

PERFORMANCE.

All the latest news and innovations in one place.



Digitization. Industry 4.0.

READY FOR THE FUTURE?!

Digitalization | Digitalization and Industry 4.0 are the trends.

The future is here! Digitalization and Industry 4.0 are trends that can no longer be ignored. Are you ready for it yet? It is not easy to digitalize an analog process - such as the production of packaging. There are a lot of potential approaches: but where to start?

It's simple: we pave your way to the digital future of die-cutting. With various solutions and different approaches, we help you to strategically upgrade your production.

The Marbach Performance Package forms a solid basis for maximum performance in packaging production: With the help of SMED analysis, which is carried out with state-of-the-art video technology, GoPro cameras and special software, experts from Marbach analyze your machines, set-up processes and the machine environment on site. The analog process is disassembled and

reassembled with digital technology. On this basis, optimization and savings potentials are determined and an individual package of measures is developed - both analog and digitally. From machine upgrades to improved tooling technologies, equipment and accessories to training.

One of these digital machine upgrades is the digital zone levelling DZL|plate. In standard format or as DZL|plateXL for large-format machines, it replaces the zone make-ready with digital technology and thus ensures significantly reduced make-ready times and greater productivity in the production of your packaging. Find out exactly how you can increase your performance with it in our web session. You can watch it on-demand free of charge (see button below).

All these optimizations ultimately pave the way to the flagship

of digitization: our CONNECT|M system solution. Combined with various hardware components, such as cameras, sensors and QR codes, this connects tools, die-cutting machines and operators in your packaging production. This digital link provides performance tracking and efficient die management. Key figures are determined and trends and potentials are revealed - a perfect basis for your decisions around the diecutting process and maximum transparency in packaging production.

Find out more about CONNECT|M here and below you can download the virtual.drupa presentation. For smooth processes. Short make-ready times. And a clear goal: to arrive in Industry 4.0.

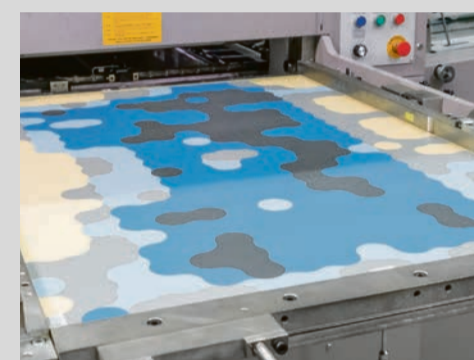


Scan me!

Digital zone levelling - makes everything run smoothly.

Product | Efficient make-ready.

Tolerances due to an uneven platen are part of everyday life for a packaging manufacturer. These occur mostly due to wear.



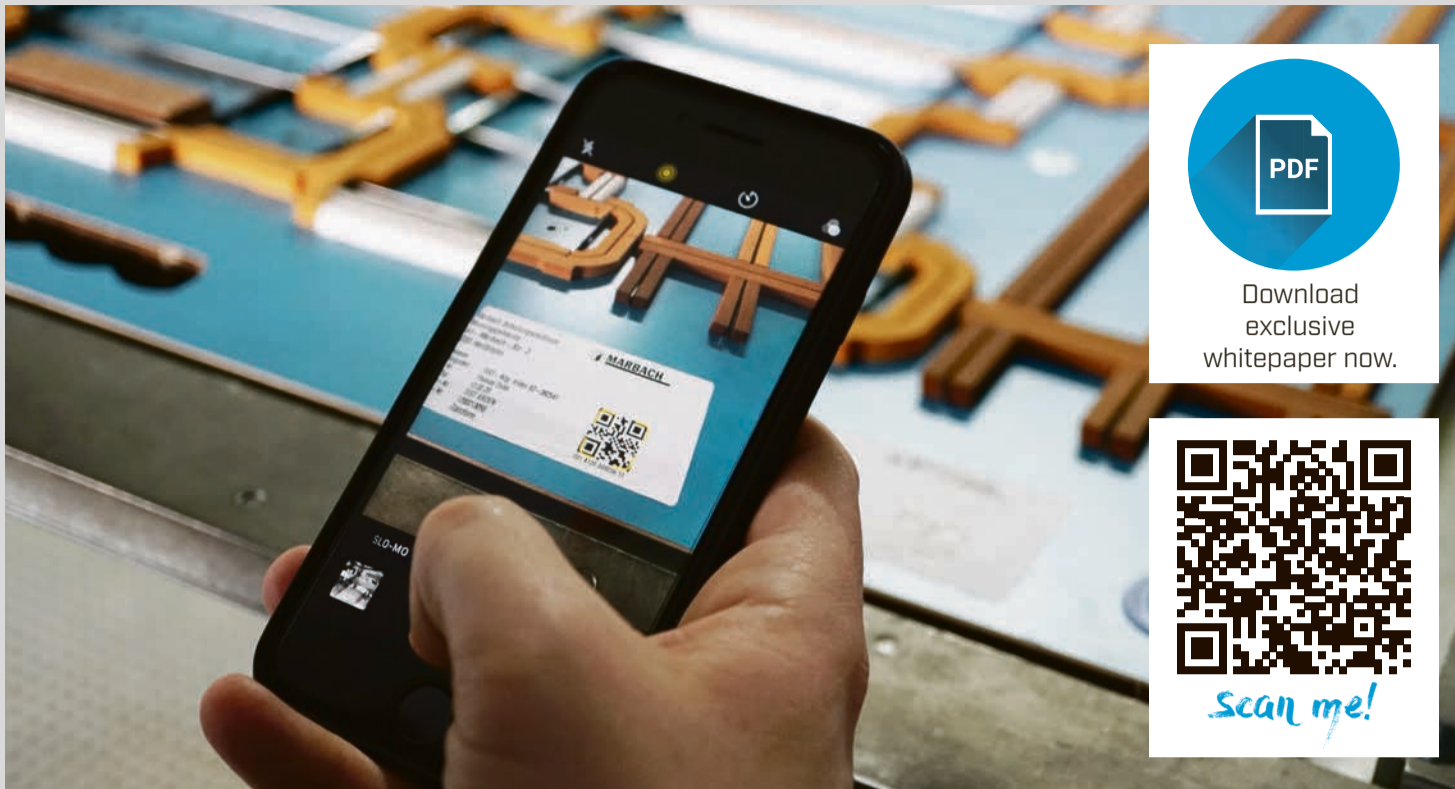
The digital zone levelling.

Although differences in the platen may be small, they are extremely important for quality and processing speed. Time-consuming area patching has to be done from scratch for every order, unless you have digital zone levelling from Marbach.

This special machine upgrade, which bears the name DZL|plate, makes area patching almost totally unnecessary. It is based on an impression of a special grid die onto pressure sensitive foil. With the Marbach system, the individual height profile of the machine is calculated and transferred onto a make-ready protection plate. Once fitted, it ensures that tolerances are compensated for on a permanent basis.

The DZL|plate is also available for large-format corrugated board machines with a two-part protective plate. More information about the XL version of the DZL|plate can be found here.

Marbach with added value: Operators of more than 500 machines throughout the world benefit every day from this effective form of zone levelling.



CONNECT|M. The new software for performance tracking and tool management.



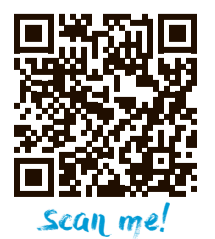
User platform CONNECT|M.

Digitalization | New feature with added value.

Our new system solution CONNECT|M ensures more digitalization in the die-cutting process and has met with great interest on the market. The first projects have already been started. We are currently expanding this solution gradually, including the user platform of the same name. For this reason, a completely new feature has recently been made available on the website connect.marbach.com.

Project manager Ferdinand Zehaczek: „We notice from the numerous project inquiries about CONNECT|M that there is enormous interest in the topic of die-cutting 4.0 on the market. Everyone wants to know more about this forward-looking system solution for more performance and optimized tool management in diemaking. On our user platform, which also goes by the name CONNECT|M, we provide our customers with access to the CONNECT|M system solution as well as other digital gadgets on the subject of the „die-cutting process“. Our latest feature is a digital, interactive order form that enables our customers to order a perfectly equipped tool with pinpoint accuracy. How does it work? It's very simple: enter the necessary data, find out more about the various features of the tool package by clicking on special information buttons, upload the data, and you're done. And best of all, the user is guided step by step through the ordering process, including important information on the selection of the individual tooling components. This makes even technically complex orders easy. Greatly shortened communication paths as well as technical clarity included.“

In the coming months, the CONNECT|M user platform will be expanded step by step with additional features.



DIE-CUTTING 4.0. WITH CONNECT|M.

Digitalization | Maximum visibility in packaging production.

Performance tracking and good tool management in packaging production are difficult to integrate. This is because the current die-cutting process – in contrast to the printing process – is still analog-based. Digital connectivity is therefore missing. The die-cutting machine, tool and user are not connected. If data on the tool and its performance are to be collected, this can often only be done manually offline and involving a great deal of effort. The end result is often data that is unreliable or which is missing and cannot be found. The situation is similar for tool management: time lost locating production tools, problems in the structured organization of tool maintenance, and no documented information about key performance indicators of the tool – these are today's norm.

The future: CONNECT|M. A new system solution consisting of specially developed, web-based software, combined with various hardware components. Cameras, sensors and QR codes will provide a connection between tool, die-cutting machine and operator in your production. With this digital connection, we will be able to provide you with the finest performance tracking and the most efficient tool management.

This will enable you to identify trends as well as potential and, thanks to the key indicators obtained, you will have the perfect basis for your decisions on all aspects of the die-cutting process. And all of this independently of the machine and die manufacturer. For maximum transparency in packaging production.

Performance Tracking

CONNECT|M's performance tracking option ensures that key performance indicators are determined quickly and easily at the touch of a button. This way you have the most important key indicators for each of your tools at a glance. This makes it possible to compare different tools with each other as well as to compare one and the same tool on different machines. In addition, the user receives an automated message in case of changes in the tool performance. Even objective performance comparisons of several production sites are simplified with CONNECT|M. The same applies to the digital storage of setup data for optimized setup for repeat jobs. The results of performance tracking are impressive: based on these key indicators, you will be able to benchmark, identify trends, uncover potential and so increase the performance of your packaging production step by step. At each of your locations.

Tool Management

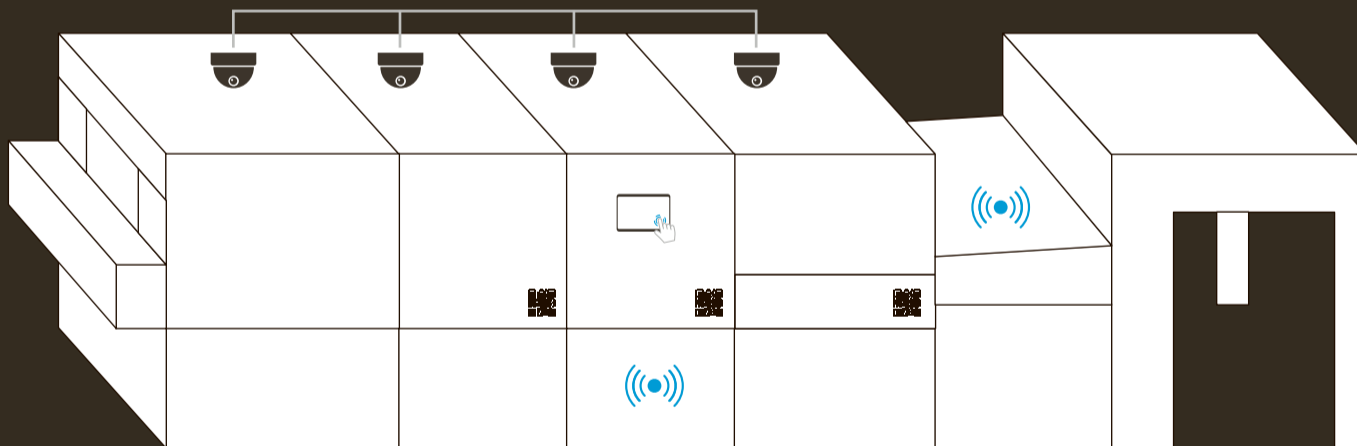
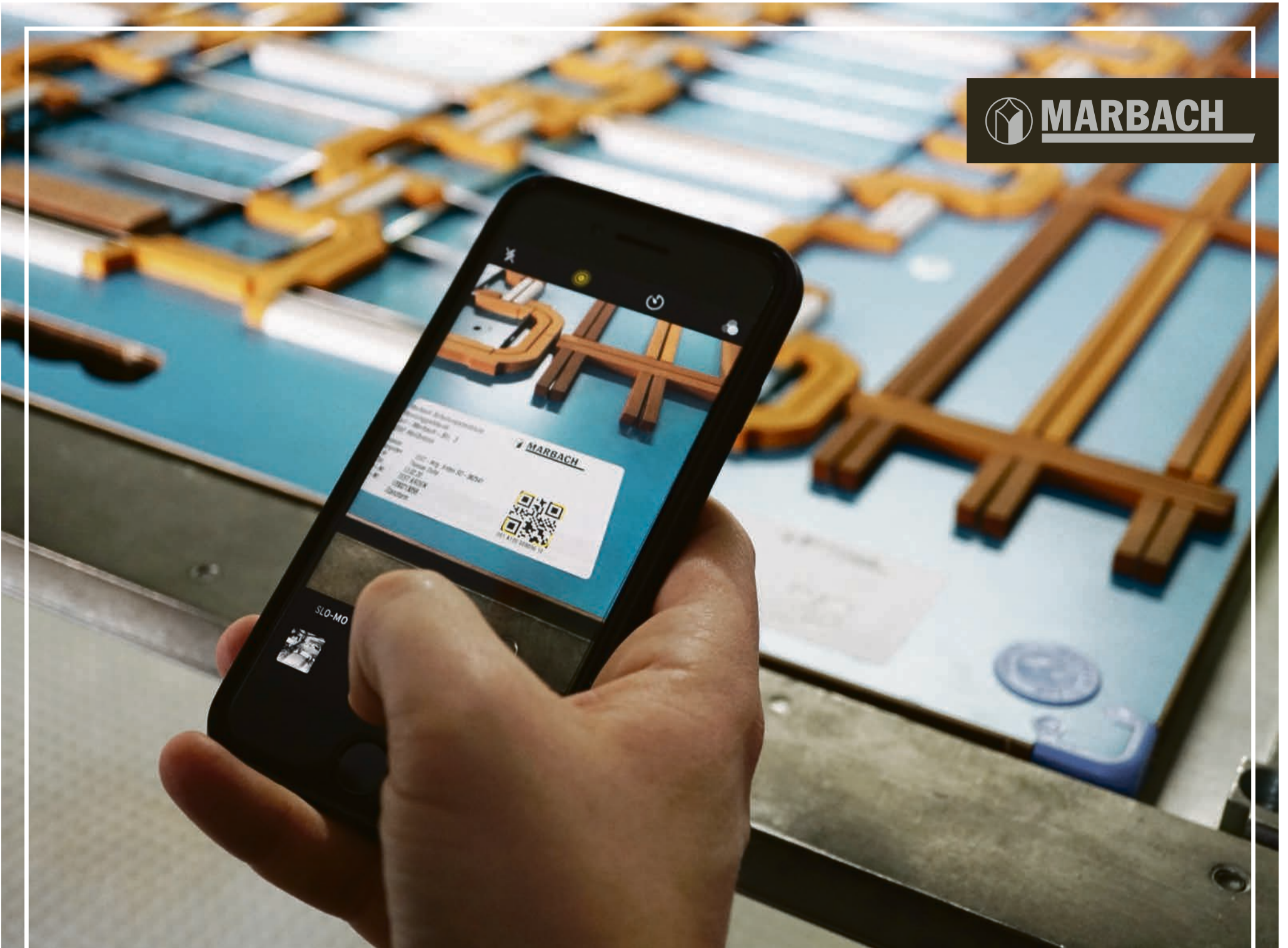
Tool management is also an important component for transparency and efficiency in packaging production. To sum up: the tool must be located quickly, maintenance ensured, and quick and efficient re-ordering made possible. Defining key performance indicators for each individual tool also helps to ensure efficient use. In other words, tool availability must operate perfectly.




With CONNECT|M Tool Management, you have the advantage that all important information is always available exactly when you need it, cutting out the need for long searches. The storage of key performance indicators for each individual tool also makes tool use even more efficient. The bottom line: Simply transport your production tool to the die-cutting machine and start producing packaging.

CONNECT|M – for maximum transparency in packaging production.

Here you can find the CONNECT|M user portal:

connect.marbach.com/en



Hardware upgrade	
Camera system • optical tool detection	
QR-Code • optical tool detection	
Sensors • Speed • Paper detection	

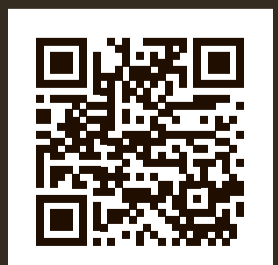
CONNECT|M.

DIE-CUTTING 4.0: THE FUTURE STARTS NOW.

CONNECT|M. Brand new software, combined with various hardware components. Cameras, sensors and QR codes create a connection between die-cutting tool, machine and operator.

For maximum transparency in your packaging production. Immerse yourself in the fascinating world of die cutting 4.0.

connect.marbach.com/en



What doesn't fit is made to fit.

Product | Quick adjustment of tool to print image.

The challenges in packaging production are many and varied. Especially in the case of packaging for the cosmetics industry, it can happen quickly: the cutting-die and the print no longer fit together perfectly. This is due to the fact that the cosmetics industry often works with costly printing techniques and foil laminations. This high degree of finishing can lead to warping of the paperboard sheet, with the result that the print and the tool no longer fit together perfectly.

The fundamental condition for visually attractive packaging is the perfect register from the cutting-die to the printed image. If this register is not optimal, packing will not only look unattractive, but also very unprofessional. This can have an impact on the image and quality perception of the packaged product and its brand.

All this can be avoided with our special tool with „register adjustment“. With this tool, the tool can be quickly and easily adjusted to the print image directly in the die-cutting machine. This not only leads to greater flexibility in packaging production, but also to visually flawless packaging.



scan me!



HIGH PRECISION LOWER PINS. FOR A RELIABLE STRIPPING PROCESS.

Extremely precise. And made of high-quality materials. This is our precision lower pin. Thanks to its narrow guide tolerances, it is very accurate in terms of position. For permanently trouble-free stripping processes in packaging production.
www.marbach.com



Economy meets ecology. With the dieboard greenplate.

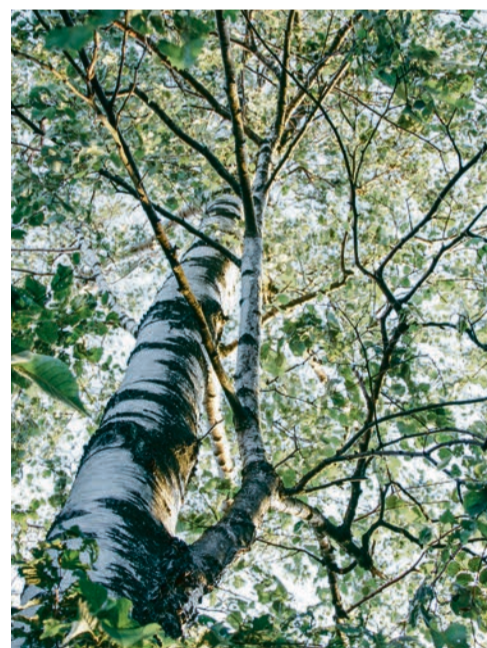
ECONOMY MEETS ECOLOGY.

Sustainability | 3 in 1: environment, security of supply and economy.

There are many dieboards as a basis for die-cutting tools: In different sizes, thicknesses and numerous designs. Depending on the requirements, the right dieboard can be selected. But what happens when raw materials become limited and supply security is threatened? And what if the cutting-die not only has to cut efficiently, but also has to be as gentle as possible on the environment? Then a very special dieboard is needed that combines the issues of the environment, security of supply, and economy. And that in a single dieboard.

The main material for a cutting-die is a dieboard made of birch wood. A shortage of birch as a raw material and the associated supply bottlenecks have a massive impact on the supply of cutting-dies to packaging manufacturers. And without cutting-die, there is no packaging production. At the moment, raw material supplies are limited in many areas. This is also the case for the slow-growing raw material birch from Nordic forests. This makes it all the more important to achieve the greatest possible independence from such limited resources. And if a cutting-die can also convince through ecology and economy, then it is a real innovation for the future.

Good news for you: Such a dieboard exists. Its name is Marbach greenplate. The greenplate is the first and only ecologically sustainable carrier plate that not only protects the environment, but also offers numerous technical advantages and, thanks to its special composition, also ensures delivery reliability.



But let's start at the beginning: The Marbach greenplate dieboard consists to 30% of the primary raw material birch, 70% of the board is made of environmentally friendly secondary material from ecologically sustainable forests. The innovative structure of the Marbach greenplate increases wood utilization and ensures that significantly less birch wood needs to be used

than with conventional cutting-dies. This means 3 times as many tools can be produced from the same amount of birch material. In addition, the greenplate saves CO2 emissions during transport thanks to the special material selection, and thus saves important resources and protects the environment.

But that's not all: Marbach greenplate also offers the user numerous technical advantages in packaging production. The excellent flatness, high compressive strength and high dimensional stability of the plate ensure short makeready times, high machine speeds and excellent storage durability.

With greenplate, ecology meets economy: an innovation that is more up-to-date than ever and which has been used successfully by numerous Marbach customers – since its market launch more than 12 years ago.



scan me!

Knowledge is the road to success.

Training course | Your expertise for reduced make-ready times.

Small print runs mean frequent re-tooling. In such cases, it is particularly important that make-ready times are as short as possible. The Marbach solution: In the Marbach Academy we deliver the expertise for all technologies in modules that are designed to be both educational and meaningful in content, and provide answers to your questions.

A machine which runs creates turnover. A machine at standstill costs money. What makes a machine run? The people who work on it. At our Marbach Academy, we ensure that all those involved in the process are kept up-to-date, are provided with the latest technical knowledge and obtain practical expertise.

The main focus at the center is on the make-ready times, as ever smaller quantities are required and delivery is preferably made "just in time". In our courses, we demonstrate practically how to avoid unnecessary machine ma-

ke-ready times and machine downtimes under these conditions. Flexibility, continuity, reliability, punctuality and highest quality are the objectives. Added to these are cost savings and maximum performance in the production of your packaging. The machines and cutting dies used play only a subordinate role, as the steps which are necessary for making-ready are always very similar. Work in the tool preparation can make all the difference. But more about that in our training course ...

We offer our training courses either face-to-face or as an online course under the motto "**More knowledge. More Skills.**" – exactly matched to your individual requirements on request. They are held by trainers with decades of experience.



The Marbach Academy.

TRAINING DATES IN GERMAN

Date	Training	Duration
04.09. - 08.09.2023	FS-INT	5 days
26.09. - 27.09.2023	FS-02	2 days
on request	WP-02	2 days

TRAINING DATES IN ENGLISH

Date	Training	Duration
14.08. - 18.08.2023	Z-INT-E	5 days
12.09. - 13.09.2023	FS-02-E	2 days
23.10. - 27.10.2023	FS-INT-E	5 days
on request	WP-02-E	2 days



Flawless processes with the Marbach Performance Package.

Flawless processes. Short make-ready times. Excellent cutting results.

Service | Better performance. Higher productivity. Package solution.

The linchpins of high cutting productivity are short and predictable make-ready times. These make-ready times are the result of a complex interplay between different factors. The Marbach Performance Package therefore makes an impact on your make-ready times and reduces them to a minimum.

The conditions on site play a significant role. Factors such as machine equipment, machine condition, the tool technology used, as well as the working sequences and staff qualifications all affect the make-ready times. It is therefore true to say that only something that has been individually matched to your conditions on site can have the optimum effect. The Marbach Performance Package is therefore not available "off-the-peg". We look at every single process step and select the right procedures to satisfy your company's requirements.

As we know that time is money, we keep the time and effort extremely low. Using the latest recording and video technology, we record the set-up of several orders, including the machine environment, at your premises. Our experts analyze the recordings, determine potential savings and supply the perfectly matched concept for optimization. In doing so, we make use of various modules that we select for you individually to suit the

requirements in your company. These include training courses, products such as digital zone levelling, and also various machine upgrades. Other important modules for reduced make-ready times, optimized processes and maximum productivity are:

The platen cleaning device

A clean platen ensures short set-up times. You can use the m|platen|cleaner to clean your platen – quickly, easily and smoothly. This forms the basis of a clean and efficient cutting process.

Calibration tool

Perfect matching of all stations in the diecutter. Including upper and lower dies. Fast and straightforward. This is all possible with the Marbach calibration tool.

Universal sheet delivery

Sheet delivery in the blanking section instead of blank separation. This can be achieved without major conversion work using a special upper die combined with a lightblinker lower die with appropriate masks. For quick and easy conversion from blank separators to sheet delivery in the blanking section.



New high performance ejector rubber.

Product | The rubber does the trick.

The rubbering of a cutting-die has a significant influence on the performance of the die-cutting machine. This is because it fixes the die-cutting sheet material during the die-cutting process, it prevents the paperboard sheet from getting stuck in the cutting-die thanks to its elastic properties, and also supports the strength of the nick. Perfectly executed rubbering is particularly important at high speeds of the die-cutting machine, as well as for complex layouts of a package.

There is a large number of rubber materials on the market. These often reach their limits in application. This is because the rubber must meet many different requirements. As a result, the cutting-die usually has to be equipped with different types of rubber, so rubbers with different properties are required – depending on where they are used in the tool. These rubbers have to be perfectly matched to each other to ensure optimum function. But that's not all: good ejection behavior, high abrasion resistance and durability, as well as a good adhesive function with equally good removability are features that our customers require from the rubber.

With these requirements in mind, we set to work and, based on our experience, developed a new rubber specifically for use in die-cutting technology. In the

process, we placed particular value on ensuring that all rubber grades are perfectly matched to each other. We continuously adjusted the formula in the development process until we were finally able to hold the perfect result in our hands: marbaject.

But what makes marbaject so special?

marbaject has been designed for use in the die-cutting process. It has high rebound elasticity, so it returns to its original shape very quickly, and that ensures optimum ejector function. It is also highly resistant to abrasion and thus wear. Long service lives are the result. marbaject also protects the nick and has a good adhesive function, yet can, if necessary, be removed again without leaving any residue. Another plus: marbaject is ISEGA-certified and can therefore also be used in the food sector. Its environmental properties are also impressive.

marbaject is now available in shore hardnesses 20, 35, 40, 45 and 55. Color coding ensures easy handling during maintenance or repair.

marbaject – the clever high-performance rubber for maximum performance.



Scan me!



The new high-performance marbaject rubber.



The MDSS storage system for your cutting dies.

Seek and you shall find.

Product | Just-in-time at the die-cutting machine.

In-house logistics in a print shop must be right. This also includes the tools used to produce packaging. Not only must these die-cutting tool packages be stored securely so that they are undamaged in the event of a repeat job. No, they also must be accessible at all times and located quickly so that they are available just-in-time at the die-cutting machine. Even on the spur of the moment, if an urgent job has to be scheduled at short notice. Well-functioning logistics avoid time loss and ensure smooth packaging production. With solutions from Marbach.

Efficient functioning internal logistics have an impact on productivity. With Marbach's MDSS (Marbach Die Storage System) you will be on the safe side: because it ensures that your dies will be stored absolutely safely and at the same time protected against damage. But that is not all.

Due to its design and its combination with perfectly matched handling systems (depending on the MDSS version and size), the MDSS ensures that the die packages can be transported quickly and safely to their place of use.

This means that they will always be in the right place at the right time. All done quickly and reliably, without the need for any long searches. The MDSS is available for flat die packages up to 2,100 format and for rotary dies up to

a shell diameter of 690mm. The MDSS system from Marbach has a modular design and can be configured individually, depending on the requirements. For this purpose, different cassettes or rail sizes as well as handling systems are available.

An MDSS can be installed as a small storage system directly at the die-cutting machine for continuous production, but also at a separate facility containing a few storage locations or as a large storage system with several thousand storage locations on multiple levels.

The flexibility of the MDSS system also makes it easy to implement special space-related solutions.



With an MDSS, you ensure safety and reliability in the supply of your tools to the die-cutting machine.



Scan me!

THIS IS HOW ROTARY DIE-CUTTING ALWAYS WORKS.

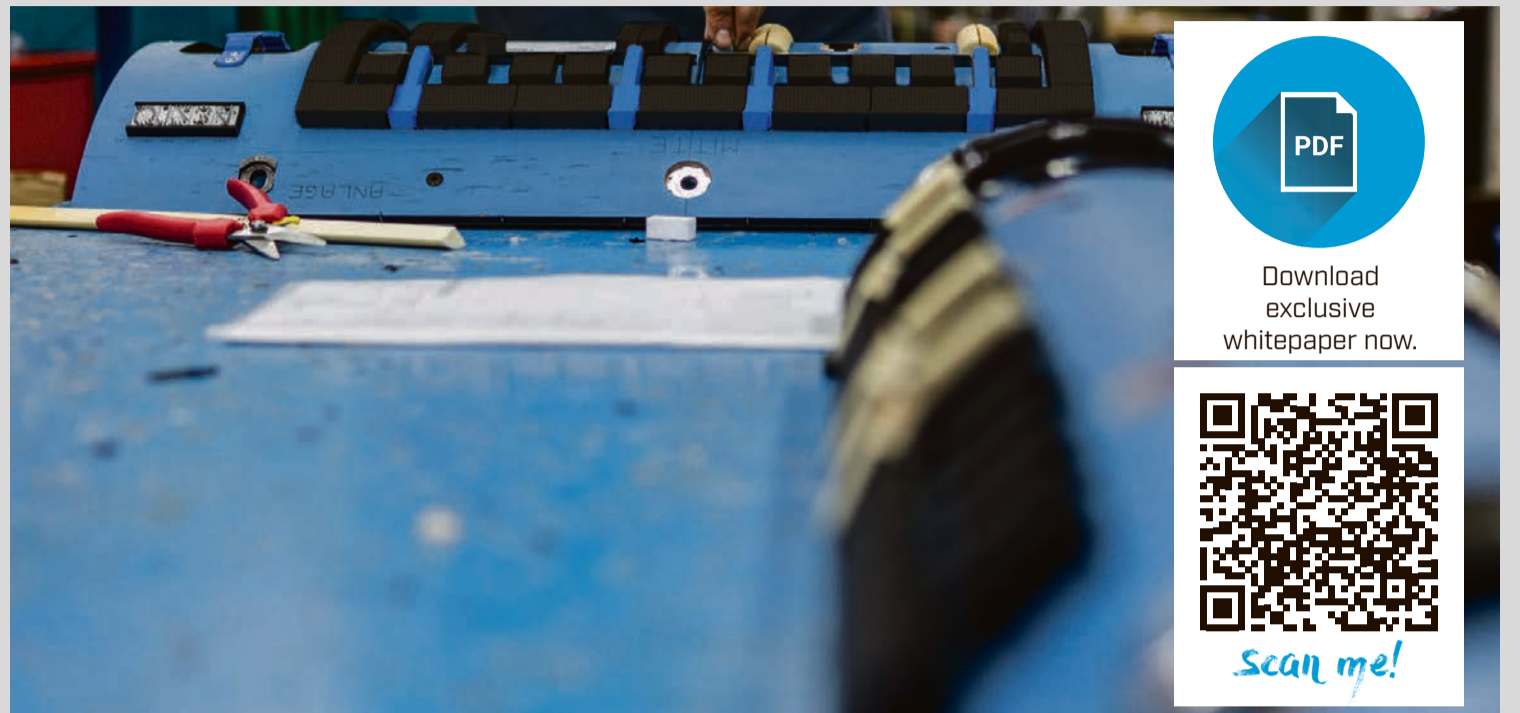
Product | The right solution for every requirement.

The challenges involved in rotary die-cutting of corrugated board are multiple. The main influencing factors here are the material used (moisture, flatness, recycled content), the machine, and the quality and equipment of the cutting-die used. As a die-maker, we have no influence on the material and the machine. But we can influence the tool. In order to be able to achieve waste-free die-cutting and the highest machine speeds, we offer – in addition to our standard rotary dies – various die technologies with which you can master any challenge.

In rotary die-cutting, the tool not only performs the functions of creasing and die-cutting, but also the stripping of waste parts. In order to do this safely and efficiently – depending on the die-cutting machine you are using – you need a rotary die perfectly equipped for your particular job.

marbapeed|r.

marbaspeed|r is a special high-performance tool equipped with the most advanced materials and manufactured using the very best manufacturing technologies: best rules, best dieboard materials, high-performance rubber as well as many other features. The tool equipment is tailored to your individual require-



The high performance tool marbaspeed|r.

ments. This means that not only cutting and creasing, but also stripping during rotary die-cutting of corrugated board is optimally achieved. marbaspeed|r is available for all corrugated board types and is suitable for both inline and offline machines. With a marbaspeed|r tool, the choice of rubber plays a significant role. Here, we use special high-performance rubber. Depending on your requirements, for example, the marbaject rubber, which is exclusively available from Marbach, is used.

Its special surface structure provides the perfect grip. It is extremely compression resistant and has a very good rebound elasticity. All of which ensures outs-

tanding die-cutting quality of blanks. In addition, marbaject's high rebound elasticity means that waste is ejected quickly and efficiently during rotary die cutting. The Marbach rubber is also tear-resistant and has low abrasiveness. This makes it highly resistant and durable. Even when other rubbers wear out and need replacing, marbaject still continues to work. It is ISEGA-certified and can therefore also be used without any hesitation for die-cutting of food packaging.

Rotary dies with active stripping technology.

In rotary die-cutting, the trend is toward the use of rotary machines with active stripping technology. Such machines employ a

different technique than conventional rotary machines. They have an integrated self-stripping system where the waste is stripped by means of mechanical ejectors. Therefore, we at Marbach have developed special tools, which ensure high productivity with machines like these. This is because the tool requirements are extremely high: For maximum performance, the special rotary tools must not only be extremely precise, but also have special equipment.

The result is waste-free blanks in addition to very high running speeds of the rotary machine and in this way maximum productivity in rotary die-cutting is achieved. Our special tools are suitable for all rotary machines with active stripping technology.

As you can see: With Marbach rotary tools there is the right solution for each of your requirements.

Learn more in our whitepaper on rotary die-cutting.



marbaspeed|r with the new high-performance marbaject rubber.

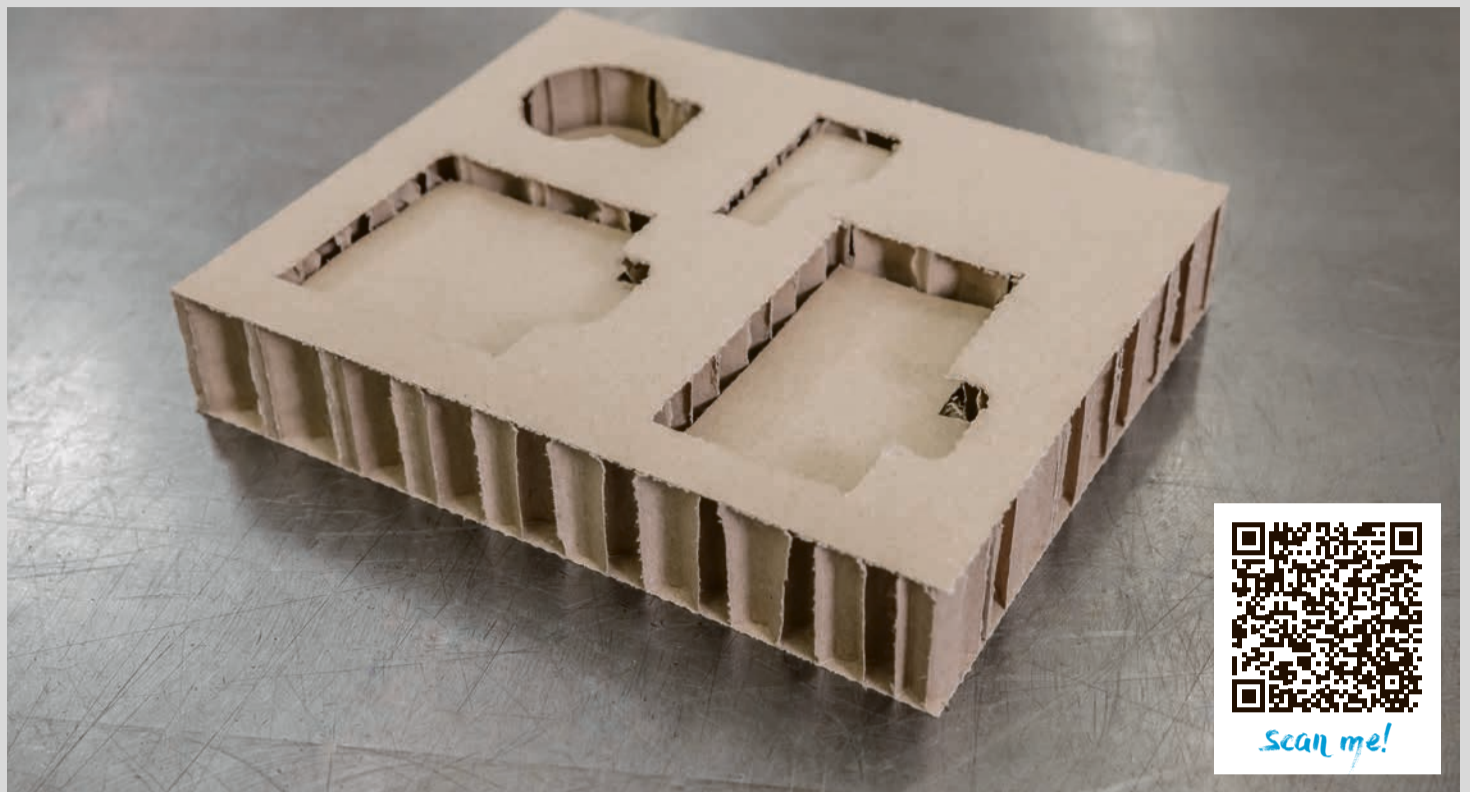
HONEYCOMB CORRUGATED BOARD.

Product | Die-cutting of thick materials made easy.

The alternative solution for environmentally friendly transport protection is called honeycomb corrugated board. This material impresses with its many positive properties. This is because honeycomb corrugated board is a light but very stable type of material due to its honeycomb-like structure, but there is the thickness of the material. This makes die-cutting a very special challenge for the tool used.

A tool for die-cutting honeycomb corrugated board must be very stable, resistant and robust as well as specially equipped so that it can optimally penetrate the thick material and deliver good die-cutting results.

This is not an easy task, but fortunately not a problem with Marbach's decades of experience. Marbach tools for die-cutting honeycomb corrugated board are characterized by their spe-



Special tools for honeycomb corrugated board.

cial equipment as well as the selection and quality of the materials used.

This is because they are equipped with particularly robust tooth cutting rules, a suitable anvil as well as a special ejector technology. The most important factor here is the optimum co-

ordination of these individual equipment elements.

Our tools are individually tailored to the requirements of each job. This leads to smooth die-cutting processes and optimum cutting results. Best of all, the special tools described can also be used for die-cutting honey-

comb corrugated board for door interiors, edge protectors, plug-in connections and packaging trays.

TOBACCO: PERFECT CREASING IS WHAT COUNTS.

Product | The right technology for every requirement.

Tobacco packaging machines are very sensitive. For a smooth packaging process, the processed cigarette blanks must be exact and the creasing parameters must be right. Uniform creasing is just as important here as precise make ready. A very special challenge is round corner creasing. This is because the special effect of round corner creasing is achieved by arranging several creases very closely together when die-cutting the packaging. This looks very attractive in its finished state, but is difficult to implement.

When die-cutting cigarette packaging, the demands are very high: the creasing parameters specified by the cigarette manufacturer must be met exactly for smooth further processing. This requires the highest precision of the blanks.

Conventional tools equipped with cutting and creasing rules often reach their limits at this point. This is especially true when absolute accuracy is required or when many creases are closely placed next to each other.

So what is the solution for these applications?

It's quite simple: The Marbach crease-plate-die. With this special tool, the creasing rules are replaced by high-precision, CNC-milled crease plates. These are elastically mounted on a dieboard and equipped with raised creases. This makes it possible to first crease and then die-cut. As a result, less tension is placed on the paperboard sheet during the die-cutting process. The outcome is attractive edges, small nicks and maximum precision.



The new crease-plate-die|rc.

IN 2023. MARBACH BECOMES 100.

General | Marbach celebrates its 100th anniversary in 2023.

Marbach is celebrating a very special birthday this year: in summer 100 years ago, Marbach was founded as a 3-man operation in the German city of Heilbronn.

Internationally active

Managing Director Peter Marbach: „Celebrating 100 years as a company is not a matter of course. Only just over 1% of all companies in Germany mana-

ge to do so. And we are among them. Who would have imagined that when my grandfather founded the company with 2 partners in 1923. Back then, it all started in a small workshop, and today, as a corporate group, we operate worldwide at 20 locations with more than 1,600 employees and offer die-cutting and thermoforming tools as well as various services related to packaging production.“

Soon 100 years of experience

Marbach was founded in 1923 by Karl Marbach Senior. In 1955, his son, Karl Marbach Junior, joined the company management. 1972 we were the first company to use laser technology for the die-cutting production.

This was a milestone for the further success story of the Marbach Group. In 1988, with Peter Marbach, the 3rd generation

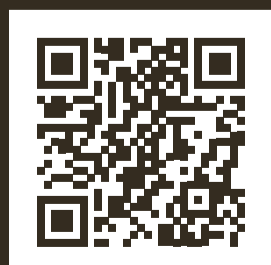
joined the company. Supported by his 3 managing directors, Bernd Klenk, Stefanie Schier and Markus Britsch, Marbach today steers the fortunes of the company. Marbach continues: „We are already in the middle of planning for our 100th birthday and are very much looking forward to the exciting year 2023, which is unique for us!“



The mpower cutting rule. THE ORIGINAL.

The mpower cutting rule. Developed by Marbach. For the shortest make-ready times. And maximum die-cutting performance from the first to the last sheet. The trick: a rounded cutting edge that absorbs tolerances, eliminates angel hair and that is almost immune to overpressure.

marbach.com/materials



BLANKING MADE EASY.

Product | Maximum efficiency in blanking.

Blanking is a sub-process in packaging production in which many challenges arise. Especially in very demanding layouts when the blanks have to be separated automatically. Maximum efficiency requires not only precision, but also easy handling of the blanking tools employed.

With conventionally manufactured blanking tools used for special production requirements - such as blister cards, cup segments, small folding boxes or cigarette packaging - problems frequently occur because manufacturing tolerances are not optimal due to the physical material properties of laser-cut steel plates or bent rods.

If, for this reason, the blank shafts differ in size, this will lead to longer set-up times and lower running speeds.

On top of this, conventional blanking tools are very heavy and single-person handling at the ma-



The Marbach alublanker.

chine is impossible. Increased manpower requirements and time delays are the result.

But, not so with our new alublanker. Because it ensures efficient processing and easy handling. The alublanker is a high-precision female blanker, made completely from one piece and manufactured in one milling operation.

It is available in marbablanker or lightblanker versions. The separ-

ating grid is made of aluminum and is completely CNC processed. Produced in aluminum, its resulting low weight ensures optimized handling of the female tools. Two people are no longer needed to set-up a blanking tool, and this saves you time and personnel costs.

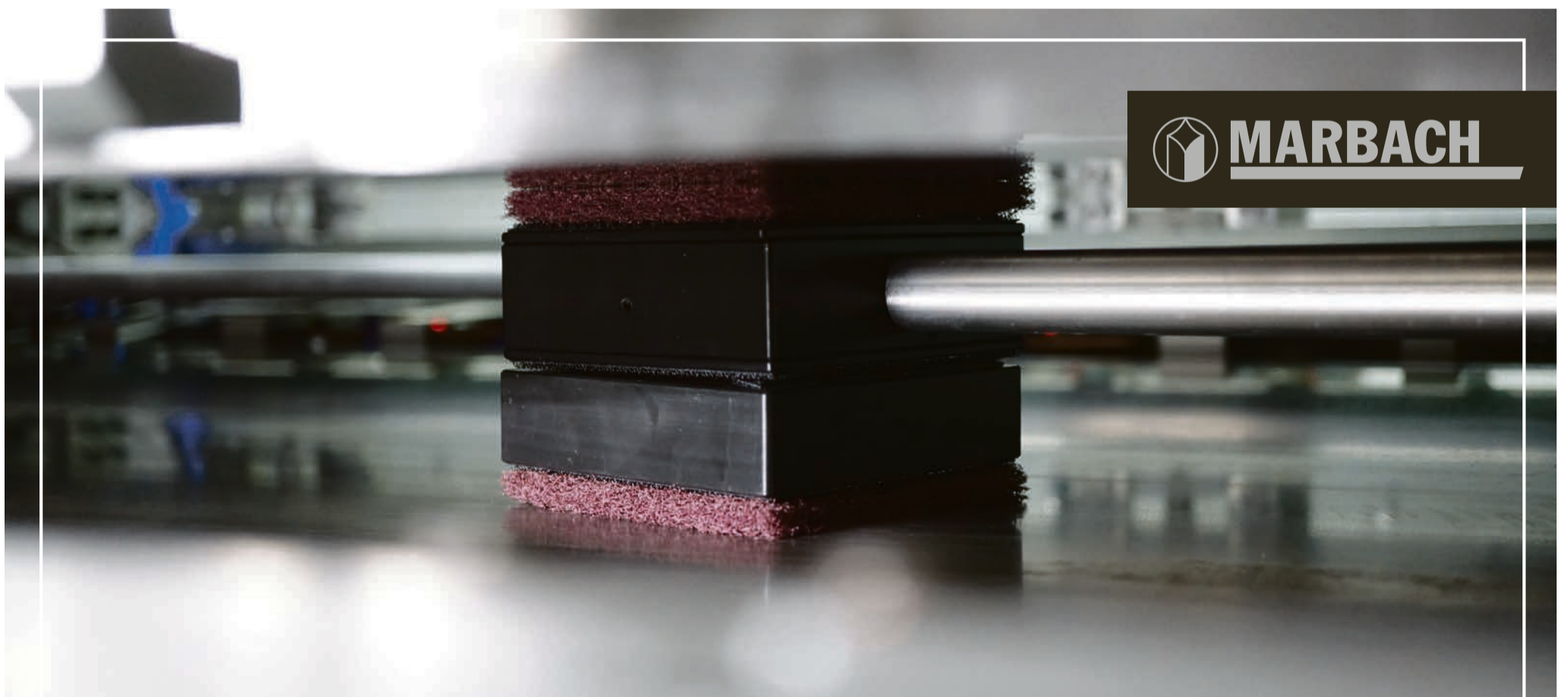
Highest precision ensures perfect pile formation, reduced set-up times, excellent packaging quality

with zero marks and high machine speeds.

In short, for maximum performance in your blanking station.



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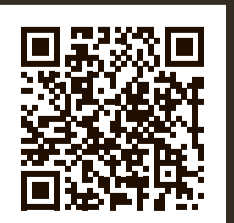


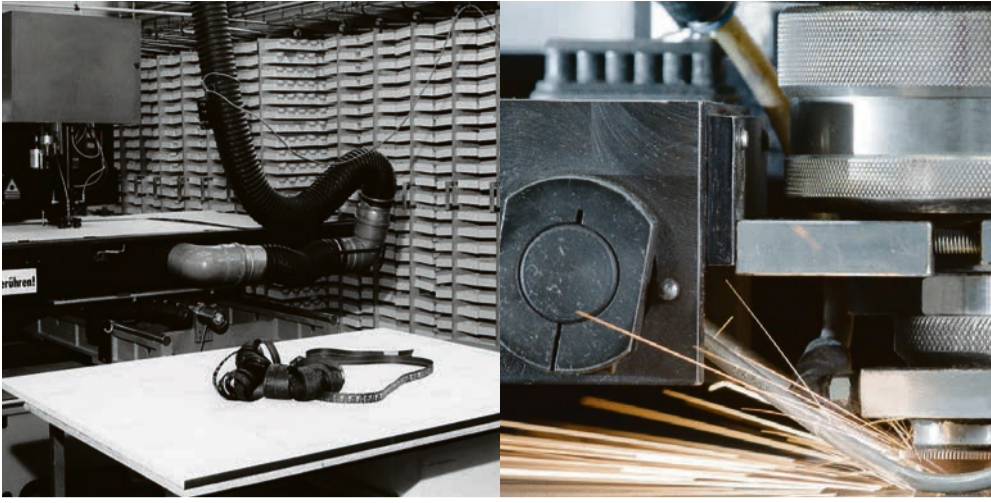
mplatencleaner

THE PLATEN CLEANING DEVICE FOR DIE-CUTTING MACHINES.

Easy handling. No need to disassemble the chain. For a fast and efficient cleaning process of the die-cutting platen. Reduced set-up times. And more performance in your production.

www.marbach.com





50 years laser technology.

Pioneering work done.

Product | Marbach has been using laser technology for 50 years.

In its almost 100-year history, Marbach can look back on numerous innovations and groundbreaking decisions. One of the most important decisions in the company's history is the investment in laser technology in the early 1970s.

As recently as the 1960s, the manufacture of a cutting-die was a purely manual activity: marking out the contours on a plywood sheet, sawing the contours using a scroll saw, bending to the correct contour and fitting the rule material using simple jigs and fixtures. In the process, the tolerances of the individual production steps added up, so that the quality of the tools produced was not very high. However, the demands of the packaging industry were increasing at that time, especially due to the rapid development in packaging machines with ever higher performance data.

Marketing Manager Tina Dost: „Karl Marbach Junior was well aware of this situation of increasing quality demands on cutting-dies. In 1969, he attended a lecture in Great Britain about ‚cutting with light‘, a new, revolutionary technology. The speaker was Ray Miller, President of Atlas Steel Rule Dies. At that time, Miller had the world's first CO2 laser system for cutting-die production in operation at his company in the USA. In 1970, Karl Marbach flew to the USA to see Ray Miller's laser system in action. From this time on, he became fascinated by this technology. He couldn't get the idea of his mind to use such a cutting system for diemaking in Heilbronn, Germany. And so Karl Marbach dared to make the investment. Even though the financial risks were high and no reliable

empirical values were available. In 1972, the time had come: the first CO2 laser system for diemaking in Europe was set up in Heilbronn in a purpose-built annex. This decision would subsequently prove to be the right one. Because the use of laser technology for the production of cutting-dies would become a cornerstone of the success of the Marbach Group. With the help of this technology, a previously unimaginable productivity was achieved: In a very short time, many more cutting-dies could be produced than with the conventional, manual production method. In addition, the use of laser technology enabled a new tool quality which was not only unique on the market, but which simply delighted the customers. As a result, Marbach no longer only supplied customers in Germany but also abroad. There, the Marbach tools with their extraordinary quality met with great interest just as quickly as they had done in Germany. The result: More and more customers ordered cutting-dies „made by Marbach“. Marbach had become the market leader in Europe. The foundation stone for the success story of the family-owned company was thus laid.“

As a result, the decision to use laser technology became the most important milestone in Marbach's company history. 1,500 employees currently work for us at 20 locations worldwide. And laser technology has become an indispensable part of today's die production. In the Marbach Group alone, 40 laser systems with a total power of 86,000 watts are in operation, 7 of these laser systems are located at the headquarter in Heilbronn.

Make-Ready, steady, GO!

Product | Make-ready in no time at all.

The cutting-die is a flat tool: in theory, all cutting rules hit the cutting plate at the same time during the die-cutting process. In practice, however, there are various tolerances which can cause the rules to cut through the die-cutting material in some places but not in others. This is where a height compensation becomes necessary: so-called patching.

But make-ready takes time. And time is money. With ever-increasing demands on packaging manufacturers, ever-smaller runs and thus an increasing number of tools that have to be made-ready, the importance of time savings in the make-ready process is growing enormously.

What is make-ready? - The patching process.

During make-ready, height differences are compensated with the aid of make-ready paper/tape. This is done on the one hand by levelling out areal tolerances, and on the other hand by placing make-ready tape behind the cutting rules at points where the material has not yet been punched through. A distinction is made between area make-ready which compensates for machine unevenness and a local patching of the cutting rules. Certain make-ready rules must be observed for this. Depending on the job and complexity, the make-ready process can take several hours.

What is make-ready for? - The influencing factors.

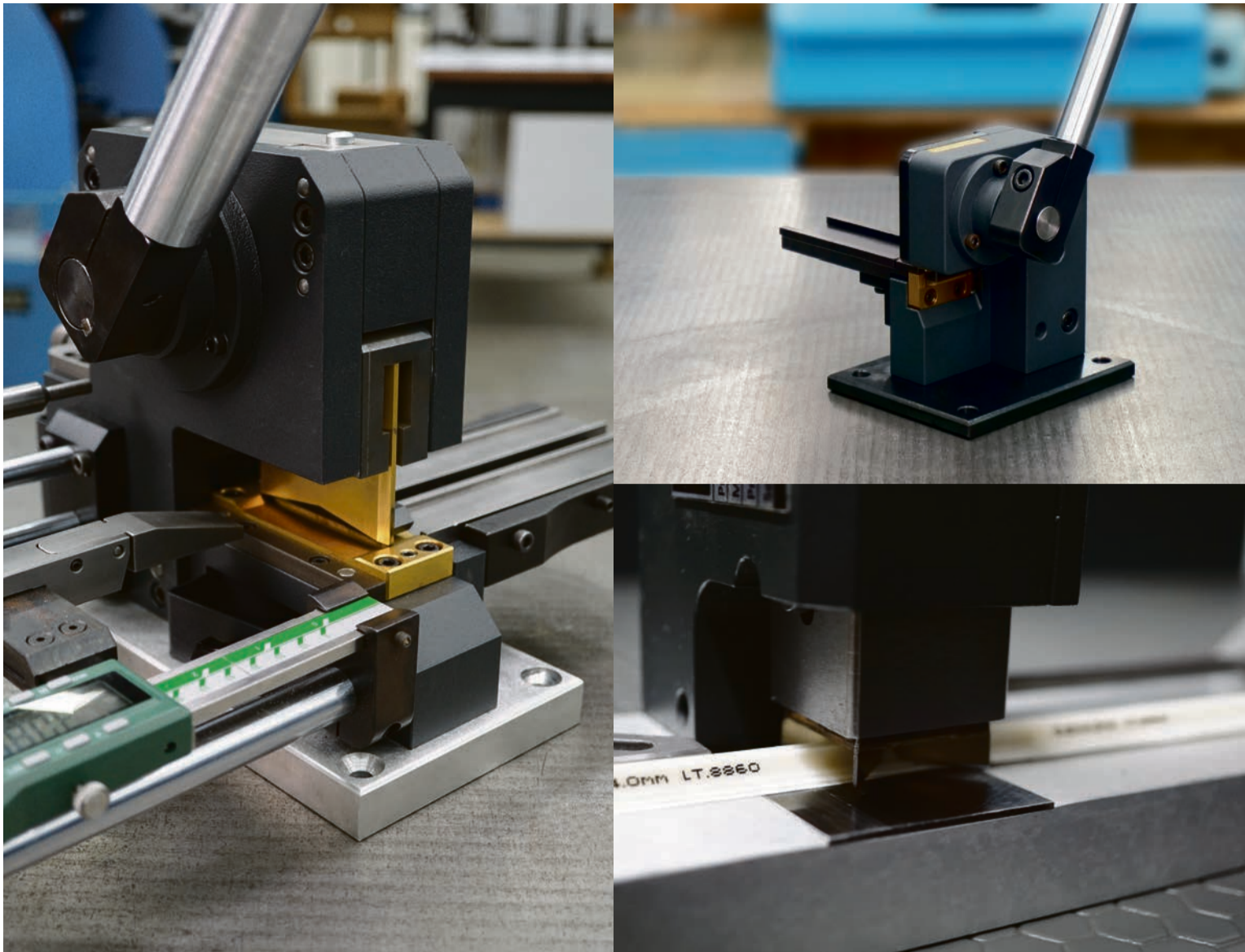
There are various tolerance factors that influence the scope of a knife make-ready. These include: the die-cutting machine, cutting-die and counter plate, the paperboard material and the quality of the make-ready materials. But the machine operator and the operation in its turn also have an influence on the make-ready time. Each of these factors in and of itself produces different tolerance ranges.

Make-ready results.

At the end of the make-ready process, the result is a clean cutting edge for high-quality packaging. Height compensation ensures that the die-cutting machine and tool are protected in the best possible way. This means a longer service life. Clean make-ready also ensures stable machine operation and thus an efficient die-cutting process. Technologies and services from the diemaker can help, but in addition regular training of the machine operators also supports them in efficient make-ready.

In our free whitepaper on „The main success factors for minimum make-ready time during die-cutting“, you will not only learn how make-ready works and what the most important make-ready rules are, but also how you can optimize make-ready time – while ensuring high-quality make-ready. The practical checklist will help you to do this.





Handheld devices for your cutting-die preparation.

PERFORMANCE FOR CUTTING-DIE PREPARATION.

Product | For maximum productivity and low make-ready times.

Low make-ready times, maximum machine uptime and good packaging quality. These goals will be achieved with a well-maintained and adjusted die-cutting machine. And with the right die technologies. But that's not all: to achieve even higher productivity, other factors have to be taken into account. Here optimum preparation of the cutting-die plays an important role.

There are many cogs that need to turn for more efficient packaging production. One cog that often receives little attention in practice is cutting-die preparation. What's the point if the die-cutting machine and the cutting-die are in top shape, but small adjustments become necessary during production which eat up valuable time?

To ensure that cutting-die preparation can be carried out in the best way possible, it is important to have the right equipment. As specialists for cutting-dies, we know from many years of experience

which devices are indispensable in cutting-die preparation:

mcut|multi:

The mcut|multi is a true multi-talent. Its outstanding feature is that it combines the functionality of 3 devices in one. With it, you can cut rule materials to length, notch, and cut lips and double lips. Its perfect installation location is directly at the processing machine or in the work preparation area. With the mcut|multi, your cutting-dies are optimally prepared for use in manufacturing and so ensure the production of your packaging can continue quickly.

mcut|round:

The mcut|round is simple and clever. It is a hand device for cutting defined radii at the end of creasing rules. You can use it to cut different radii, both on flat and rotary creasing rules. Always with consistent quality. This gives you permanently clean creasing results. Your advantage: it prevents the paperboard from cracking at

the creasing ends. For high quality creasing of your packaging.

mcut|matrix:

The mcut|matrix makes your life easier during preparation. It cuts creasing matrix quickly, precisely and reliably. Its special mechanics reduce the cutting force. And the creasing matrix is child's play to cut. It is a flexible, ergonomic, and very robust device that is perfectly matched to the requirements of your production. For fast onward production.

Many of our customers are already using Marbach devices. You can also benefit from better performance in your die preparation. We will be happy to advise you on which devices are best suited to your requirements.



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Marbach Web Sessions.

Training | Always up to date.

Since August 2020, Marbach offers Web Sessions on various product topics. With this, takes Marbach another step towards digitalization.

During Marbach Web Sessions participants learn more about how to increase their performance in packaging production.



Marbach Web Session.

Jan Brunner, Sales Director at Marbach: „To inform our customers efficiently and quickly we started our Web Sessions some time ago. Since then thousands of customers have already taken part. The feedback has been very positive. From 30 to 45 minutes, audiences of our sessions learn all the relevant news about our innovations. We present one special innovation per session. Something unique in our sessions is that not only is a presentation made, but also practical knowledge is passed on by demonstrating the use of the technology directly on the die-cutting machine.“

In recent months, Marbach has continued to expand its web sessions. Brunner: „We are pleased that the combination of theory and practice is so well received by the participants. Due to the great success of our Web Sessions, we will continue this format.“

You can access an overview of all current Web Sessions via the QR code below.

Simply productive.

Product | Maximum performance in hotfoiling.

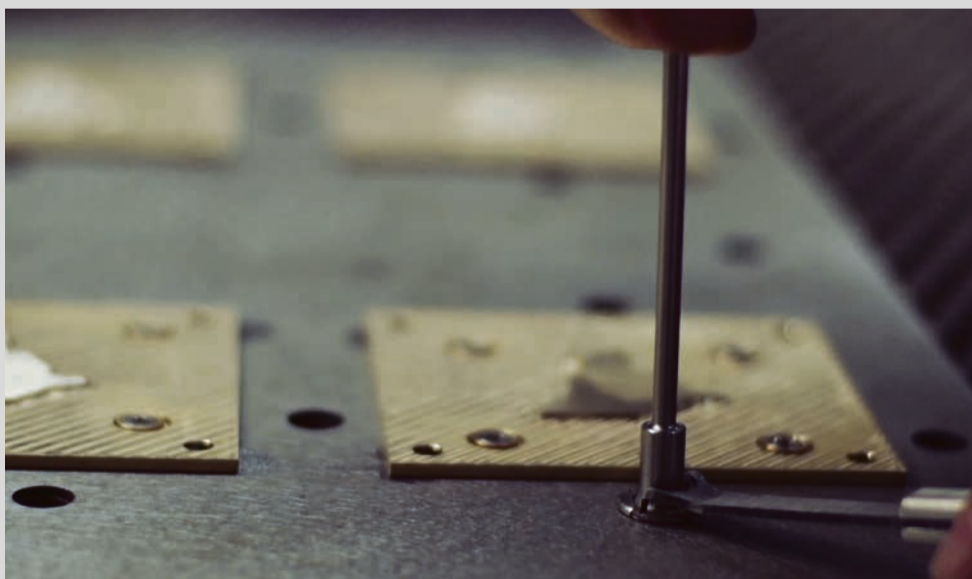
When refining packaging with hotfoiling, the register between the packaging layout and embossing plates must be perfect. This is because hotfoiling must be perfectly positioned to meet the visual demands of high-quality packaging embellishment. With hotfoiling, such matching is time-consuming. It can take several hours for the layout and female dies to fit together perfectly. The problem here is that if the position of the female dies is not archived on a job-specific honeycomb plate, this work will be necessary for every make-ready, and also for every repeat job.

In practice, our customers usually do not use a job-specific honeycomb plate. Why is that? Quite simply, to purchase a separate honeycomb plate for each job that runs repeatedly would be very expensive. Since honeycomb plates are used universally, the position of the embossing plates must always be realigned with the layout. For each individual job, and also for each repeat job.

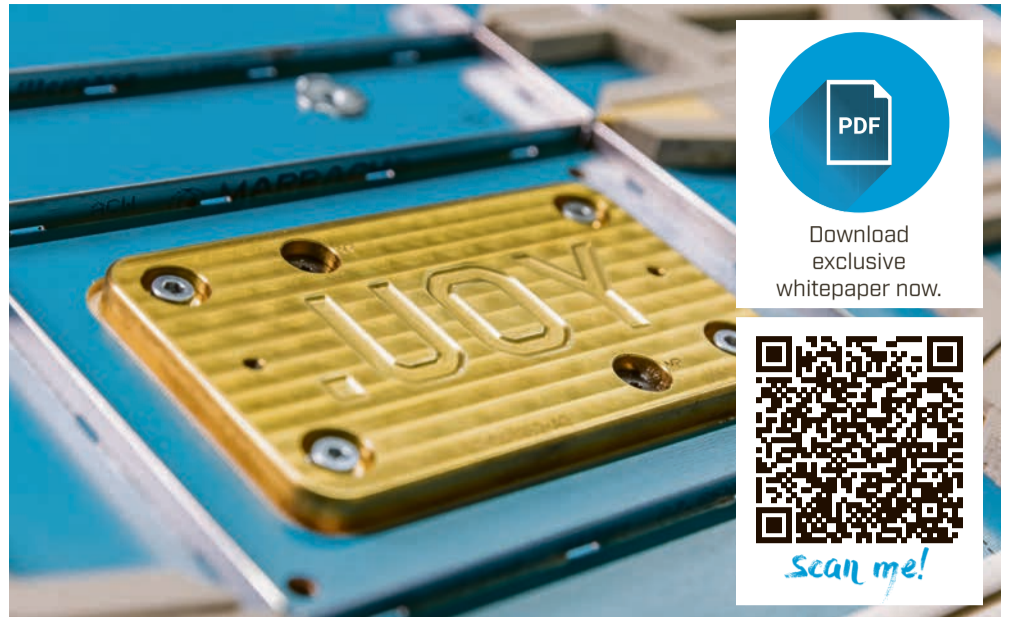
To save you this unnecessary waste of time in the future, there is the thinplate from Marbach. This is attached to the honeycomb plate mounted on the machine. With this cost-effective

solution, the embossing plates are pre-mounted on a special steel plate according to the print layout. In the case of hotfoiling, this pre-assembly is carried out by taking into account a calculated reduction factor, since in this application the foil is transferred via heat. In the ideal situation, the position of the hotfoiling fits immediately. However, if something needs to be adjusted, the female dies can be quickly readjusted. This is because they are mounted so that they can be repositioned on the thinplate and can therefore be set-up quickly and precisely to match the layout of the packaging by means of a scale. And best of all, this position can be archived for the next repeat job. This means that for repeat jobs, everything happens very quickly: by positioning the thinplate on the honeycomb plate, packaging production can start immediately. The result: high-quality embellished packaging with embossing and hotfoiling that perfectly matches the layout.

The thinplate - for maximum productivity in hotfoiling. Perfectly matching the layout.



The Marbach thinplate system.



Strong-selling packaging with Marbach embossing tools.

Strong-selling paperboard packaging at the point of sale.

Product | Embossing makes the difference.

The embellishment technique of embossing is used primarily for the packaging of high-value consumer goods, confectionery and cosmetics. Embossing can be used to visually highlight individual elements of a package. This increases their impact at the point of sale. The packaging becomes an eye-catcher, which promotes sales of the packaged product.

There are many different factors to consider when embossing paperboard. Their selection and combination depends primarily on the material to be embossed, the packaging layout and the visual requirements of the packaging.

The embossing process can be carried out in one or two passes. The female embossing die and male force are either integrated into a cutting-die and its counter plate, or a separate embossing die is used. Both the structure and the function of embossing using female die and male force involve a complicated process that must be precisely coordinated to achieve perfect embossing results.

But before embossing takes place, the design of the packaging should already be taken into account to determine which embossing version can be used. There are many different variants: 2D embossing with or without a rounded edge, bombed or multilevel 3D embossing, debossing and even a combination of embossing and debossing.

Once the embossing option has been selected, the materials of the female embossing die and male force are specified. The most common combination used in practice is brass female embossing dies with epoxy male forces. Depending on the material and application of the female embossing die and male force, different manufacturing methods are used.

In addition to the tool itself and the die-cutting machine on which it is used, the set-up process is vitally important when embossing paperboard. Because in the end, the embossing should match the packaging layout and print image perfectly in order to achieve its full visual effect. Various make-ready aids are also available to simplify and speed up the make-ready process.

Making the right decision for your embossing application is not easy. This is why, in practice, there are always difficulties in making the right choice. In our white paper, we deal in depth with this issue. We take a detailed look at what exactly embossing is, what different embossing options there are when processing paperboard, and what you should look out for when choosing embossing options and embossing plate materials. On the basis of these factors, we will explain how you can use embossing to make your packaging even more attractive. And thus make it an eye catcher at the point of sale.

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SAFELY INTO THE FUTURE.

General | We offer you security of supply.

Marbach supplies the global packaging industry with die cutting tools and services for all aspects of packaging. Thanks to our international positioning and our forward-looking strategy, we are in the fortunate position of being able to supply our customers without restriction even in the current difficult supply situation triggered by the Corona pandemic and the Ukraine war.

Sales Director Jan Brunner: "At the moment we are facing an unprecedented challenge: Many raw materials are becoming scarce, delivery times are getting longer and prices are rising in many areas. Our customers know us to be a reliable supplier of quality tools. Even during the difficult pandemic times, we have always been there for our customers, supplying them reliably and safely with our innovative technologies. Fortunately, we can say – in contrast to many other companies – that this will remain the case, in spite of the currently difficult supply situation for raw materials."

So there will be no supply bottlenecks in the short and medium term. This is because in recent



Security of supply for the future.

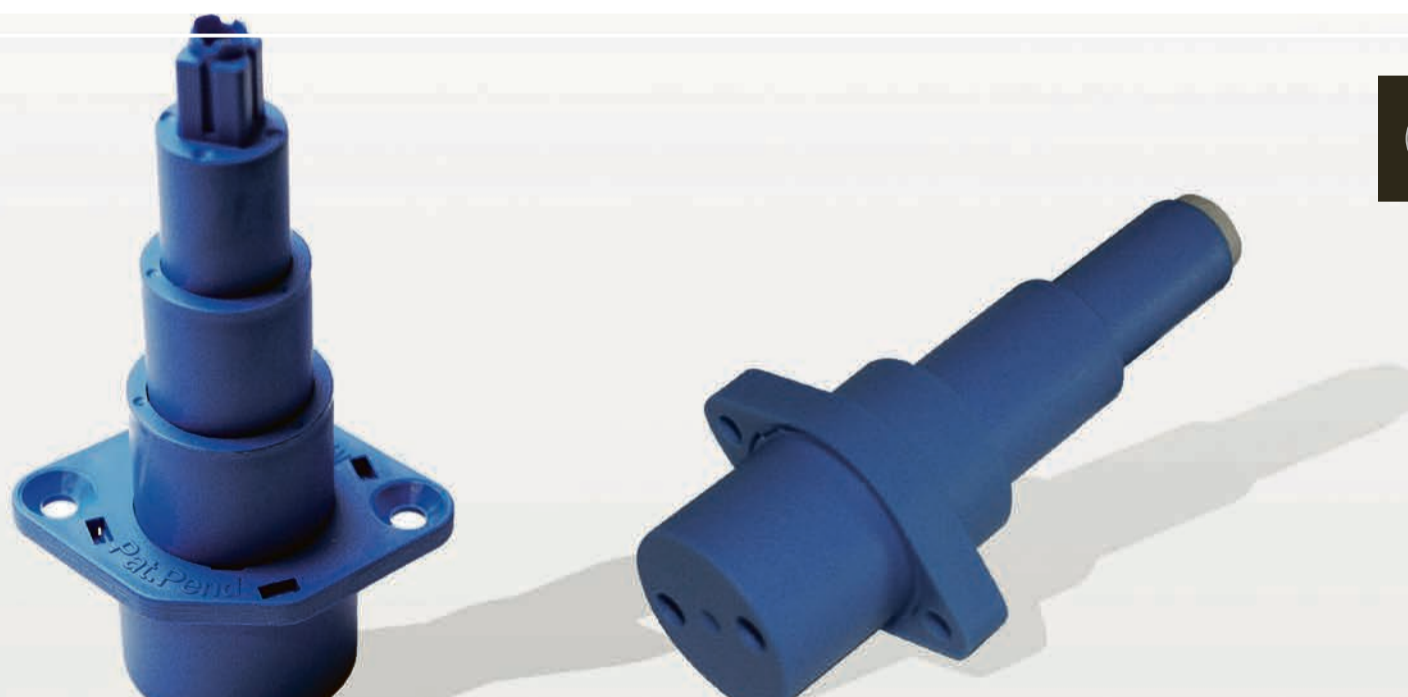
months we have restocked our warehouses with the most important raw materials for cutting-dies and increased capacities in all our plants. This is all the more important since we also supply the food and pharmaceutical industry with tools, and are therefore a vital part of the critical infrastructure.

Brunner continues: „Fortunately, we are not dependent on supplies from Russia or Ukraine. However,

as with any die manufacturer, we also partly use birch wood from Russia for our dieboards. But here, too, we are on the safe side: thanks to our Marbach greenplate dieboard, we can more than compensate for uncertain supplies from Russia.“

This is because 30% of the greenplate consists of the primary raw material birch, while 70% of the plate is made of secondary ma-

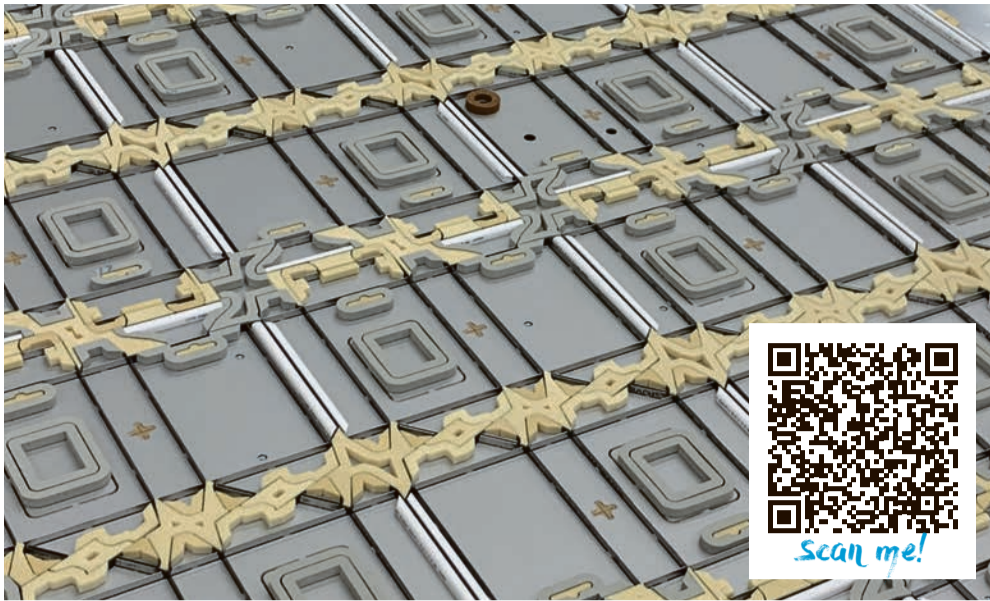
terial from ecologically sustainable forestry from regional woods. This structure of the greenplate ensures that considerably less birch wood needs to be used for a cutting-die than for conventional tools. This means 3 times as many tools can be made with the same amount of birch material: ensuring a secure supply of cutting-dies in the future.



MARBAPUSHER. FOR MORE FLEXIBILITY IN BLANKING.

Lightweight, affordable and functional. Real all-rounders. That's what our marbapushers are. Because they can be used for presser plates as well as for custom-shaped presser bars. Flush on the back of the tool. Fits even when space is limited.

www.marbach.com



solidplate|alu.

Lightweight and precise in large format.

Product | Special tools for special requirements.

When die-cutting large formats, various factors are important: Here it is not only of particular importance that a tool is dimensionally stable and precise so that it ensures productivity and good die-cutting results. But it is also important that the handling of the tool is as simple as possible. After all, what is the point of having a great tool if the handling is unnecessarily complicated?

Various dieboard materials can be used as the basis for cutting-dies. In addition to standard wood materials, other materials are also possible. These have clear advantages over wood in terms of dimensional stability (hygroscopic properties!), register to the steel counter plate and number of reknifings which are possible. Particularly with large-format

tools, it is not only precision that is important for maximum performance, but also the weight of the tool.

A tool that optimally meets exactly these requirements is the Marbach solidplate|alu. The solidplate|alu is made up of 3 layers: Two aluminum top layers enclose a center layer of secondary material (solidplate core) from above and below. This special combination of materials ensures high (dimensional) stability and low weight.

Solidplate|alu is used primarily for food packaging, but numerous other applications are also possible, such as in the pharmaceutical or cosmetics industries.

For more flexibility when die-cutting.

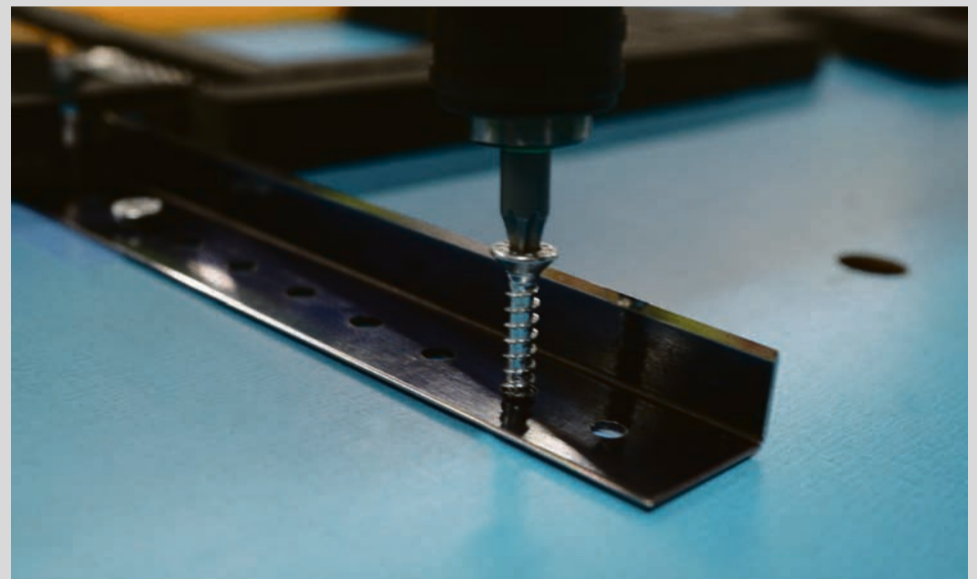
Product | With the trimknife|multi separation knife set.

Marbach Die Supplies supplies both print shops and diemakers with machines, devices, materials and other equipment related to die-cutting. The portfolio also includes various solutions that make the user's work easier. Our latest solution is called trimknife|multi.

trimknife|multi is used whenever additional waste separation knives have to be installed in a cutting-die, or existing ones need to be extended. This is done directly at the die-cutting machine during packaging production. Here, Marbach offers an uncomplicated solution with trimknife|multi. André Angermeir, Sales Manager at Marbach Die Supplies: „The special feature of our trimknife|multi separation knife set is that it is not

glued onto, but screwed onto the cutting-die. This is very safe and can be done quickly. As a result, the separation knives are firmly fixed and remain exactly where they belong. Detachment – as is the case with existing adhesive solutions – is prevented with our separation knives. In this way, trimknife|multi ensures that the separation knives stay where they belong: On the tool – and not as foreign objects in the die-cut format.“

The screw-on separation knives are available in four different heights as a complete system with separation knives including accessories such as support foils, fastening screws, rubber material as well as matching fastening tools.



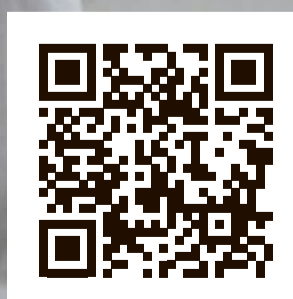
trimknife|multi - the new knife in a complete set.

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