopted by the Federal Council to combat the virus did not allow for any physical participation by shareholders. Shareholders were able to exercise their rights in the general meeting though independent proxy. This meant that despite the extraordinary situation and in compliance with social distancing rules, it was possible to hold the general meeting.

All proposals approved

In total, 10,222,968 of 13,400,000 votes were represented by independent proxy. The shareholders represented this way approved by large majority all proposals of the supervisory board. Among other items, all existing supervisory board members were confirmed in their offices. The president of the supervisory board remains Dr. Thomas Schmuckli.

ENGINEERING

Assembly Technology Expert

EFFECTIVE OPTIMIZATION OF YOUR BOM

Rationalization of C parts: Reduce total operating costs with Expert Assortment Analysis

Did you know that only 15% of total operating costs of a connection are associated with the fastener itself? The rest of the 85% are namely due to procurement, logistics, assembly preparation and many other activities. It is exactly this situation that makes the rationalization of C-parts so important for your products' total operating costs. Bossard's experts help you to optimize your product range so that you can benefit from measurable and varied advantages.

Assembly Technology Expert

Overall we offer you six differentiated services with Assembly Technology Expert. All of these services contribute to gradually improving your products and your production. On the following pages, we will present you with one of these six services: our Expert Assortment Analysis service.

Expert Assortment Analysis in detail

And why exactly is our Expert Assortment Analysis service worth it for you? It's simple. Fewer unique fasteners in a product mean fewer costs at the end of the day. Rationalization of fasteners and parts lists results in a high cost savings potential, which should be of interest to any company.

Numerous decisions are made with the Expert Assortment Analysis service. For example, the service determines whether fasteners should be included, retained or standardized in the assembly process. Our experts use successfully proven methods and techniques for this purpose. By reviewing the fasteners in detail, we can significantly rationalize your product range and provide an effective optimization, which reduces your overall operating costs.

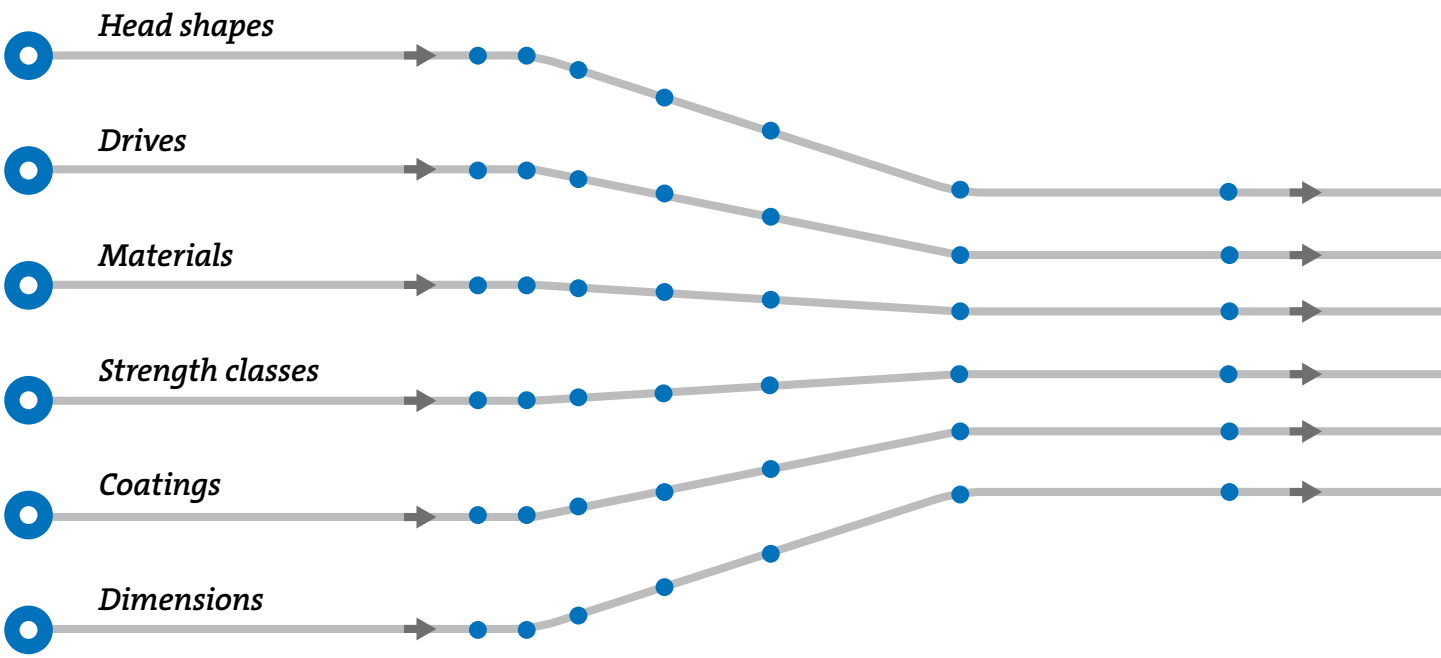
The Expert Assortment Analysis service essentially consists of three phases: The analysis, the review and the implementation. The first phase focuses exclusively on the parts lists and value analysis. This includes a systematic analysis of the entire product range of fasteners as well as a specific assessment of the cost savings based on the TCO principle. After the analysis phase is complete, we make specific suggestions for optimization to the customer, revealing the hidden potential.

Analysis, review and implementation. Three steps to success.

Once the analysis is complete, the second phase begins. Bossard's experts technically review the proposals from phase one and verify possible technical improvements for the customer's specific joining processes. Then, different suggestions for new and proven solutions are developed and all observations are recorded in a detailed technical report. Finally, the second phase is also completed with the presentation of a specific proposal, including the results. In addition, the first physical samples are already provided for demonstration purposes.

After completing the analysis and review process, Bossard's experts are committed to the final step – the implementation. Since the last phase is particularly important, we have broken it down into the following sub-areas:

What is the Expert Assortment Analysis?



Implementation plan, support and evaluation. To be able to ensure the smoothest possible implementation, a specific implementation plan is developed, a project team is put together and clear priorities are set. A good plan for the implementation is crucial to being able to generate the greatest possible added value from our Expert Assortment Analysis service. Once again at this point our experts can offer you valuable support with their many years of experience in optimizing product ranges and their sound knowledge in joining technology.

During the entire implementation phase, our development team helps you to realize the suggestion with specific assembly and usage instructions. This comprehensive support during the production implementation, however, is not the end of the cooperation. The final, but decisive step of an effective optimization is the evaluation of the implementation. This can take place either in the form of a training directly on site or at our location in the laboratory and is used both for reflection and also to provide an initial insight into the future.

Your benefits at a glance:

Elimination of unnecessary elements
Identify commonalities and reduce unnecessary components

Reduction of complexity in procurement, storage and assembly
Define your product range to choose from.

Greater productivity
Using Bossard's Expert Assortment Analysis has a significant impact on your overall productivity.

Would you like to take advantage of Bossard's Expert Assortment Analysis service? By effectively optimizing your product range, our experts will help you to reduce your total operating costs. Eliminating superfluous elements and work steps improves your company's productivity and at the same time is a valuable contribution to more sustainability. Visit our website to learn more: www.bossard.com

SCAN ME

With Bossard's Expert Assortment Analysis, you can reduce your product range of fasteners and establish clear rules for the types of screws, materials and drives you prefer.

Smart Factory Logistics

YOUR CONSUMABLES AT A GLANCE AT ALL TIMES

SmartLocker: Maximum safety for your materials management

Consumables, such as protective equipment and sensitive and valuable materials, in particular impact the cost and effectiveness balance of every company. Not only does procurement itself, but rather ensuring the material availability and its consumption protection that play an important role here. Bossard has prepared for exactly these cases. With SmartLocker, an integrated cabinet system with RFID-based access control, you get an overview of valuable materials and prevent unauthorized access.

Special handling of consumables: Prevention of theft and production downtime

Consumables, work materials and maintenance equipment are indispensable for the procedures and processes in production. Unlike direct materials, whose requirements are clearly regulated via parts lists for every single product, the consumption of indirect materials fluctuates depending on the frequency of use and wear. As a result, products such as lubricants and sealants, wearing tool components, gloves and safety goggles generate high process costs during every order, despite their usually low material value – starting with the manual inventory control, the requisition with the Procurement department, the subsequent approval procedure and the order to the transport, storage and invoice review. The "special treatment" of the materials then continues in the warehouse or during the material issue: To prevent theft, wastage, and excessive consumption, they are only issued periodically or in restricted quantities. From a business administration point of view, there is also the fact that these overhead costs cannot be passed on or can only be passed on proportionately. The SmartLocker is used wherever high or higher-valued consumables need to be protected from unauthorized access and a permanent inventory must be ensured.

A small practical example: Production occurs in a shift operation. An employee needs new safety gloves, but the material issue point is not occupied. This is not a problem with the SmartLocker. The employee uses their RFID key to open the locker and take one of the last pairs. Due to the reduced weight of the container, the system registers the removal, detects that the minimum inventory level has been exceeded and triggers and order process. When the SmartLocker is closed, the system records all removals to the cost center assigned to the RFID key.

Transparency of accesses

With the Bossard SmartLocker, manufacturing companies always have a full overview of removals, consumption and inventory of their consumables, work materials, maintenance devices and high-valued items. This makes the system of interest not just for production and materials management. An automated cost center allocation, for example, can be used to directly assign the respective expenses to certain orders or shifts. Companies with several physically dispersed location will receive a central overview of all accesses, consumption and current inventories thanks to the ARIMS (Automated Remote Inventory Management System) control software. The complete order cycle control minimizes uncertainty in the procurement process of indirect materials and reduces consumption and reordering costs. The continuous monitoring finally makes out-of-stock scenarios and wastage a thing of the past.

Have we piqued your curiosity? Visit our website to learn more:
www.bossard.com

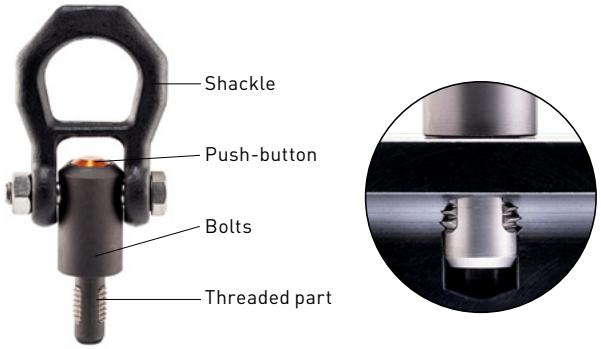
PRODUCTS

Product Solutions

THE WORLD'S FIRST: THREADED LIFTING PINS FROM HALDER

Process-optimized lifting of loads - safely.

Lifting pins and threaded lifting pins are quick and easy to use, robust support elements that can be used to safely lift loads as well. The proven lifting pin is already well-known and has proven itself many times in industrial use. The threaded lifting pin, however, is a real world's first: Only a matching metric thread is therefore needed for fastening in the workpiece.



Threaded lifting pin with description and in application

Functionality of the threaded lifting pin

1) The movable shackle on the lifting pin is folded back.
2) The carrying thread retracts at the push of a button and can be inserted in the internal thread.
3) By loosening the knob, the carrying thread anchors itself in the internal thread.
4) The threaded lifting pin must be screwed in by hand until it stops.
5) The load can be raised – it can also be done from different angles thanks to the movable shackle.

Advantages

- Maximum bearing load 840 kg at M16
- Only one suitable threaded is required
- Easy assembly at the push of a button, without screwing in
- 85% time savings during assembly and disassembly compared to eye bolts
- Easy to reuse
- Safely lift from various positions/angles
- Certified safety according to TÜV Süd (CE mark)

Safety first

- The product and usage safety has been documented by TÜV Süd with the CE mark.
- Every single threaded lifting pin comes with operating instructions with the CE declaration of conformity.
- A safety bar prevents unintentional loosening.
- There are two corrosion-protected designs.

Available designs

BN	Item number	Size	Material
13400	22352.0010	M10	Quenched and tempered steel, quenched and tempered, manganese-phosphated
	22352.0012	M12	
	22352.0016	M16	
13401	22352.1010	M10	Stainless steel 1.4542, precipitation-hardened
	22352.1012	M12	
	22352.1016	M16	

BN 13400 **in the Bossard e-shop**

BN 13401 **in the Bossard e-shop**

Find out more in our video:

THREADED INSERTS FOR SAFE SCREW CONNECTIONS

Reliable thread for every base material

Vehicle construction, railway industry, mechanical engineering and precision construction - lightweight construction materials, such as glass-fiber reinforced plastics, aluminum and magnesium materials or die-cast zinc, are now indispensable in many sectors. Bossard offers a broad product range of threaded inserts to ensure safe, tear-out resistant screw connections in often notch-sensitive materials with a low shear strength. Threaded inserts are ideal for creating precise, resistant internal threads in workpieces made of plastic, light alloy or other notch-sensitive materials.

What are threaded inserts?

Threaded inserts consist of an internal thread and special external geometries, which were designed to ensure optimal hold in the respective carrying materials. Depending on the individual requirements, Bossard threaded inserts solve specific connection challenges – from the aforementioned manufacturing of precise resistant internal threads to subsequent thread reinforcement or thread repair.

BN1047 Threaded insert for self-clinching

BN1052 Threaded insert for welding in

BN37915 Self-tapping threaded insert

Threaded inserts for plastics

Different designs are used depending on the type of plastic. Self-**tapping** threaded inserts for screwing in are used both in thermoplastics and thermosets as well as in glass fiber reinforced plastics and foamed materials. Variants for self-clinching are also available. The designs with patented external geometries are in particular suitable in thermoplastic materials. For molded and cast components, however, the threaded inserts for insert molding are the ideal solution. Thanks to their thin walls, they can be placed and molded directly on the edges of molded parts. They are therefore versatile in use, for example in thermoplastic and thermoset plastic moldings with through or blind hole threads. In addition to brass threaded inserts, which are primarily used in plastics, Bossard offers a variety of threaded inserts made of steel and stainless steel for use in light alloy components.

”The wear-resistant and heavy duty models are ideal for the high requirements of precision construction.”

Threaded inserts for metals

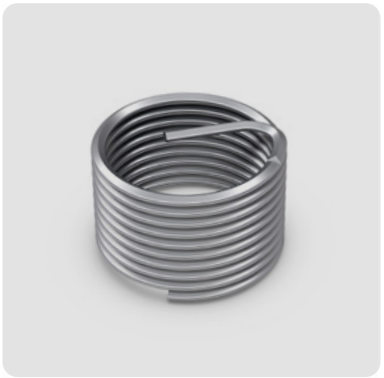
Wire threaded inserts and self-tapping threaded inserts are indispensable in mechanical engineering, in the automotive industry and in many repair cases. They impress with their simple and economic assembly and are ideally suited for producing high-strength threads with an optimal force transmission from the screw to the internal thread. Threaded inserts with locking wedges are well-suited for the most strict requirements and highest loads. The wear-resistant and heavy-duty models are ideal for the high requirements of precision construction, such as in the railway industry. The threaded inserts have pre-assembled locking wedges, which are driven into the base material after assembly so as to ensure a twist-proof and vibration-proof fit. This principle offers the maximum level of safety and also permits multiple loosening or tightening of the connections without the thread being able to come loose. It is also possible to quickly and cost effectively repair defective threads in expensive components with these threaded inserts.

The advantages of threaded inserts in an overview:

- High-strength thread in plastics, light metals and notch-sensitive materials
- Repair of damaged internal threads
- Wear-free and corrosion-resistant
- For the repeated tightening and loosening of screw connections
- Versatile in use
- Different installation options
- Minimization of weight and space
- Reduction of the total costs

BN37961 Self-tapping threaded insert

BN53533 Threaded insert with locking wedges

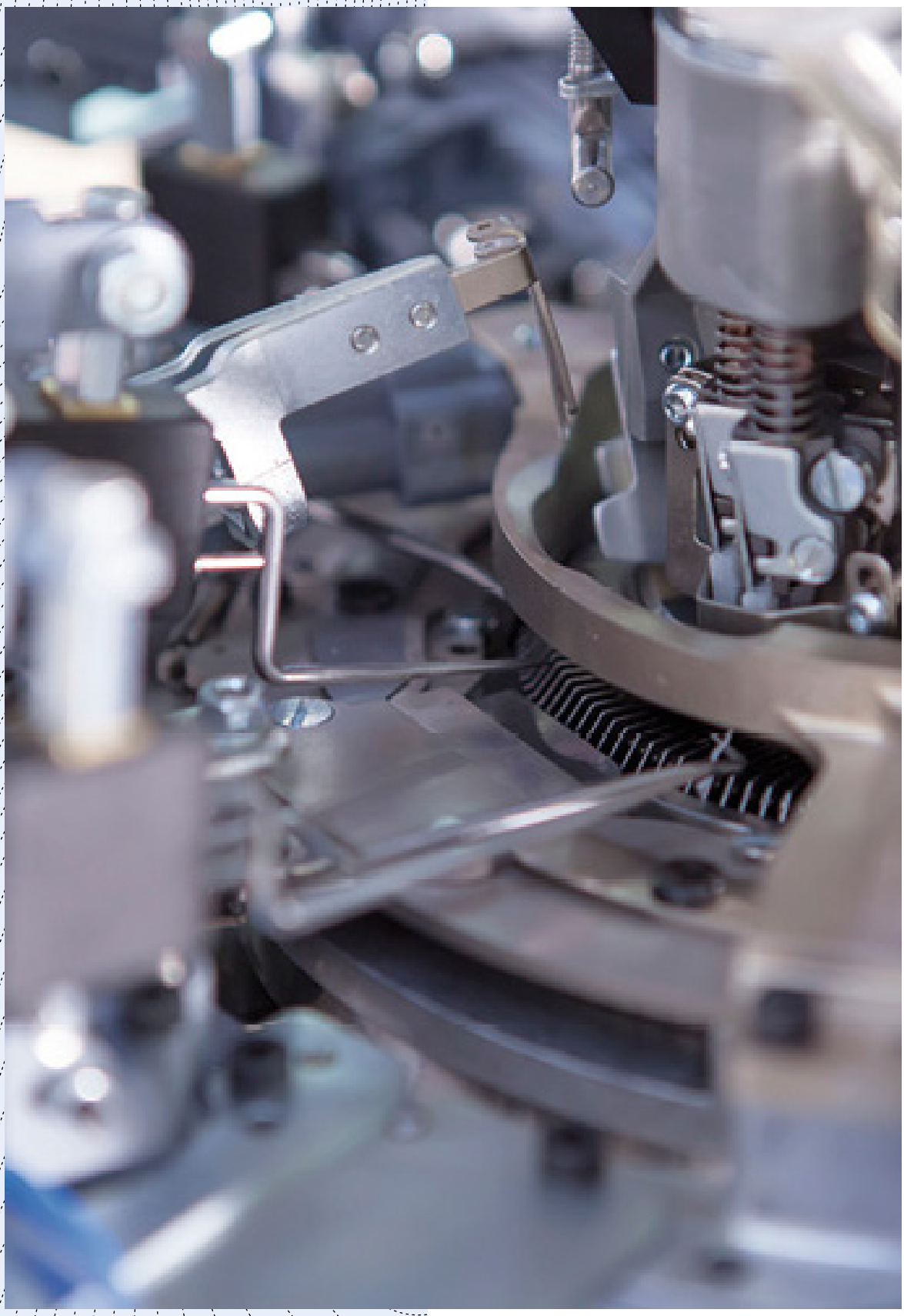


BN37770 Wire threaded insert

To our brand products:

PROVEN PRODUCTIVITY

Do your products get to market in time?



The pressure to be first on the market has never been so high. At the same time, delivery times have never been so tight. Bossard knows how to optimize processes in fastening technology to accelerate time-to-market and reduce production times.

Time-saving in the management of C-parts

When it comes to the management of C-parts, it is essential to define the execution time for each individual operation.

An excellent strategy to save time in the management of C-parts is offered by the view of consumption data in real time. One of the most common problems in the parts management is that the data is not updated frequently enough and there is no useful information to accurately predict future demand.

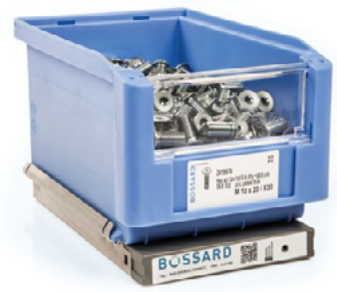
Efficient real time management allows the company to optimize its internal structures, reduce costs and increase productivity. Bossard Smart Factory Logistics is designed with exactly this goal in mind.

Our proven systems and solutions are customized based on the real needs of our customersy and guarantees full transparency of the useful information.

Smart Factory Logistics offers full control on material flows through ARIMS, an interactive platform. It allows orders tracking, interactive inventory management and access to intelligent analysis. All these functions offer improved predictability and efficiency of the supply chain of B- and C-parts.

Automated factory systems

In addition to the availability of real time consumption data , it is possible to save time by processes automation. This does not necessarily include robotic solutions. Bossard Smart Factory Logistics offers simple technologies, such as SmartBin and SmartLabel. With these intelligent systems installed, ordering multiple components requires no time at all. It saves time and collects useful data that helps to efficiently manage B and C-parts.



SmartBin systems, at the base of Bossard Smart Factory Logistics, consist of a combination of bins and weight sensors (SmartBins) or E-labels (SmartLabels). These intelligent systemsensure constant

control of material availability.. When the minimum level is reached, a predefined quantity of parts is automatically reordered.

SmartBin consists of a weight sensor fixed to a bin. Each bin is an independent unit that can be flexibly integrated into the configuration of an existing-workstation.. The wireless SmartBin can be placed just like a conventional bin.

SmartLabel is an intelligent label that can be fixed to any bin. It shows all the main product information, the order status and the expected delivery date in real time. The users conveniently and directly re-order from the point of use at the push of a button, maintaining perfect control over the process. The E-paper display is easily readable in all lighting conditions, while at the same time it allows long battery life with minimal maintenance.

Automated supply chain

Today, manufacturing processes must be flexible andagile.. Companies are expected to keep up with market changes while delivering high-quality products. To do this, the supply chain must be fully automated. Ideally, each operator must have an efficient, organized and constantly replenished workstation.

Lonati success story

In Italy, many manufacturing companies have entrusted themselves to Bossard and have implemented Smart Factory Logistics in their factories. Among these is Lonati S.p.A., leader in the field of circular textile machines for hosiery for over 70 years.This company is engaged in constant research for innovative products, technologies and materials to offer its clients the best of textile machinery technology. Lonati S.p.A. leads the world markets with an annual production of more than 11,000 textile machines, with the goal of improving the textile machinery and electronic synergies.

Lonati S.p.A. Inventory Manager, Flavio Lo Sardo, together with Marco Zago, Industrialization Manager, constantly adopt continuous improvement processes based on lean manufacturing principles that mainly target the reduction of waste in the company and, most of all, in production. In order to bring products to market as quickly as possible, it is necessary to optimize the times of every process within the company.

With regard to the management of C-parts, it is necessary to know exactly the time required to complete each operation linked to the C-components. Among the activities that require the most time are the handling and transport of goods from the loading dock area to the production line and administrative management.

As part of an examination of the internal processes, Marco Zago carried out a test measuring the time spent by the operator for handling, unpacking and transferring the materials to the line. As a result, it was decided to use a Kanban process control system for the Lonati warehouse so that the material no longer had to be collected bench-by-bench. This saved several working hours.

Once the Kanban system was installed internally, the handling of the various articles on the assembly lines became automatic, however, the daily replenishment order of the warehouse was still done manually by an employee specifically hired for this task until Bossard, already a supplier for thefastening technology, presented the Smart Factory Logistics systems.

The continuous efforts of Lo Sardo and Zago in optimizing the processes allowed them to choose an even more innovative method aimed at the full automation of the management of C-parts.

Bossard supports Lonati SpA with Smart Factory Logistics methodologies

Flavio Lo Sardo: "The installation of Smart Factory Logistics has been a work in progress. We were already convinced that the systems could be effective and functional for our needs, and following the pre-defined agreement, we were proven right. We were initially a bit skeptical; we thought that we would need to use an operator for the manual handling of the parts in any case.

Now that we know the mechanism better, we know that this is the optimal system for us.

Today, Lonati no longer requires human resources for handling the articles and inventory management.

The recorded benefits are:

- Drastic reduction of the inventory
- Elimination of the previous buffer system. The only system is the one managed by Bossarddirectly on the lines
- Reduction ofthe personnel dealing with the handling of parts
- Less transport operations
- Digitization of the processes
- The operator previously employed in this area can now perform activities providing an added value to the company
- No more orders and reminders are triggered, the order entry is performed directly on a single collective order (from weekly orders to annual order)
- Reduction of the administrative workload
- Cost savings in C-parts management

The integration of Bossard Smart Factory Logistics systems went smoothly and there is the will to extend it to the management of the products of other suppliers with the Bossard's Supplier Consolidation Solution to guarantee a seamless and continuous supply chain.

Currently, Bossard and Lonati are working on furtherimproving productivity: Together, they are analyzing fasteners, streamlining assembly processes and optimizing tools used in manufacturing.

The fewer different fasteners are used in a single product, the shorter theassembly times, the greater the cost savings.

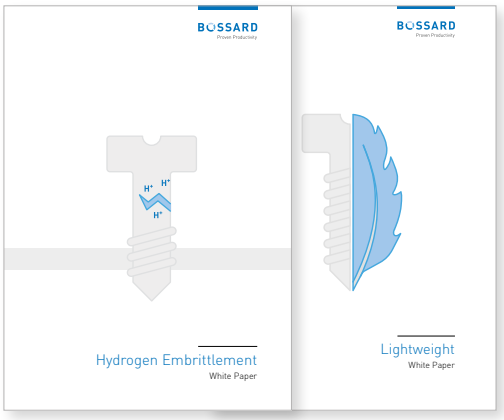
GLOBAL – LOCAL: BOSSARD SWITZERLAND

We help you to understand the science of joining technology

Are you facing joining technology challenges or have you asked the following questions?

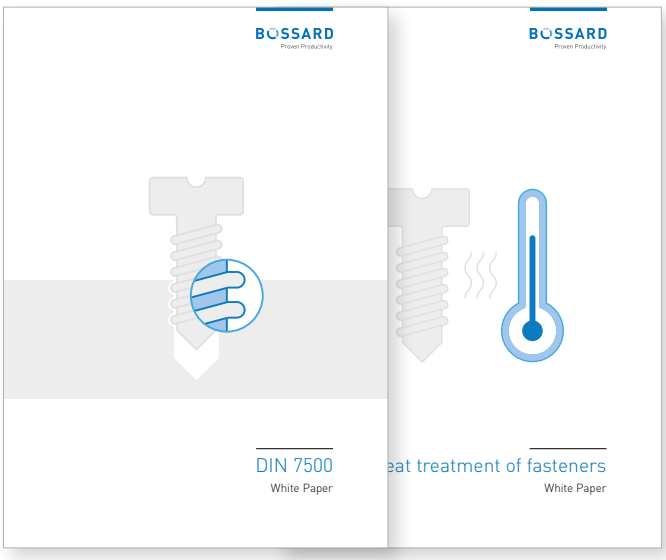
- Which fasteners are suitable for lightweight construction?
- How do I choose the right surface treatment?
- Why is friction in screw connections crucial for process capability?
- Are composite materials really lighter, more resistant, more versatile and mechanically more stable?
- Can fasteners be reused?
- How can I stop the unwanted loosening of connections?
- What is corrosion and why does it occur?
- Why are fasteners made of stainless steel, aluminum and titanium frequently affected by cold welding, or so-called seizing, when tightening?

Our team of experts has compiled its knowledge and the accumulated application experience in joining technology in various technical articles (white papers).



New design – consistently high quality content.

Expand your knowledge of how to correctly handle fasteners with our free white papers. This way you can answer your questions yourself right away.



Click here to access the new white papers!

SCAN ME

COOPERATION OF VR AG AND BOSSARD

REGULATE TRAFFIC WITH EASE

Traffic is regulated with ease

The intelligent traffic systems of VR AG decide every day where and when we have to stop in traffic and they determine our continued journey. They therefore ensure smooth traffic all across Switzerland. What seems very simple is in fact highly complex.

Constant traffic jams and a shortage of parking spaces, infrastructures and fine particulate pollution require new traffic concepts in order to manage and maintain mobility, especially in urban centers. VR AG from Schlieren is playing a key role in this ever more complex future market. The company leads the market with around 750 installed traffic light systems in German-speaking Switzerland. The traffic light systems from Schlieren are therefore a fixed and important part of the Swiss road network.

Intelligent technology

Induction loops in the road surface or camera systems detect vehicle movement and report it back to a control unit. This then uses various parameters to decide which circuits are necessary to manage the traffic volume as efficiently as possible. If, for example, a vehicle approaches an empty intersection, this is detected and the traffic light automatically switches to green. The myth of the "green wave" therefore has less to do with chance or luck, but rather with intelligent technology from VR AG.

Broad product portfolio and logistics

As a supplier of VR AG, Bossard ensures a reliable C-parts management with Smart Factory Logistics. The products are transparently and efficiently delivered directly in the assembly hall according to the Kanban principle. The C-parts management of VR AG is therefore also regulated with ease - by Bossard.

As is always the case, product quality is crucial. A failed screw connection would have serious consequences, plus the function of the connection must be ensured in the long term.

Traffic light of VR AG, exhibited at Bossard in Zug

Electrical engineering

Traditional screw product range

Designed parts

VR AG purchases a wide range of products from Bossard. In addition to the traditional product range of screws, you can also benefit from a wide product range in electrical joining technology, such as cable glands or electrical housing. Many custom solutions are also produced and delivered. Thanks to the global Bossard network, VR AG can purchase designed parts and catalog items from a single source. The number of suppliers remains manageable, and that saves time too.

"Quality is our top priority. Our products have a lifetime guarantee of 20 years, but often run for 30 years or more."

Roger Leemann, Member of the Board of Management of VR AG

About VR AG

VR AG was founded in 1990 and since then has focused on traffic light systems, control systems and special products, such as bottleneck control systems or parking guidance systems with special requirements. Individual and tailor-made customer requirements can be realized with our own developments in the fields of hardware and software. We are focused on the Swiss market and employ 48 workers at the Schlieren location.

www.bossard.com