verbinder

verbinder

The staff and customer magazine of the binder group

ALLES BEGINNT MIT EINER IDEE.
Starkes Team. Gemeinsam Zukunft gestalten. HEC. **Am Ball bleiben.** **Mit dem Herzen dabei.** **binder baut.** Mit Tempo in die Zukunft. Treu, loyal und bodenständig. **High End.** Tradition. **Auf das, was da noch kommt.** Kundenspezifisch. **Nicht alles kommt „von der Stange“.** Menschen. Begegnungen. Vielfalt. **Klangvoller** Steckverbinder. NCC. International. Transparenz. **Familienunternehmen.** Der Mensch zählt. Historische Produktentwicklungen. **Der nächste Schritt.** Rundsteckverbinder. Ausgerichtet auf den Bedarf von morgen. Lösungsorientiert. Rapid Prototyping. Wertschätzung. Verantwortung. M16. IoT. Ehrlichkeit. Zukunftsorientiert. **Vertrauen.** **Respekt.** Bodenständigkeit. **Industrie 4.0.** Verlass. **Nahbar.** Qualität als unsere höchste Maxime. Wissbegierigkeit. Neue Märkte. **Glaubwürdigkeit.**
RUNDSTECKVERBINDER.
ALLES BEGINNT MIT EINER IDEE.
Starkes Team. Gemeinsam Zukunft gestalten. HEC. Am Ball bleiben.

Customization
Connectors for medical applications

System service provider
binder solutions

Interview
Hermann Haberkern

Replacement only

No trade fairs, no customer visits, no meetings and
no in-person discussions.

Everything is crying out for digitalisation. Digitalisation is the magic word.

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A replacement is never as good as the original. On that note!

Marketing

The verbinder is also online

Missed the last issue of the verbinder? No problem – the digital edition brings the magazine's topics to your smartphone, tablet or PC.

www.binder-connector.com/de/news-presse/kundenmagazin-verbinder

YOUR OPINION COUNTS

We are open to suggestions, ideas and every form of criticism – both positive and negative – because it is only by keeping a dialogue going that the verbinder will keep its dynamic quality.

So be brave and tell us what you think of the verbinder:

marketing@binder-connector.de
Tel.: +49 7132 325-302

It is not easy

Dear reader,

the corona pandemic and the associated restrictions are commanding our lives and complicate many things.

The subject of corona will occupy us for some time to come. Therefore, we must learn to live with this virus and come to terms with its effects. The existing protective and hygienic measures naturally remain an integral and important part of our daily activities.

We have implemented short-time work until 31 March 2021, and are still facing economic challenges. The goal is and remains the safeguarding of all jobs in the company.

Due to Covid-19, the plans for the new building have also been postponed. But already in the coming weeks the first departments will start moving into the new building.

In this issue of verbinder, we report on the Franz-Binder-Verbundschule as well as connectors for medical applications. There are also interesting updates from our affiliated companies binder Netherlands, binder Austria and binder solutions.

It is very important in these difficult times that we pull together, stick together and get through it together.

Happy reading!
Kindest regards,

Markus Binder
General Manager

Photo Steffen Walter Studios

Content

Issue 50

50th issue of verbinder

After binder already celebrated its 60th company anniversary this year,
there is another reason to celebrate in 2020:
This issue of the **verbinder**, the employee and customer magazine of the binder group,
is already the 50th edition.

Text Patrick Heckler

Graphic Designed by piksuperstar / Freepik

"The verbinder provides an overview of events and news at binder across departments and locations. It informs, honours and entertains our employees, customers and partners", says Marketing Manager Timo Pulkowski. The verbinder is the only communication medium of the company that does not have to comply with any CI or CD guidelines. To the point: The verbinder is wild, free and unbound.

The origin

The first edition of verbinder had four pages and was published in March 2003. The style and appearance has changed a lot, but the intention has remained the same. The employee and customer magazine, which is considered the flagship of internal and external corporate communications, serves as a platform for company-relevant topics. The verbinder unites all departments and affiliated companies of the binder group and serves as the mouthpiece for their topics. In addition to the four business areas Sales, Production and Logistics, Technology and Organisation, the sections News, Marketing, Global and We are Binder can be found in almost every issue. In future, Hermann's Fitness column will complete this exciting list (more on this from page 40). Thus, the verbinder covers an extremely wide range of topics, from technical articles to emotive reports and interviews, thus achieving a high degree of variety.

The original

Why is "verbinder" written in lower case and not in capital letters? Shouldn't the heading say "of the verbinder"? These are two questions that some people have probably already asked themselves simply by reading this text. The answer is quite simple: "verbinder" is a brand with a defined spelling. The magazine is an "original" which is not subject to declination (inflection), but always remains the same. To honour the history of the verbinder, the breakers will be the historical cover of this anniversary edition. Enjoy reading. ■

> WE CONSIDER THIS MAGAZINE A MEDIUM FOR INFORMING OUR EMPLOYEES AND OUR CUSTOMERS.
>
> **Markus Binder**
> Editorial | 1st edition | March 2003

The beginning of a true partnership

At the beginning of the 2020/2021 school year, the new Neckarsulm integrated school, named after Franz Binder, opened its doors. The aim of the cooperation is the individual support of the pupils – and the communication of values.

FRANZ BINDER VERBUNDSCHULE

Text Patrick Heckler

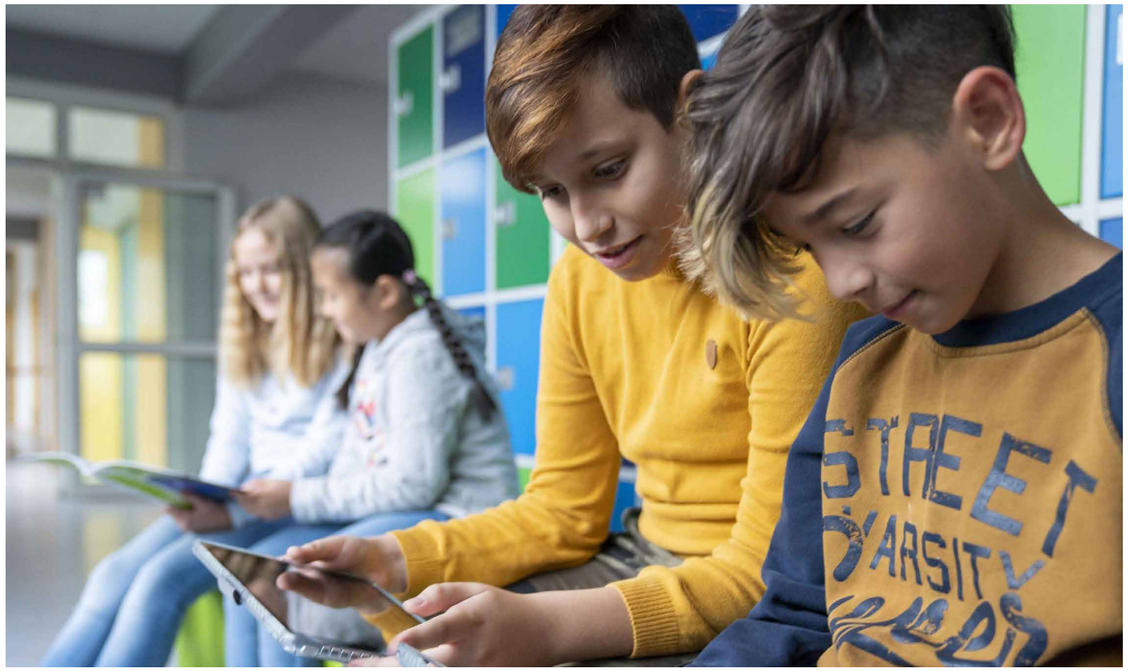


Photo Franz-Binder-Verbundschule Neckarsulm

Despite his residence in Heilbronn, Franz Binder was always a Neckarsulm resident who was active in associations and also "in the thick of things" at festivals. He has always ensured the well-being of his employees, assumed social responsibility and built his company with courage and diligence. The naming of the new integrated school honours the man Franz Binder and his achievements in life. "Without my father's hard work, courage and dedication, our company would not exist. I am very grateful to him for this", says Markus Binder, General Manager of the binder group. His private engagement with the Franz-Binder-Verbundschule is a homage to his father who passed away in 2019, and with whom he had a special relationship. "My father is an absolute role model for me, both personally and professionally."

True partnership

One of the aims of the cooperation with the Franz-Binder-Verbundschule is the targeted and individual support of the pupils. In addition, conveying values such as trust, orientation, respect, protection, care, responsibility and commitment is a central element. The creation of excellent educational opportunities, the promotion of digitisation and support for school festivals, class trips and excursions are agreed measures to stimulate cooperation. In short: The pupils are to be offered an optimal school environment, regardless of their (social) background, skin colour or religion. In order to achieve the desired goals, there is a close and regular exchange with the responsible persons of the city of Neckarsulm and above all the team of the Franz-Binder-Verbundschule. ▸

Conceptual pioneer

The Franz-Binder-Verbundschule is the first model in the country to combine three educational courses under one roof: secondary school, community school and vocational school. The facility thus offers a reliable, flexible and future-oriented spectrum of schools in Neckarsulm. The aim of the integrated school is to enable every child to obtain the highest possible school-leaving certificate. At the school, the pupils can obtain the secondary school diploma or the intermediate school diploma. With the appropriate grades, it is possible to obtain the general higher education entrance qualification (Abitur) at high schools after 10th grade.

The joy of learning

The focus of pedagogical work is the learning success of each individual child. Great importance is attached to learning in a stimulating and positive atmosphere. Children and young people who attend the educational institution should enjoy learning and develop into confident personalities. The range of subjects and projects offered in grades 5 to 10 will take into account the diverse interests and talents of the children. In grades 6 to 9, children can, under certain conditions, change their course of education without having to leave their familiar surroundings. This enables the Franz-Binder-Verbundschule to offer an optimal range of schools. This should be oriented towards the needs of the children and young people, create an atmosphere of well-being for them and be perceived as an enrichment by their families.

Community school course

Students who choose the community school (GMS) course opt for a fixed full day on three days (Tuesdays, Wednesdays, Thursdays). Especially in GMS, where students of all levels learn together, teachers are employed who are committed to differentiation and individual support. Lessons in the morning are combined with lessons in the afternoon, and care is taken to ensure that cognitive learning phases and creative or practical or sports activities are sensibly combined. Learning phases in which the children continue to work independently on their own goals (EVA), and coaching help the children to reflect on and optimise their own learning paths. ■

THE PUPILS ARE TO BE OFFERED AN OPTIMAL SCHOOL ENVIRONMENT, REGARDLESS OF THEIR (SOCIAL) BACKGROUND, SKIN COLOUR OR RELIGION.

PUBLICATION YEAR **2003** ISSUE **1**

Further development of the international sales strategy

Through strategic internationalisation, binder has managed to position itself worldwide as a high-quality manufacturer of circular connectors. A central function has now been created to optimise the management of sales activities.

Text Patrick Heckler

Today, the binder group has nine sales offices worldwide. The first was founded in 2001 in China, further locations followed in the USA, France, Great Britain, Sweden, the Netherlands, Singapore, Austria and Switzerland. "Due to the steadily growing number of sales offices, the need for centralised control of market and communication activities has become ever greater", says Peter Schall, Head of Sales and Technology. "We are now taking the actions necessary and were able to find the ideal person for the central function 'International Sales Development' in Achim Klett."

Multi-talent

Achim Klett has been with binder since 2000, initially working in customer service and product management. With his talent for foreign languages and his intercultural understanding, he has already contributed to the establishment of the sales offices in France, Great Britain and the Netherlands. In 2013, he established binder South East Asia as Managing Director and shaped their market entry locally for over two years. Achim Klett will now use the experience and contacts gained over the years to intensify the cooperation between the branches and the binder headquarters in Neckarsulm. "First of all, we must show our sales offices great appreciation and let them know that they are an important part of the binder group", he says about his plans. "The expansion and networking of existing structures creates synergies from which we in the group will benefit.“

Challenges

The globalisation of markets, digitisation and the resulting changes in the framework conditions make it possible and necessary to make targeted changes. "By improving the cooperation between the sales offices, we can achieve better and more intensive market cultivation in the long term", says Achim Klett, who hopes that the various measures will lead to an even stronger market presence for binder. Peter Schall looks to the future with confidence, and provides a glimpse into an ongoing project: "In future, we will be able to react more flexibly to new conditions and product requirements by comparing market information. One of our current measures is the adjustment of our pricing policy, which is also to be managed centrally from binder headquarters." Finally, Achim Klett shares the motto that he intends to adhere to together with the colleagues in the sales offices: "Forge ahead together.“■

FORGE AHEAD TOGETHER.
Achim Klett

Illustration Adobe Stock Images

A guide for specifying medical connectors

The highly sensitive field of health care requires a particularly high degree of accuracy and conscientiousness. This article highlights the most important criteria when selecting connectors for medical applications.

Text Jana Wagner

Electronic medical products extend from single-use devices, diagnostic hand-held equipment and bedside monitoring equipment up to large computerized axial tomography (CAT) scanners and magnetic resonance imaging (MRI) scanners. Specifying electronic connectors for these medical applications requires the same careful consideration as for many other applications. However, there are some aspects that need only be considered in medical technology.

Some basic decisions regarding the electrical and structural properties must be made. These properties affect the selection of the connector directly and specifically. The connector selection directly involves more than just the current, voltage and the number of contacts interacting with the cable diameter and the required protection against electromagnetic interference and environmental effects. It is the same with the structural properties regarding mating and demating, the insertion process and the space available both inside and outside the product.

Electrical requirements

The rated and surge voltages of the connector come from the basic standard DIN EN 60664-1 for insulation coordination. This standard specifies the requirements for clearances, creepage distances and solid insulation for equipment. It takes into consideration the voltage stress and surge voltages together with the expected pollution degrees in certain environments. These factors determine the structural dimensions of the connector.

The current-carrying capacity of a connector is the current that can flow continuously and simultaneously through all its contacts. It is determined in accordance with IEC 60512-5-2.

Easy Locking Connector (ELC)

Photo Franz Binder GmbH & Co. Elektrische Bauelemente KG

The current-carrying capacity, however, is not a fixed value, it decreases with increasing ambient temperature. This value is recorded in the derating curve and can be checked for the customer-specific application.

For certain applications such as MRI scanning, there must be high-performance shielding against electromagnetic interference (EMI). This, in turn, needs shielded cable systems and ready-for-assembly cables with connectors that have good shielding properties and are available in metal or metallic plastic versions..

Locking and degree of protection

The number of expected mating cycles and the requirements on the degree of protection have a great influence on the type of the connector system. Of course, the selection of the connector and locking method has a lasting effect on connector costs. The degree of protection (IP code) determines the level of protection against the ingress of dust and liquids. Connectors used in medical technology usually are IP54 or better. Many are also designed for protection to IP67. This allows temporary immersion of the connectors

.

Connectors with a screw-on lock often provide the ultimate protection against unintentional disconnection and excellent IP properties. However, their design and structure make them generally the most expensive type of connector, in particular metal versions.

Connectors with a push-pull lock are also among the more expensive approaches but the trend toward plastic versions has contributed to a reduction in cost. They have also allowed a quick plug-in IP67 connector with good protection against unintentional disconnection.

Latching and bayonet connectors are quick and easy to connect and are almost always among the most cost-effective solutions. The latest advances in development have now allowed these to be designed for up to IP67 and offer an economical solution with very good properties.

New locks such as the innovative Easy Locking Connector (ELC) recently introduced by binder provide positive locking with an intuitive latch for protection against unintentional disconnection. In this case, the friction-free connection allows a mechanical lifetime of more than 5000 mating cycles.

The ELC Series 570 connectors from binder come in a PA66 housing. They have 12 gold-plated contacts for conductors having a cross-section of 0.25 mm² and are rated at up to 2A and 150 V. The flanged connector is protected against the ingress of liquids, against spray water and against unintentional electrical contact even when not connected. In addition, the new quick-locking connector system is sealed with up to the IP54 degree of protection when connected and locked. ▶

Biocompatibility and resistance to disinfectants

As already mentioned, the medical spectrum is widely diversified. For this reason, connectors that are used close to the body, for example, must be assessed for biocompatibility as per DIN EN ISO 10993. The assessment uses various test methods including the cytotoxicity test as per DIN EN ISO 10993-5. These tests are used to investigate whether a product can damage tissue or cells or whether it can inhibit growth.

In practice, medical products are regularly cleaned with disinfectants to eliminate bacteria and viruses. These disinfectants may damage the material of the connector and, in the worst case, can cause the connector to fail. For this reason, the connectors are tested using a multitude of disinfectants. After this, the results are analyzed and made available to the customer.

Standards

A number of standards must be considered when specifying connectors. The DIN EN 60601 series of standards specifies the general requirements placed on safety, the essential performance and the electromagnetic compatibility of medical electrical equipment. It is the technical equivalent of the international standard IEC 60601 and covers aspects such as the strain induced by vibrations, impacts, improper handling and the accessibility of hazardous parts using test probes (protection against contact).

The ISO 13485 standard specifies the requirements placed on the quality management system. According to this, an organization must verify its ability to provide medical products and associated services that satisfy the pertinent, legal requirements end-to-end. For the American market, the Food and Drug Administration (FDA) also supports the development of connectors to reduce the danger of wrong-way connections. These standards promote patient safety through the assurance that connectors from systems that do not belong together are incompatible. As a result, such equipment cannot be connected together by mistake or by using force.

Customization

The standard connectors available on the market are not adequate for many medical products. For example, some customers want connectors that are firmly locked but that release with a certain amount of pulling force so that the device is not damaged. Other customers need a connector system for different applications. These require different coding to prevent connection errors. In such cases, customization may be the best approach.

This not only provides customers with the best solution, it also protects their intellectual property. Of course, medical connectors are rather expensive – but how do you put a price on patient safety? With the necessary technical and economic monitoring and support, binder ensures that you get the right connector for your medical application. ■

ABOUT THE AUTHOR:

Jana Wagner has been working at binder since April 2016. As product manager in sales, she is responsible for connectors for medical applications.

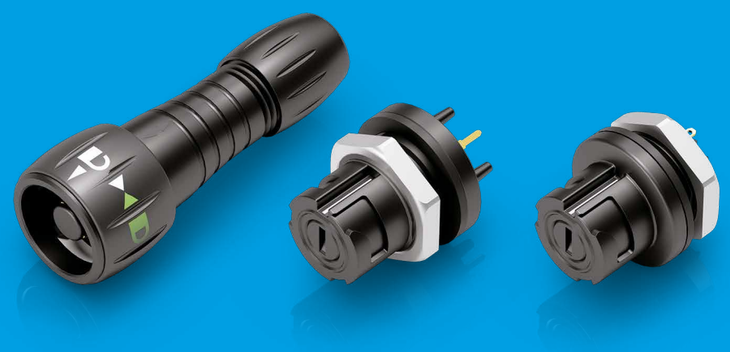
PUBLICATION YEAR **2014**

ISSUE **33**

NCC Connectors offer high protection level, connected and disconnected

Perfect for applications with restricted space

The Series 670 NCC Subminiature Connectors expand the binder product range with a system for applications with restricted space.



Text The Editorial team

The newly developed products target the growing need for suitable, reliable circular connectors in many applications including lighting and test and measurement instrumentation. The Series 670 are 5-pin subminiature connectors with a bayonet closure and a cable bushing from 3.5 to 5.0mm. The flange-type socket is provided with soldered and dip-soldered contacts. A key feature of these connectors is that the contacts are completely protected against water, dirt and penetration by foreign objects when not connected. The NCC (Not Connected Closed) connectors use a spring cover to protect the contacts even when disconnected.

Permanent Protection

With the NCC system, the Series 670 achieves protection to IP 54 when not connected. When the subminiature connector is connected, the level of protection increases to IP 67. The core function of the NCC feature from binder keeps the contacts free from environmental effects and is also distinguished by its high durability. Sascha Döbel, product manager at binder, explains, “Our NCC subminiature connectors are designed for more than 1000 mating cycles. With this flexibility and long life combined with the additional characteristics of the Series 670, we put the focus on the increasing demands of a growing group of users.”

Compact Profile

Users with applications that demand frequent mating and demating will appreciate Series 670 subminiature connectors as will those users who need connectors with a compact profile for applications with the restricted space.

Strong Resistance

In addition to the key feature of environmental protection, the Series 670 plastic socket impresses with its high resistance to vibration and shock loads. The product is also particularly resistant to heat and cold with an operating temperature range from -25°C to +85°C. binder has made available connector housings in different colours which is ideal for those applications where identification and organization is important. ■

> OUR NCC SUBMINIATURE CONNECTORS ARE DESIGNED FOR MORE THAN 1000 MATING CYCLES.
> **Sascha Döbel**

Photo Franz Binder GmbH & Co. Elektrische Bauelemente KG

M12 connectors for AC and DC applications

binder's new S-coded and T-coded power connectors are very well suited for power transmission. The two standardized types are designed as per DIN EN 610276-2-111 for applications such as motors and drives and for supplying power to AC and DC consumers.

Text The Editorial team

The S-coded connectors of binder's 814 Series were developed for use in AC supplies up to 630 VAC. They have a PE lead and can transmit, in the two-phase or three-phase version, power of up to 7.5 kW. The power connectors of the 814 Series are ideal for applications such as AC motors and drives, motor load switches and frequency converters.

The T-coded connectors of binder's 813 Series are intended for DC voltages up to 63 VDC at 12 A. They are suited for use as power connectors for fieldbus or Ethernet applications such as Profinet. These power connectors can also be used to supply DC motors and drives or other power-hungry components with up to 750W.

The Series 813 connectors have four gold-plated contacts while the Series 814 plugs have two and three gold-plated contacts and one pre-mating PE contact. They are available in both straight and right-angle versions.

The cable connectors of both types come with the M12 interlock as standard. They protect to IP67 and IP68 and are designed for more than 100 mating cycles. The operational temperature range is -25 °C to +85 °C.

Both series offer moulded male cable connectors and female cable jacks, either premade or ready for assembly. For panel mounting, round and square housings made of metal and plastic are available. These can be screw-mounted from the front or back. The products can be connected by the customer and are also available with already connected stranded wire. In this way, binder allows its customers to find the connector suitable for their preferred method of installation. ■

Photo Franz Binder GmbH & Co. Elektrische Bauelemente KG

Not only fast cars come from Zuffenhausen

From the late 1950s onwards, the headquarters of Standard Elektrik Lorenz AG (SEL) was located in the immediate vicinity of the headquarters of the well-known Swabian sports car manufacturer Porsche. Until the 1990s, radio sets, telephone and telefax systems as well as radiotelephones for private customers and state institutions were successfully produced there. For the SEL branch office in Pforzheim, state-of-the-art know-how in the development of innovative contact strips was in demand in the mid 1980s – a clear case for binder!

Text Dieter Fink

Text Dieter Fink

At binder, we already started in 1983 with the development of single-row contact strips with the grid dimensions 1.27 mm and 2.54 mm. They were used by SEL to connect printed circuit boards and were manufactured with different numbers of poles. At that time, punched contacts that were snapped into the insulating body were state of the art. However, this standard was not sufficient for the radio systems that were manufactured by SEL in Pforzheim. Contact strips were required which were sealed from the soldering side to prevent flux and solder vapours from rising into the contact area during wave soldering.

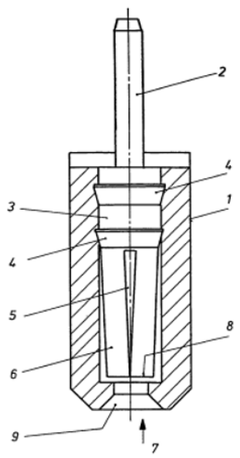


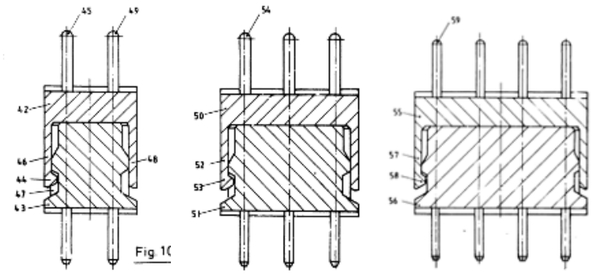
Figure: Contact socket retracted into socket body with two retaining claws.

True to the motto "doesn't work - doesn't exist", we started the corresponding development work in Neckarsulm. After some consideration, we finally decided to use turned contact elements. We overmoulded the contact pins with plastic, inserted the contact sockets into the contact strip bodies and provided them with circumferential retaining claws (see figure below). The result was perfect! The contact chambers now offered optimum protection against external influences. I will not forget the feeling when our invention was registered with the utility model G 83 23 581.7 at the German Patent Office. Our requirements were described in detail in the entry and that made us very proud.

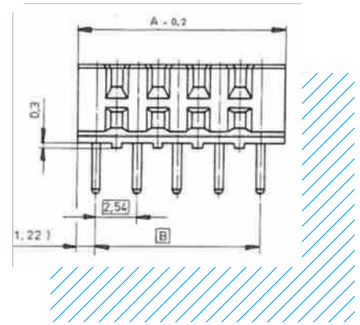
In the following years, the contact elements were manufactured by our subsidiary bec (now b-pp) in Switzerland. For the production of contact sockets, a new type of stamping process on automatic lathes was developed there to further reduce the production time. The punching tool was pressed into the contact sleeve from the mating side of the socket, creating two opposite slots and thus two resilient contact legs. In a further step, the chips were then turned at the end of the slot. The process represented a further innovation from binder, because until then the slots in turned contact sockets were either sawn or milled, which was a rather time-consuming process.

The company Standard Elektrik Lorenz AG (SEL) no longer exists in its former form since 1991, but its know-how and that of its suppliers lives on today. Since 2012, the site on which the company's headquarters used to be has belonged to the immediately adjacent plant of the car manufacturer Porsche.

Over the years, the range of strips has been continuously expanded and supplemented. In 1989, for example, the 752 series, a multi-row contact strip program with locking, was developed at the request of SEL. It was realised by means of snap-in hooks, which were attached to one side of the guide collar (see figure, item 11). The strips were available in single/two/three- and four-row versions, with straight and angled dip solder pins. To protect the invention, utility model G 89 03 055.9 was filed with the German Patent Office, in which our claims are described in detail. ■



Pin/socket connectors, straight, multi-row with locking, in mated condition – 752 series.



ABOUT THE AUTHOR:

Dieter Fink joined binder in 1977 as a development designer and was responsible for the design and development department (T-KB) for more than 37 years from 1980 onwards. He retired in 2018.

Illustrations Franz Binder GmbH & Co. Elektrische Bauelemente KG

Smart camera for error reduction

In the past, parts or sprues that got stuck in plastics production have repeatedly led to expensive mould damage during the closing process, especially when sampling new moulds – but this is now a thing of the past.

Text Reinhard Müller

Time-consuming interruptions and cost-intensive repairs in the mould have led to questioning both the condition and the working process of existing injection moulding machines. After an efficient research process and extensive testing in the technical centre, a camera system installed in the mould has emerged as the most promising variant. Consequently, since October 2020, two smart cameras for industrial image processing in plastics production have been in use at binder. Their functionality and advantages are described below.

Functionality

The so-called smart camera (also called intelligent camera) is attached at a suitable position in the injection moulding machine. In this context, a suitable position is defined as the place where parts are expected to become stuck in the area of the parting plane. This is usually the side on which the parts are ejected by mechanical ejectors. After opening the mould in the injection moulding machine, an image is taken and compared with a previously stored reference image. In the best case, the image recordings match and the process can continue unhindered. If foreign bodies are still present in the mould, the process would be interrupted and the closing of the mould would also be prevented. The responsible fitter would then eliminate the fault that has occurred.

Advantages

The risk of tool damage due to parts getting stuck has been greatly reduced by using the camera system. The constant presence of an operator is no longer necessary. Frequent cycle interruptions, triggered by the smart camera, quickly identify problematic tools. The image recordings make it easier to detect, analyse and correct errors. As a consequence, the measure initiated saves both time and financial resources. ■

Photo Franz Binder GmbH & Co. Elektrische Bauelemente KG

ABOUT THE AUTHOR:

Reinhard Müller, Head of Production Technology Plastic Parts, has been working for binder since November 2018.

Joining forces: development of the new flanging system

Mini segment in Plant 2: The two flanging machines 2 and 3 tirelessly ensure the safe combination of plastic and metal, the main components of connectors. The systems would probably continue to run stoically for years, but the supply of spare parts is proving increasingly difficult.

Text Jörg Mühlbeyer

How challenging the search for a suitable replacement can be became evident in 2020, when the control system of the press stopped working. A new element was not available anywhere, so the only option was a second-hand solution from the stock of the press manufacturer; naturally not without putting the unit through its paces before commissioning. The production was up and running again after the short interruption, but it became very clear: A new, permanent solution must be found as soon as possible. A new project team will therefore be appointed in P-IE-WS (stands for production, industrial engineering and value stream mapping) specifically for this task.

Many questions in advance

Fully or semi-automatic? One or two systems? Which articles should be produced in future? Right from the start of the project, the team is confronted with a multitude of questions that need to be solved. In order to find a long-term, future-oriented solution for binder, the figures and data of the last few years must be closely examined. True to the motto "know where you come from in order to understand where you are going", annual consumption, production orders, cycle times and quantities of finished parts are precisely evaluated.

Parallel to the analysis, the rough construction of a new system already begins with P-IE-BM (stands for production, industrial engineering and equipment sample organization). The project team is still hoping that only one new system will be able to provide an adequate replacement – but no one knows for sure. The benefits would be enormous: In combination with the flanging lines 1 & 2 as a secondary source, this solution would not only save space but also reduce costs. When all the data is finally evaluated, the relief is substantial. Now there is certainty – the capacity of a single new system is sufficient to meet the demand.

Finally getting down to business

The goal is ambitious: A total of 660 articles with around 30 types of workpiece carriers are to be transferred to the system in a production and setup-optimised manner. Of course, the overall costs had to be kept in mind. The matter is quickly decided: Only a semi-automatic machine can really be considered. The fact that binder has a wealth of experience in operating flanging lines 1 & 2 is a relief. First, all existing workpiece carriers of the two old flanging lines 2 & 3 are mounted on a very large turntable in a setup-optimised way. Altogether, there are about 30 types with four pieces each. If necessary, these can be easily exchanged for the workpiece carriers of flanging line 1 & 2.

In future, flanging will be done with a servo press, as this has several advantages. On the one hand, the servo press automatically adjusts itself to the parameters of the articles via program selection. No mechanical adjustment of the press height is required to adjust the travel distance, flanging force and travel speed. A simple stamp change is sufficient. On the other hand, the force-displacement monitoring and thus a quality test of the flanging takes place automatically. Binder has also thought about optimal ergonomics for the system. The small load carriers for the removal of objects, cans and sleeves were attached in an adjustable manner. In future, the operating personnel will be able to adjust the gripping angle individually. The easy running height adjustment is now also variable.

P-IE-BM has succeeded in designing, building and programming a new flanging system that not only meets today's standards, but far exceeds them. The sum total of the innovations implemented is impressive.

And this is how the process works

- The program for the desired article is read in by barcode, the turntable and press adjust to the article and the flanging stamp is changed manually.
- The object and can/sleeve are inserted manually, then the system automatically cycles when the light barrier is left.
- A camera checks by coding whether the can/sleeve and object have been inserted and whether the installed workpiece carrier matches the selected program, thus preventing possible crashes.
- The servo press carries out the flanging and checks it simultaneously.
- A pick & place unit removes the articles and sorts them according to quality. ■

Project team

Michael Dorner, Ewald Fleischer, Heiner Hönig, Simon Kühner, Jörg Mühlbeyer, Julian Oster, Marcel Sandrisser

ABOUT THE AUTHOR:

Jörg Mühlbeyer has been working for binder since June 2000 and is a project manager in the Value Stream Management (P-IE-WS) department.

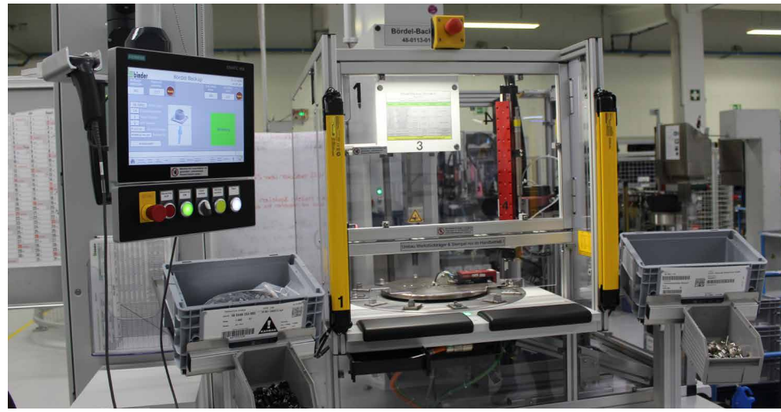


Photo Franz Binder GmbH & Co. Elektrische Bauelemente KG

Committed to quality

T-QPL

Since December 2019, the Quality Projects & Supplier Management department has been dealing with project-related quality planning. Find out why it was necessary to found the organisation and how its field of activity is defined here.

Text Patrick Heckler

The Quality Projects & Supplier Management department, or T-QPL for short, is the first point of contact at binder for the various departments and project managers and is responsible for project-specific quality planning. Projects are defined as all products developed by binder to series maturity. "In order to cope with the increasing number of customer-specific projects, the creation of a specific unit was the logical consequence", says Achim Pfeifer, T-QPL Team Leader. His department is involved in quality planning measures and product development, which means that a consistently high quality standard is guaranteed for internal and customer projects.

Variety

The T-QPL team has three employees, including Achim Pfeifer, Simon Kühner and Peter Patzke. "We currently have a lot of work", says Pfeifer, who has been working for binder since April 2016. Currently, his team is involved in 16 active projects with about 30 new parts. The amount of work varies from project to project depending on the phase. The tasks range from the preparation of specifications, supplier and customer audits, process approvals to the supervision of initial sampling and series releases.

Supplier development

A further area of responsibility is supplier development, in the course of which strategic decisions are made regarding the type and intensity of the relationship with a supplier that is to be aimed at in future. For this purpose, precise targets and measures are defined based on the results of the previous supplier evaluation and supplier classification, which are intended to improve performance potential and cooperation with strategically important suppliers. The reasons for such development measures are complex and can be both operational (e.g. quality problems or delivery delays) and strategic (e.g. building up replacement suppliers to prevent dependencies).

f. l. t. r. Achim Pfeifer, Peter Patzke and Simon Kühner

Teamwork

The T-QPL division maintains a very close relationship with all departments involved in the development of sales products. These areas include, for example, construction & development, project management, strategic purchasing, product management and binder solutions, system service provider of the binder group. "The interactions with our colleagues here in Neckarsulm, but also with our affiliated companies, are very pleasant", says Pfeifer, who worked in the automotive industry for several years before joining binder. He greatly appreciates the family-like working atmosphere within the binder group.

New construction

T-QPL is also involved in the topic of new constructions, because: All automatic machines and production equipment that will be installed in the new building in the course of the coming months must be approved by the quality experts. "This will be a great challenge for us", says Pfeifer, concluding: "A challenge that we look forward to with great anticipation." ■

TIME FOR NEW WAYS, TIME FOR THE NEW BRAND BOOK

The goal of binder is to become a global brand. The distinctiveness of a company has become particularly important in the field of modern communication. The new brand book serves as a guideline for the brand communication of binder.

Text Timo Pulkowski

Photo Franz Binder GmbH & Co. Elektrische Bauelemente KG

A brand needs an image to stand out. A brand is only strong if it has real fans and detractors. We aim to achieve a balance between international focus and tradition, and between local roots and a cosmopolitan outlook. All of our communication tools are characterised by a minimised, clearly structured visual appearance. They are modern, valuable and "different". In the new brand book (in German: Markenbuch) we have clearly defined the essential characteristics of the binder brand. It serves as a guide in internal and external brand and corporate communication. The new brand book will be distributed from early 2021 and will be available through Intrexx. ■

Overview of the most important features of a brand

Values

The values of a company provide internal and external orientation and form the foundation of an open, lived corporate culture.

Vision

A vision indicates the direction in which a company should develop. The vision expresses where and what a company wants to stand for in future.

Philosophy

The corporate philosophy forms the basic framework of the corporate identity of a company. The culture, mission statement and strategy of the company are derived from this.

Brand core

The brand core symbolises the most important value that a company or a brand represents.

USP

The USP (unique selling proposition) is a unique selling point. This unique selling proposition distinguishes a product/company from all others.

binder Netherlands

Getting ahead in difficult times

After binder Netherlands was able to record remarkable sales growth of more than nine percent in the BeNeLux region in 2019, the company has struggled with the effects of the coronavirus this year. Nevertheless, there are good reasons to be optimistic about the future.

Text Wilfried Snelting

Illustration Designed by pikisuperstar / Freepik

While the first three months of 2020 went according to plan, in April the coronavirus caused a drop in sales and an even more significant cut in orders. Trade fairs were initially postponed and later cancelled. Customer visits became impossible due to the measures taken to contain the coronavirus.

Digital instead of analogue

Creative steps had to be taken to stay in touch with the customers. Meetings no longer took place in analogue form, but digitally via Zoom or Microsoft Teams. The digital presence has suddenly gained in importance, although it was already enormously important before the coronavirus crisis. One of the digital platforms on which binder operates is TraceParts. The portal is one of the world's leading providers of digital 3D content for mechanical engineering. binder uses the tool to present technical drawings to (potential) customers. The fact that the haptic experience also continues to be important is underlined by the increased demand for connector samples.

Disparate developments

After the first wave of coronavirus, it looked for a long time as if things were moving back to normal. However, the number of cases in the BeNeLux region is currently rising significantly again – not a good sign. Meanwhile, the markets are developing differently: Some customers have experienced a complete collapse in demand and sales have fallen to almost zero. With other customers, demand has remained at a consistently good level or even increased, as favourable conditions favour a corresponding market situation. A look at the customer base of binder Netherlands reveals a broadly diversified field with a balanced distribution. So there are both positive and negative developments. This is due to the fact that binder products can be used in many different industries.

Very optimistic

2020 will probably be the first year since its foundation in 2012 in which binder Netherlands cannot record any growth in turnover. In view of the unforeseeable circumstances, however, the mere stabilization of sales is not that big of a deal. In order to be prepared for 2021, the stocks were increased so that an increase in demand can be well met. Hopefully, it will soon be possible to participate in trade fairs again as in years past. Another important step is the automation of internal processes by using additional functions of the ERP system SAP Business ByDesign. All these points fuel the optimism for a positive future. ■

THE DIGITAL PRESENCE HAS SUDDENLY GAINED IN IMPORTANCE.

ABOUT THE AUTHOR:

Wilfried Snelting has been familiar with binder products for over 15 years. He has been responsible for binder Netherlands since January 2012.

binder Austria

TOGETHER ON NEW PATHS

f. l. t. r. Florian Halmetschleger, Walter Pakr, Thomas Leber, Matthias Floriansitz, Monika Friedl, Martin Grabler

In June of this year, binder Austria was reorganised. Long-serving as well as young employees have been entrusted with new areas of responsibility and are working in concert. The following is a presentation of the innovations and the team.

Text Martin Grabler

Photo Binder Austria

Following the instruction to realign the company management, a fundamental decision had to be made: Continue along the same old path or critically question your own actions? The script was written very quickly, because the employees wanted to take on more responsibility and be part of the restructuring process. With the virtues of binder as a family business, such as respect, trust and appreciation, new goals were set within a short time, such as proactive improvement processes or the introduction of parts controlling. The consequence: binder Austria has a new structure and will continue to be managed in a stable and successful manner.

The "experienced ones"

After working for the company for around twenty years, Walter Pakr and Thomas Leber have become important pillars. Walter Pakr takes over the key account function in the area of plastic injection moulding in addition to his function in project management and production control. The "Single Point of Contact" solution channels all customer enquiries from this business unit, ensuring rapid processing without loss of information.

Thomas Leber, in addition to being responsible for managing the tool and mould making department, now also carries out the tool calculations. With his technical competence, he also serves as a link for the preparation of key account management offers and sampling in production.

The "newcomers"

Matthias Floriansitz is already responsible for strategic purchasing at binder Austria and is the company's SAP key user. Now he is also responsible for controlling. Having already successfully introduced automated production planning, Matthias Floriansitz is now starting to set up project controlling in the area of plastic injection moulding and mould making.

Florian Halmetschleger is – besides his functions as quality manager, quality controller and supervisor of the ISO 9001:2015 standard – an important link between all departments in the company and supports the production management.

Monika Friedl has been with the company since the beginning of October and will take over the management of the accounting department. She has a decade of experience in this field and, having completed her training as an accountant, plays an important role in the reorientation of the department. In future, she will also work on personnel issues and completely digitalise the departments.

Measures to increase motivation

As a result of the reorientation and the active "living" of the areas of responsibility, the motivation of the employees at the entire site has risen markedly. binder Austria is thus optimally equipped for the future requirements of the market and is looking ahead to the coming months with optimism. ■

ABOUT THE AUTHOR:

Martin Grabler, at binder since 2015, completed an apprenticeship as industrial engineer and established the sales of circular connectors in Austria. Today, Martin Grabler is responsible for the binder Austria location.

Can't be done, doesn't exist – binder solutions

As a system service provider, the business model of binder solutions is to combine the numerous competencies of the binder group in order to offer a tailor-made solution to the customer. Find out what processes are behind this in our new reading series.

Text Michael Schroers and Matthias Simbürger

Compacting of a strand

Completed assembly

Photo Franz Binder GmbH & Co. Elektrische Bauelemente KG

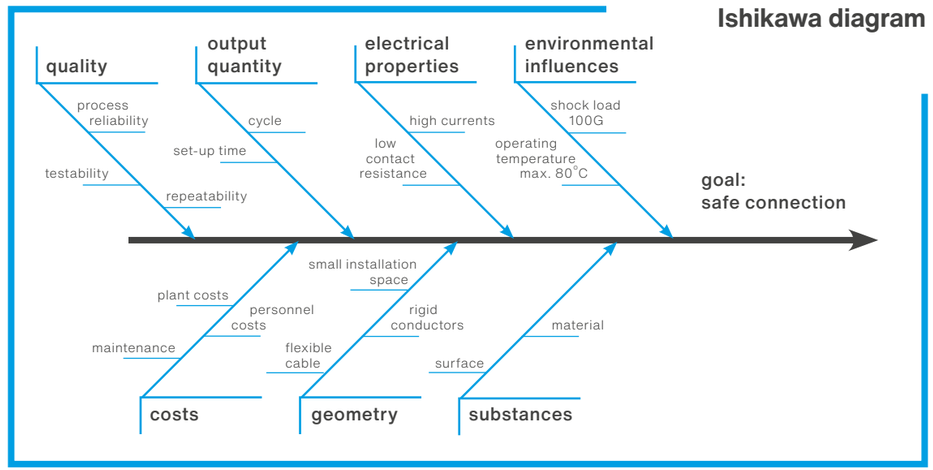
In the area of customer-specific solutions, an end product always includes a manufacturing process that makes the production of an assembly possible. Often, a product consists of many new individual parts that finally come together to form an assembly. In addition to the processes for the individual parts, processes for the entire system must also be developed and tested. If you study this topic more intensively, you will very quickly understand what Aristotle meant by the phrase "the whole is more than the sum of its parts". At binder solutions, this step is called analysis and process development.

Individuality

In order to illustrate the long road from idea to the final product, this article outlines part of such a development process. The development of processes according to specific methods is a core task for the realisation of products – and an essential part in the world of binder solutions. Above all, the focus is on time and financial resources. Many solutions are based on technologies that already exist in the binder group. However, sometimes those are not ideal for a given task. In such cases, the development and process planning team, together with colleagues from the relevant sites, looks for new ways to find the best possible solution..

Complexity

At the beginning there is usually a wealth of requirements that must be evaluated and fulfilled. It is particularly important that all necessary properties are taken into account. The complexity becomes clear with the example of a new conductive connection of a customer project. A so-called Ishikawa diagram is used for illustration purposes, with which influencing factors and their links can be shown (see diagram). The parameters to be considered for this purpose are usually unchangeable and result from the specific properties of the product and the interaction of the product with its later field of application. ▶



Example

Initial situation:
For a waterproof product you cannot use water-permeable materials on the outside. Many parameters are significantly influenced by the design of the process. It can be said that the product could not be realised without a tailored solution. For this reason, a so-called feasibility analysis is carried out.

In this specific case, the challenge is reduced to the following core issues:
1. Connection between flexible and rigid conductor on a nearly flat surface
2. Conductors with different surfaces that are difficult to match
3. Several connections in one assembly at different points
4. Spatially poor accessibility
5. No auxiliary components for contacting desired
6. The process must not have any errors

Existing standard processes cannot be used in this case:

Soldering > Too slow, too unsafe (cold solder joints), no space
Crimping > No space
Plugging > Too high shock load (fretting corrosion), too high contact resistance
Resistance welding > Flex on rigid is very problematic, the installation space is very
Laser welding > Reflection of the conductor material too high for a laser process

A solution using resistance welding still seemed to be the most suitable of the methods listed. After a systematic evaluation and testing of different options, a process was described which might be appropriate: A flexible conductor (stranded wire) that is only flexible up to a certain point, but becomes rigid in the welding area and does not require any additional individual part.

Solution:

Compacting of strands with subsequent welding (with a very small welding gun). During compacting, the individual wires of a strand are welded together with the aid of welding tongs to form a gas-tight wire. This results in the following advantages:

1. The stranded wire behaves like a single-core cable in this area
2. No additional material is required (tin or end sleeve)
3. The strand can be bent like a wire in this area
4. No additional punched part is required

Now the strand can be bent to a defined point and welded at this point with micro welding tongues. Micro resistance welding has the following advantages:

1. Different surfaces are not a problem for welding
2. Gas-tight welding at one point (firm and secure)
3. Weld spot has an extremely low contact resistance
4. 100% quality monitoring of the process based on the welding parameters
5. Very short cycle time with low set-up effort
6. Variably applicable system

Successful concept

The combination of the various processes ultimately convinced the end customer. He decided to implement the project with binder solutions. The combination of the binder group's know-how with its openness to new approaches is leading to interesting, future-oriented solutions for an increasing number of projects. ■

ABOUT THE AUTHORS:

Michael Schroers and **Matthias Simbürger** have both worked for binder since 2013 and are jointly responsible for the innovative business model of binder solutions. Michael Schroers is responsible for sales and Matthias Simbürger for the technical area.

PUBLICATION YEAR **2016** ISSUE **37**

"This is what drives me – every day"

Interview Patrick Heckler

Since 19 October 2013, Hermann Haberkern has been taking care of the health of the employees at binder every single day. In the interview he talks about his work as a personal trainer, the family-owned company binder and what still motivates him after seven years with the company.

Hermann, how did you get involved in binder's sports program seven years ago?

I am a trained master butcher and have been running my family's butchery for over 30 years in the fifth generation. What has always shaped and inspired me besides this activity was sports. I have completed various further training courses and am qualified as a personal trainer, fitness trainer and nutrition coach, among other things. During the time when I decided to take a new direction professionally and to turn my hobby into my job, I was approached by Monika Kluck (Head of Human Resources at binder, editor's note). She asked me whether I could develop a training concept for the binder staff as part of the health prevention program. I did that and presented it in 2013 at the health day.

What criteria do you use to design the sports program at binder?

It is always a 10-minute full body training, which is suitable for everyone regardless of their job, whether in production or in the office. Because it doesn't matter what kind of work you do. It is always the same in a certain way with regard to posture and certain sequences of movement. Motivate, strengthen, stretch – all training units are structured according to this pattern. The design of any given unit is subject to various questions, for example "What is the function of a muscle" and "How can I best stress it with an exercise".

You mention the individual exercises. How many different exercises do you have in your repertoire and how do you manage to create a varied training program time and again?

There are certain basic exercises that require the whole body. I'll put one or two of these exercises in each unit. Then there are special exercises for the different parts of the body. Starting with the head over the shoulder, the neck, the back and so on. There are 20 to 30 different exercises for each area, which can be designed with or without resistance, i.e. with or without bands. The basic exercises in combination with the specific exercises ensure a balanced, varied training. Every training session looks different, but the goal is always the same: To make people feel good, improve their fitness and get them excited about exercising.

What significance does sports have for you personally?

Exercising has always been my outlet. For me, exercising means an increase in the quality of life. The body is our greatest asset. An idea is born in the head, but the body carries it out and acts as a kind of tool. We must be careful with our body, be good to it and treat it with respect.

What does a normal working day look like for Hermann Haberkern at binder?

It's the same route every day. At 7:45 am I start

Photo www.personaltrainer-haberkern.de

in Plant 2 in the department of Mr. Waldbüßer. Altogether I teach 16 units of 10 minutes each daily on Rötelstraße and in Plant 3. Usually, my working day at binder ends around 4:30 pm.

From your perspective, what has changed at binder since 2013?

When I started at binder seven years ago, the company still had 630 employees here in Neckarsulm – later there were over 1,000 at times. The growth over the past years was of course enormous. In my opinion, binder is a model company, a family business with a healthy foundation and a good structure. The new building is certainly another important component in order to be optimally positioned for the future.

Has the number of participants in the sports program also increased in the course of binder's growth?

Yes, not only binder has grown, but the participation in company sports has also gradually increased. Even people who were initially critical of the whole thing were able to overcome it at some point – and have stuck with it (laughs, editor's note). There are some people who retire and say "I'm gonna miss this".

What is the attraction for you after seven years at binder?

Clearly: To help people, to make them happier and more satisfied. Comments like "Since I started participating in company sports, I feel better", make me happy. Those who participate regularly notice that exercising has positive effects on their lives. It is all about harmony and balance, a certain sense of well-being. That exercising is good for people is what drives me – every day.

What kind of relationship do you have with the employees at binder?

Over the years, an enormous amount of trust has been built up. Not only concerning sports, but some people also talk to me about private matters. The key is how you meet people. I always meet everyone at eye level, that's how they know: I am one of them. Of course, I am proud that this relationship of trust has developed over the years.

Starting with the next issue of verbinder, you will be offering various health topics in "Hermann's Fitness Column". What can the readers look forward to?

I would like to give the readers some tips and suggestions on how they can improve their quality of life with relatively little effort in the areas of exercise and nutrition. Exercise and nutrition must be in harmony if progress is to be made. The motto here is: "A little of everything, but not too much". ■

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binder on Instagram

binder_gruppe

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A warm thank you to everyone who has written articles for this issue!

It is only through you that a magazine can co-me into being, only through you that ideas are generated, only through you that the ver-bin-der comes to life. Feel like writing somet-hing? Then please send in your idea for an ar-ticle – the moment one issue of the verbinder is finis-hed, it‘s time to start the next one!

The Editorial team

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Markus Binder

Editorial office

Rötelstraße 27,
74172 Neckarsulm,
Tel. +49 (0) 71 32 325-293,
Fax +49 (0) 71 32 325-150,
marketing@binder-connector.de

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Franz Binder GmbH & Co.
Elektrische Bauelemente KG,
Rötelstraße 27, 74172 Neckarsulm,
Tel. +49 (0) 71 32 325-0,
Fax +49 (0) 71 32 325-150,
info@binder-connector.de,
www.binder-connector.de

General Manager

Markus Binder

Editors

Patrick Heckler, Timo Pulkowski

Art Direction & Printing

abcmedien GmbH,
Am Rosenberg 17,
74821 Mosbach,
info@abcmedien.de,
www.abcmedien.de

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www.binder-connector.de