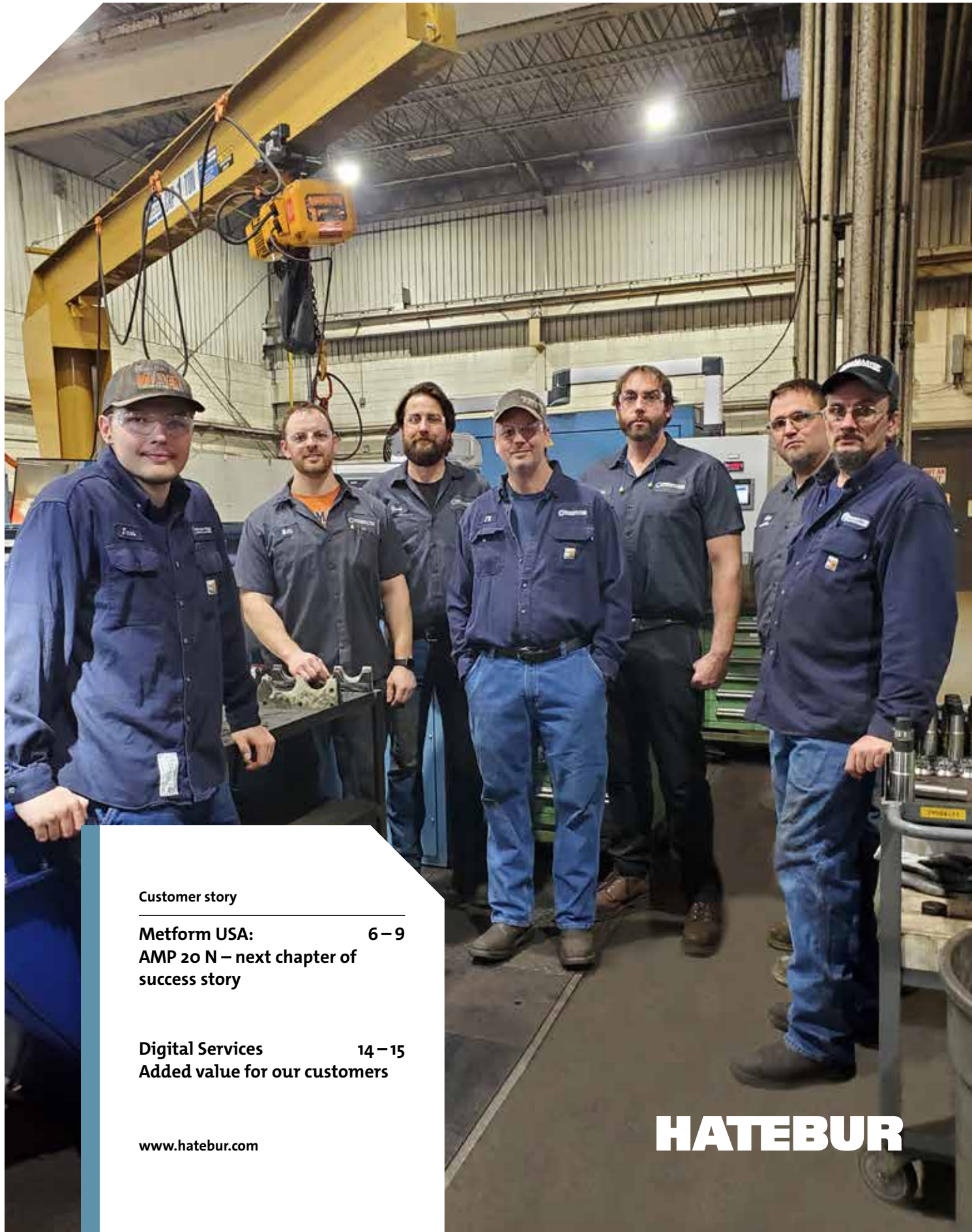


Our performance. Your advantage.

NetShape

01 | 2022



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Added value for our customers

www.hatebur.com

HATEBUR

Personal



Dear business associates,

Just as we thought the COVID-19 pandemic had passed, another crisis rears its head – returning to normality still seems a long way off. 2022 is sure to bring its fair share of challenges. However, we have recently enjoyed a few successes, which we are keen to share with you.

After an astounding 45 extremely productive years of an AMP 20 S, Metform L.L.C. USA commissioned a new AMP 20 N from us in April 2021. In doing so, the company has increased its primary production of washer for wheel nuts for commercial vehicle wheel mountings by an unbelievable 62%.

Our article about a COLDmatic AKP 4-5 at LISI demonstrates that overhaul work really does pay off – read about how our specialists replaced the entire lubrication system.

I also wholeheartedly recommend visiting our assembly plant in Brugg, where we have enlarged our assembly area and can now work on three large machines in parallel. Get in touch with your contact at Hatebur if you are interested.

Can you imagine how a timing system could be implemented and depicted online from your workplace? It's possible with our Digital Services – this range of services, which all offer our customers real added value, has been expanded.

Finally, you can read about how the CS 513 TH from Carlo Salvi can form, point and roll threads in a line.

Enjoy reading these fascinating articles ...
... and stay optimistic!

Kind regards
Thomas Christoffel
CEO

A handwritten signature in black ink, appearing to read 'T. Christoffel', is written in a cursive style.

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Machines and accessories

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Legal information

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Latest news

Hatebur is on LinkedIn

Another part of Hatebur's digital offering is its LinkedIn page.

Contact with customers, interested parties, partners and suppliers is a key element of maintaining our network. This is why, over the past few weeks, Hatebur has been publishing LinkedIn posts with news and information about the company, the *HOTmatic* and *COLDmatic* machines and our services.

In spring, internal employees from a range of departments have been trained as online "ambassadors". As experts in their fields, they will publish news and the latest findings, for instance for production managers, machine technicians, application/process technology specialists, members of the management board or (potential) employees. This means that visitors to our page will find information tailored to their interests.

Follow us on LinkedIn or use it to contact your partner at Hatebur directly. We look forward to connecting with you.

[linkedin.com/company/hatebur](https://www.linkedin.com/company/hatebur)

Employee anniversary

Rolf Nyfeler has worked at Hatebur for 25 years:



Name: **Rolf Nyfeler**
Position: **Service engineer**
Worked at Hatebur: **Since 1997**

Rolf Nyfeler joined us in January 1997 as a service engineer in our workshop; gradually, he began visiting customers alongside experienced service engineers on short visits to assemble spare parts on machines.

The first major overhaul performed with his support took place at Teksid, in Italy, on a *HOTmatic* AMP 70. This paved the way for hotformers. His first new assembly was an AMP 70, and was performed with Mr. M. Hatebur at Fovisa in the summer of 1998. From this point onwards, Rolf Nyfeler took on the job of overhauling and newly assembling all *HOTmatic* AMP machines, later including the *HOTmatic* HM 35 and HM 75. At the time, this was all done without cell phones or laptops. At GKN, he provided support after the overhaul process and subsequent start of forging work; this experience proved invaluable to him when commissioning tools later in his career. It was always a memorable moment when the first parts rolled off the production line of a machine he had installed. One highlight was the new assembly of a *HOTmatic* HM 75 in the US within an extremely short period of just 50 days.

Rolf Nyfeler is especially appreciative of the huge variety in his work and the extensive experience he has accumulated during his work in 20 different countries. During this time, he spent ten years living in Brazil, where he met his wife.

Facts and figures USA

3.6%
agriculture

24.8%
industry

65%
services

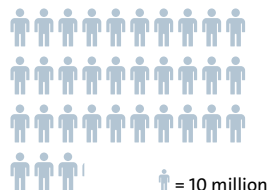
6.6%
other

The USA at a glance

● Capital city: **Washington, D.C.** Regions/areas: **New England, the mid-Atlantic states, the South, the Midwest, the Southwest, the West**

Area:
Approx. **9525 million km²**

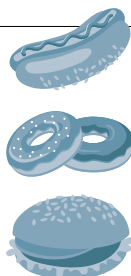
Inhabitants:
Approx. **331.45 million**



Largest cities: ● New York City 20.14 million ● Los Angeles 13.20 million ● Chicago 9.61 million
● Dallas 7.63 million ● Houston 7.12 million ● Washington, D.C. 6.38 million

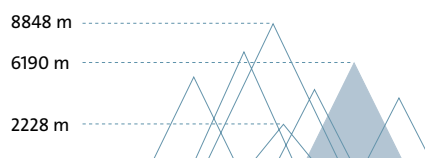
Cuisine

Hot dogs
Hamburgers
Spare ribs
Tex-Mex cuisine
Cajun food
Apple pie
Stuffed turkey
Popcorn
Donuts



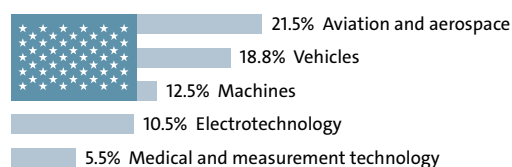
Highest mountain

Denali in Alaska, which is one of the Seven Summits (the highest mountains on each of the seven continents)



Economy

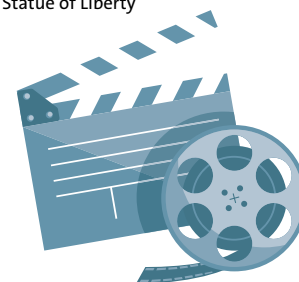
Top exports (2019)



20.4
billion GDP, in USD for 2020

The USA is famous ...

... as the land of unlimited possibility, for fast food, Native Americans, cowboys, **the film industry**, the music industry, Route 66, Disney World, the Statue of Liberty



Famous Americans

Thomas Alva Edison (1847–1931)
Martin Luther King (1929–1968)
Wilbur Wright (1867–1912)
Robert Oppenheimer (1904–1967)
Marilyn Monroe (1926–1962)
Josephine Peary (author and arctic explorer, 1863–1955)

Well-known animals



Moose, sperm whale, black bear, bighorn sheep, puma, bison, **grizzly bear**, skunk, raccoon

Metform and Hatebur write next chapter of success story

Text: Bernhard Hagen, Hagen PR

Pictures: Metform

Company: **Metform L.L.C.**
 Employees: **> 400**
 Turnover: **US\$ 100 m**
 Machines: **4 x AMP 20 S**
4 x AMP 30 S
1 x AMP 50 XL
1 x AMP 20 N
 Locations: **3 plants in**
Savanna,
1 plant in
Mt. Carroll, USA



Savanna, Illinois

Reinach — The Hatebur *HOTmatic* AMP 20 N has replaced a 1976 Hatebur AMP 20 in the workshop of hot forging expert Metform, taking production to a whole new level.

Metform is the Hot Forging division of MacLean-Fogg Component Solutions. The company, founded in 1976, focuses on horizontal hot forging, machining, and light assembly of components primarily for transportation industries. With more than 400 employees, Metform runs three locations in Savanna, Illinois, and one in Mount Carroll, Illinois. The company reaches an annual sales volume of more than 100 million USD and sells primarily to the Canadian, Mexican, and US markets. MacLean-Fogg Component Solutions is a leading supplier of fastener solu-

tions and engineered and plastic solutions, serving a wide range of industries. The parent company MacLean-Fogg was founded in 1925, offering lock nuts to North America's railroads. Through innovative product development and selected acquisitions, the business has grown into a worldwide enterprise with 26 manufacturing facilities throughout North America, Europe and South America, with sales exceeding 1 billion USD annually. MacLean-Fogg engineers, manufactures, and distributes products for the automotive and power utility marketplaces worldwide.

Securing market position

On November 4th, 2021, Metform went into production and successfully formed the first run of washers for wheel nuts on the brand-new Hatebur *HOTmatic* AMP 20 N. The instal-



A strong team with in-depth know-how: the Metform experts!





➤ From old to new – step 1: The old Hatebur AMP 20 stripped to its frame and ready for removal.

lation of the new, innovative hot former was a big step for the company, explains Jake Bellich, Director of Operations at the Metform Hot Forming Plant: “The AMP 20 N not only replaces our first Hatebur machine, the AMP 20, which had been installed in 1976 and has now reached the end of its service life after a very productive 45 years. The new former also helps us to secure our position as the leading supplier of 2-piece wheel fasteners in the market.” When replacing the old machine with the new, the Metform experts were able to keep the existing machine fundament in place, saving costs and making the replacement faster and easier. The Hatebur *HOTmatic* AMP 20 N, designed for a high press load and maximum productivity, is the ideal machine for the Metform production processes.

Metform’s SECUREX brand of 2-piece wheel nuts has been a supreme example of US-made quality for Class 8 tractor and trailer wheel fastenings for over 34 years and counting. The parts, manufactured out of high-quality alloy SBQ Special Bar Quality steel, are used for the wheel fastening in Class 8 tractors and trailers. After being launched in the heavy-duty truck market in 1990, the SECUREX wheel nuts became the first choice for virtually all hub, drum, and wheel OEMs in the United States. Many Metform customers are well known in the automotive industry, including reputable original equipment manufacturers, tier customers, and truck builders. Metform also supplies a significant number of North American, European, and Japanese customers supporting engine, transmission, and driveline applications.

➤ From old to new – step 2: laying the foundation for the new machine.



“We believe that our expert team, with its in-depth know-how and our combination of forging machines, machining, and secondary processes make Metform unique,” explains Jake Bellich.

An automotive growth story

In 1997, Metform was responsible for the production of transmission gear blanks for Ford for the first time, opening the door to Ford gear program opportunities. In the following years, machining capabilities were expanded to include suspension housing and automotive gear blanks. In the mid-2000s, Metform was awarded the Ford 6F-speed pinion and sun gear package, which resulted in opening of the facility in Mount Carroll. In 2010, the company added the Hatebur *HOTmatic* AMP 50 hot former, successfully placing Metform in the 8 and 9 speed transmission markets. Two years later, Metform was awarded the Chrysler and ZF 8 and 9 speed transmission program and began with the construction of its fourth facility. It’s been a continuous and impressive growth story.

Efficient with 10 Hatebur machines

With the recently installed and commissioned Hatebur *HOTmatic* AMP 20 N in the hot forging facility in Savanna, Illinois, Metform now operates a total of ten Hatebur machines: Five AMP 20, four AMP 30 and one AMP 50 XL. The new header is a major upgrade for the highly specialized company. Mr. Bellich says: “The investment solidifies our position as the premier two-piece wheel nut manufacturer for class 8 heavy trucks in North America. This new forging press from Hatebur allows us to better serve our customers by producing enough top quality parts on time due to improved reliability.”

The press load of the original AMP 20 was 90 tons, while the new AMP 20 N is built and designed to handle 150 tons with no penalty in stroke rate. “Compared to the old AMP 20, the new AMP 20 N is designed with a beefier frame and more robust design to handle the higher press loads required to run the washer component, which is forged from 4140 steel, for our two-piece wheel nut assembly,” explains Mr. Bellich. Other design improvements include a servo-driven infeed for more consistent cutoff quality, as well as an integrated clutch and brake assembly to simplify maintenance and repair.

200 strokes per minute

The AMP 20 N has a press load of 1500 kN and processes materials like bearing steel with the expected degree of utter precision. The body of

the machine has been reinforced, ensuring the stability required for a high part output. In three forming stations operating at up to 200 strokes per minute, the AMP 20 N turns blanks into washers for wheel nuts. The up to 6 meter-long steel bars are red hot – at 1250°C – when they are moved into the precise position with a servo motor. Cut-offs measuring 20 to 45 mm are then created in the shearing unit. The specialist expertise of Hatebur ensures a level of reliable and repeatable shearing precision that is unique globally. The transport unit is also worth highlighting: It has been designed with the utmost accuracy to ensure smooth transport of thinner parts from one forming station to the next. This transport needs to be carried out especially carefully to retain the desired surface quality throughout the whole process.

Clever cooling solution

A new water-cooling solution was designed utilizing a pump skid and rooftop cooling tower, taking the heat load off of Metform’s two main cooling towers, which support other Hatebur machines, and further heat load sources throughout the plant. This two-circuit system uses a separated loop from heat exchanger to cooling tower and another loop from the heat exchanger to the tool cooling water pit under the machine. “This design minimizes the time required on the roof to clean the cooling tower. Filters can be changed near the machine at floor level,” explains Mr. Bellich.

Industry 4.0 leader

Looking to the future, Metform wants to push forward with a strong focus on Industry 4.0. “We have been on the Industry 4.0 journey for two years. A lot has been accomplished in terms of real-time feedback to operators, advanced analytics, and predictive maintenance. We have plans to expand and improve the implementation of Industry 4.0,” reports Jake Bellich. “We were humbled that the National Association of Manufacturers recognized Metform as a leader in this space.” One of the big challenges, says the Director of Operations, is digesting and interpreting the vast amount of data collected.” As a next step, Metform aims to further optimize predictive maintenance activities across more operations in the facility.

Covid-19: safety protocols in place

The Covid pandemic was challenging for the whole industry. As Mr. Bellich puts it: “As a critical manufacturer, we are proud of our safety record during the pandemic. We took on a leading role in northwest Illinois and implemented safe-to-return-to-work protocols. We intend to keep a strong focus on contingency plans and safety stock levels.” Many companies have experienced that raw materials and repair parts have increased in cost and lead time. “With global supply chain problems and delivery bottlenecks, long-term planning remains essential,” explains Mr. Bellich.

“This thing just runs”

But back to the daily operation in the workshops: The speed and accuracy are what the Metform experts appreciate most about the Hatebur machines. “On the new AMP 20 N, we are seeing a 62% increase in daily production compared to the old AMP 20 S,” reports Jake Bellich. Training sessions for the machine operators have already been completed. Mr. Bellich says: “We are very happy with the machine and the whole project. Thanks to the excellent cooperation and support from Hatebur and their US representatives FES Forging Equipment Solutions, the project was a big success. All the preparation work, planning, and execution resulted in a major capital project that was completed on time and on budget. From the first conversation to parts off the press in our factory it took only about 1.5 years.”



From old to new – step 3: the new Hatebur HOTmatic AMP 20 N, including the sound enclosure.



From old to new – step 4: the AMP 20 N in action, boosting the productivity at Metform.

“The new former also helps us to secure our position as the leading supplier of 2-piece wheel fasteners in the market.” – Jake Bellich, Director of Operations

Revision of COLDmatic AKP 4-5 at LISI AUTOMOTIVE, Dasle, FR

Text: **Thomas Rost, Christine Steiner**
Images: LISI AUTOMOTIVE, Dasle

Hatebur had the opportunity to do an interview with Mr. Dominique Garbe, Plant Manager at LISI AUTOMOTIVE in Dasle/France. As a long-term customer of Hatebur, it was especially interesting to learn more about the overhaul of one Hatebur COLDmatic AKP 4-5 machine and the general view on future trends. Mr. Garbe, who has been working for LISI in Delle for 10 years, took over the plant at Dasle in 2011. He has been part of the project team for the overhaul of the COLDmatic machine.

240 years of industrial history

Although the LISI GROUP was founded in 2002, the company can trace its origins back to 1777, when Mr. Frédéric Japy founded a watch movement factory in Beaucourt. LISI was born in the eighteenth century out of the merger of several family-owned companies in Montbéliard and Belfort. The site in Dasle was built in 1922 by the Beley family and integrated into the LISI GROUP in 1998. It covers an area of 14,000 m². More than

100 people work at the Dasle plant, which has a €37 million budget for 2002.

The plant is located in the north of the department of Franche-Comté, where industrialization began very early in a number of different areas, but with a common technical theme: iron working. The technical excellence that was developed for metalworking then spread to other industries in the region, such as watchmaking. During this time, bolts and screws were produced on an industrial scale for the first time in France by the company Japy-Frères, for bicycles and cars.

The LISI GROUP reflects this progression: Its original business, the production of metal wires and screws and bolts gradually transformed, adapting to the demands of an industrialized world that has greatly evolved over the past two centuries. The LISI GROUP currently produces high technology fittings (threaded and clipped) for the automotive,

Aerial view of the LISI AUTOMOTIVE site in Dasle. 



aerospace, and medical sectors. With its still predominantly family shareholding that allows it to pursue a long-term strategy, the LISI GROUP continues to grow in France and around the world, offering its customers optimal service and responsiveness.

The LISI GROUP

The LISI GROUP had an annual turnover of € 1.23 billion in 2020, with more than 9,600 employees. It produces goods at 44 plants in 13 countries and delivers its products to four continents. Of the 27 production sites in Europe, 20 are in France. At present, one Hatebur COLDmatic AK 4-6 and seven COLDmatic AKP 4-5 are used by LISI GROUP. The first Hatebur machine was put into operation back in 1986 at Melisey. The Group's most important customers are almost all large automotive producers, including ZF, Stellantis, Volkswagen, Renault Nissan and BMW.

The site in Dasle specializes in the manufacture of threaded fasteners and hollow components, such as technical nuts, weld nuts, drain plugs, spacers, special components for seat mechanisms, interior safety systems, and engines. These high-precision parts are produced by combining cold forming technology with threading and machining. LISI AUTOMOTIVE's product strategy is to gain a significant share for multi-material solutions and new materials (vehicle weight reduction) in order to meet customers' demands for more complex parts.

Longstanding cooperation with Hatebur

The Hatebur COLDmatic machine that is now being overhauled has been producing since 1987. Normally, the machines run on 2 shifts per day (5 days a week) and only one person drives both AKPs at the same time. Production series may vary from 40,000 up to 350,000 parts. The parts produced on Hatebur machines represent approx. 13% of the total monthly volume.

The most appreciated advantages of the Swiss machines are their easy changeover and the ability to transfer very short parts. The operators also like the mechanical reliability, the ease of handling, and the man/machine interface.

Overhauling an COLDmatic AKP 4-5

A team of two Hatebur service engineers (for the mechanical work) and one Hatebur Lumag Service (HLS) engineer (for the scraping work) were delegated from November 8th until the December 8th, 2021. The aim of this overhaul was to replace the complete set of Delimon lubrication distributors. To achieve this task, lots of the subassemblies for the machinery had to be dismantled, included the press ram. As such, this was the

perfect opportunity to check the press ram clearances, which had been noted as too tight during the prior inspection of the machine. It was also confirmed that the pitman pin and bushes needed to be repaired after so many years. The whole assembly (press ram and Pitman) was sent to Switzerland for inspection and repair and returned to Dasle after a couple of days.


The most appreciated features of the machine are:

- mechanical reliability
- ease of handling
- control desk

All lubrication lines were tested and flushed with new oil. Once everything was reassembled, a two-hour test run was initiated by the operator of the machine, and was successful. As everything was running smoothly, the final meeting culminated in approval by LISI AUTOMOTIVE.

As always, this is in-depth work that often reveals the need for unexpected repairs or replacement of parts that could not have been detected before dismantling. Good communication between the teams is crucial in such cases. Hatebur and LISI could work together to find the best way of getting the job done on time.

Many thanks to the maintenance team of LISI, on behalf of Mr. Oudart, and the Hatebur and HLS team on site for their great teamwork to pull off such delicate and precise work!

Produced parts are collected safely. 





View of the production hall in Dasle.

Experiences during COVID-19

2020 and 2021 were very difficult for everyone. During this period, LISI were faced with the challenge of constantly adapting the production tool to the demand. LISI has focused on flexibility, agility, and responsiveness. Like many other companies, employees in support services have been working remotely. In addition, the management team realized that the expectations and demands of employees are no longer the same, and that the relationship between professional and private life has changed profoundly.

The French-based group expected to see a massive return of production to Europe that had previously relocated to Asia, but apart from a few targeted situations, this does not seem to be the case. On the other hand, competition has become tougher and remains very strong, with demands for price cuts that are beyond any standards that seen until now. Worldwide companies experienced delivery bottlenecks, resulting in many delays. Like all price increases prices increased on their supplies, including energy and transport. Tensions exist in the supply chain and are now increasing with the war in Ukraine. The outlook is very short term and highly changeable and unstable.

Looking into the future

Regarding the major trends, such as e-mobility and other new developments, LISI sees a growing demand for increasingly complex and specific assembly solutions, and a

strong trend towards the development of all-electric or hybrid vehicles. LISI is already offering adapted solutions. The amount of orders taken in these areas is very significant and demonstrates the robustness of its product strategy. The new products remain of the same type, but with different materials, like aluminum, although some developments are very specific, such as screws for fixing battery covers.

Digitization is a major focus for LISI, with deployments underway in a number of pilot plants. The best example is the Melisey plant, which was recently awarded the “factory of the future” label. The implementation of Industry 4.0 at Dasle will therefore be an objective for 2024.

Challenges over the next couple of years

There are several challenges that LISI has to face. The most important will be the management of human resources. It will be key to retain teams in jobs that require long training over several months. Other important points will be to maintain the ability to respond to customer demands, digitalization, and ensuring flexibility and agility of the means of production.

Capacity expansion in the Brugg assembly plant

Text: Christian Bürgin
Photos: Hatebur



The new, additionally used warehouse area is now used for storing the required materials and tools.



Separating activities in this way improves safety in everyday work and offers staff more space for their individual tasks.



Brugg — An optimized material flow and clearly divided activities are the major advantages of the expanded capacity in Brugg. More space is available within the assembly plant. This enables teams of employees to work in parallel on three large machines.

The operational area of the Hatebur assembly plant has been enlarged from 900 m² to approx. 2700 m². For several months, all *HOTmatic* and *COLDmatic* machines have therefore been assembled at the same location. This also makes it simpler to share expertise and for specialists and project teams to collaborate.

The new, adjacent warehouse area is used as project and supply storage. This enables the material flow to be optimized and the storage, haulage and packaging work can be more successfully separated from the actual assembly work. The previously used area in Brugg is now exclusively available for assembly work. The *COLDmatics* and the small *HOTmatics* are now concentrated in the front area of the warehouse.

Two new foundations were created for the large machines; here, *HOTmatic* AMP 50 machines and *HOTmatic* AMP 70 or *HOTmatic* HM 75 machines are assembled.

In addition, an additional space was created for scraping and piping work on large machines. This means that the assembly team can construct three large machines at the same time: Two in parallel and one after a slight delay.

Added value for our customers – Digital Services

Text: **Stephan Leibundgut, Martin Fassbender**
Photos: **Hatebur**

Reinach _____ **Hatebur Connect is synonymous with the point where data, expertise and personal contacts meet. Under the Hatebur Connect label, Hatebur will offer a range of digital services in the future. These are available in a variety of expansion stages and offer customers real added value. Our new customer platform provides an excellent entry point into the world of Hatebur Connect.**

With the new Hatebur Connect platform, customers will be able to find all information about Hatebur machines in one central location. This also enables the new digital services to be booked and managed.

The new digital services offer, for example, the continuous evaluation of machine performance, as well as the analysis and evaluation of the collected data. These form the basis for further consultation and support. An important point for the reduction of repair costs and downtimes is the digital connection to Hatebur. It enables the Swiss specialists to localize malfunctions and problems quickly and cost-effectively, and in some cases to rectify them online.

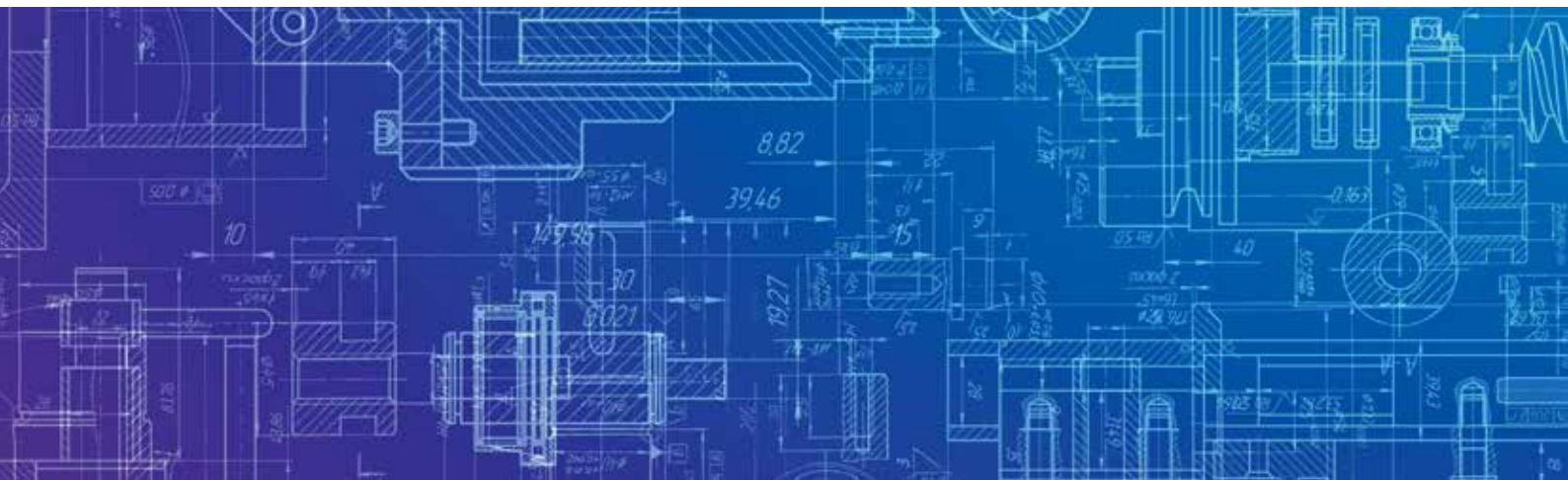
In addition, machine setting parameters, for example, can already be optimally designed in the preparation of the production process and existing processes can thus be optimized. Especially for the *COLDmatic* machines, thanks to the servo technology, there is the possibility to individually design the kinematics and to adjust the timing to the requirements. This makes it possible to achieve significant increases in various areas without having to adapt the existing tools.

The digital services from Hatebur offer significant advantages and accompany the customer on their way to a digital transformation.

Transparency and data security

When it comes to handling data, one of Hatebur's top priorities is transparency. The customer should know and be able to control where their data is stored and the purposes for which it is used.

You can find a description of our new range on the next page.



Performance report

Using the performance report for Hatebur machines, customers are provided with a better overview for the purpose of evaluating their machine and production data. The data is processed and made available in report form on a monthly basis. In the extended scope, the report is supplemented with analyses and interpretation of the transmitted machine data and thus serves to increase efficiency. In this way, recurring problems can also be identified quickly and remedied more easily.

Remote support

The integrated remote access solution enables Hatebur specialists to access the control components of the machine directly from Reinach. To do so, the connection must be enabled by the customer. With the analysis of production data paired with recordings via the remote maintenance system, any malfunctions that occur can be quickly identified and the cause can be verified and remedied as directly as possible. Remote support helps to minimize travel and maintenance costs and, as a result, machine availability can be improved.

Modeled kinematics

With the servo main drive, we offer the opportunity to model the sinusoidal movement of the press, which allows different speeds to be run within a cycle. Adapting the kinematics for the main drive means that significant improvements can be made in terms of the tool life or production quantity without having to adapt the tool or timing. A package with modeled kinematics is available on a subscription basis.

Additionally, we offer our customers the opportunity to adapt the start and stop angle for the transfer unit within a defined corridor to suit the forming process.

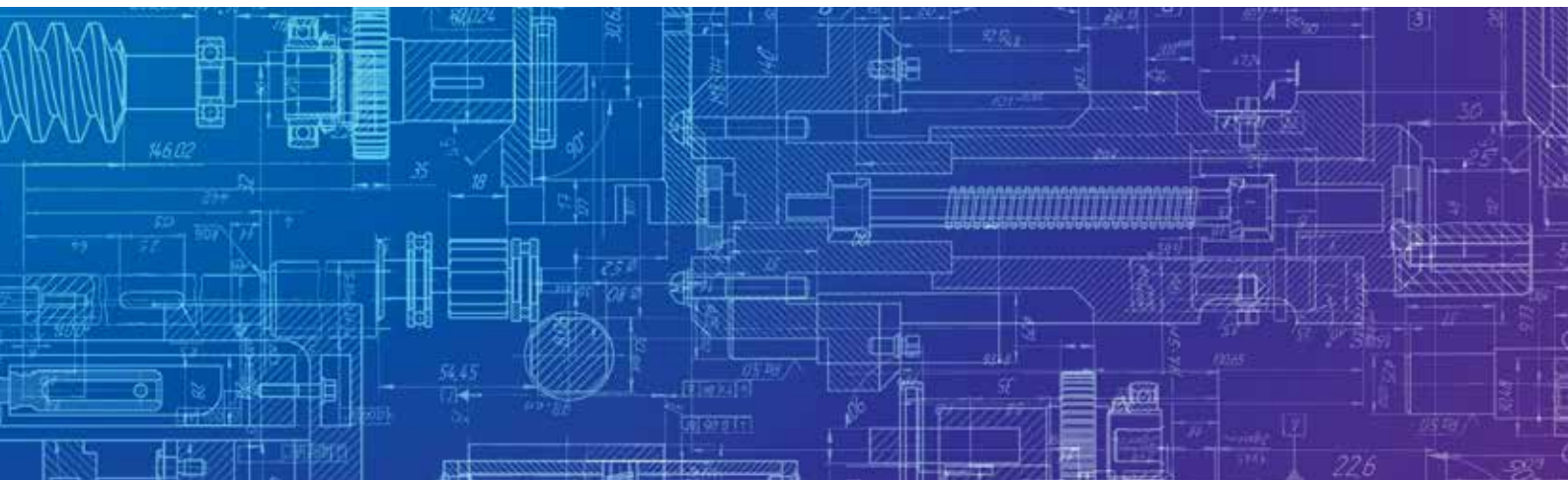
Alongside the individual adaptation of the gripper opening and closing speed, this offers new ways to optimize press part transport and parts transfer. This means that process reliability can be improved, while tool design is simplified.

Online timing tool

The online timing tool is the perfect tool for making the most of the new level of freedom available.

⇒ To find out more about this, read our separate report on the online timing tool in the next article.

Your contact at Hatebur is more than happy to have a personal discussion with you to provide you with more information and explain the advantages that each version can offer you.



Efficient tool developments – the new online timing tool

Text: Kim Weber, Christine Steiner
 Images: Hatebur

Reinach — Two recurring topics among our customers are how to reduce tool costs and how to improve process reliability. Hatebur is here to help – now offering customers the opportunity to use a timing tool online. This enables the required calculations to be generated during the development.

One important element of any optimal production process is ensuring that the machine parameters are set correctly. The machine movement is therefore calculated and depicted in advance. To meet digital transformation and customer needs, Hatebur now offers a new online timing tool.

Designing tool developments

This service is part of the comprehensive, modularly structured Digital Services offered by Hatebur and is available as a standalone module. Once a contract has been signed and user training has been provided, the program can be accessed using a unique account login. It is suitable for determining the timing for complete tool developments, in which case the corresponding CAD data from the individual stages can be read in. The online timing tool offers a significant advantage when it comes to clarifications, as the integrated modeling system can be used to examine parts quickly and without the need

- Thanks to the new timing tool for the CM 725, parts can be examined quickly and without the need for a CAD system.

Length: 50 mm Diameter: 24 mm

0 mm 0 mm

0 mm

Length: 36 mm

Diam.: 24 mm

0 mm

0 mm

0 mm

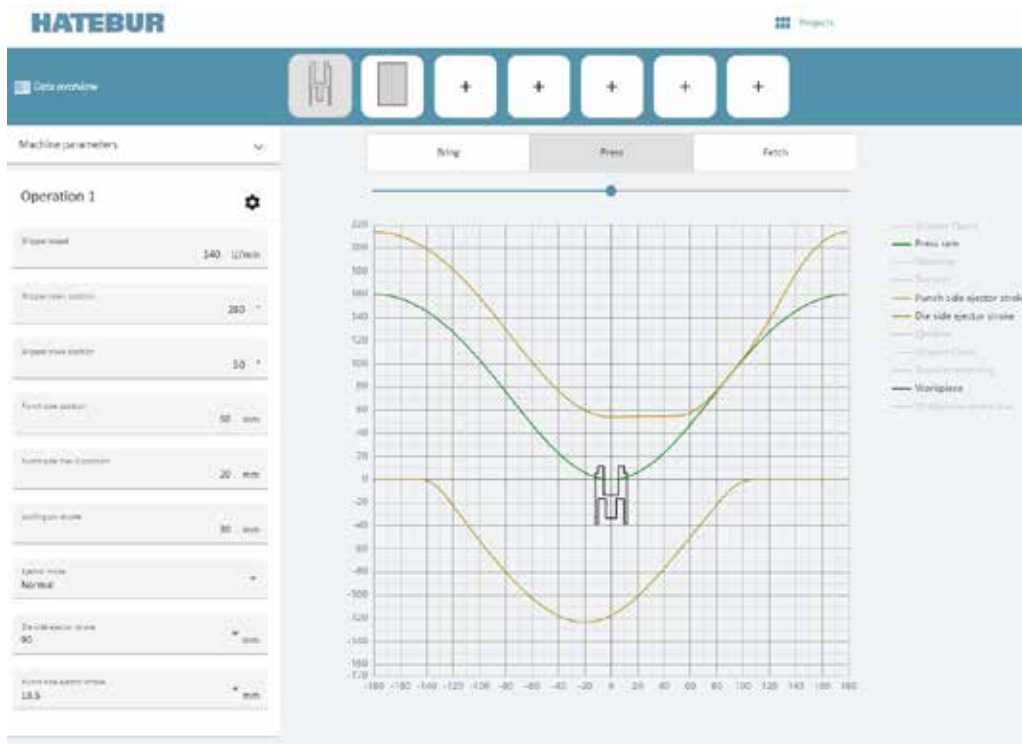
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Press position of a part with the pressram movements, as well as the punch and die ejector curves, which can be entered using the machine parameters.



for a CAD model. Illustrating the machine movements in a digital design tool in this way enables the performance, for example of the Hatebur COLDmatic CM 725 to be improved in terms of processes and handling.

Visualization of movement

After the sequence of forming stages has been established, the parts can be pushed to the required position within one station. It is also possible to pin the parts on different curves, for instance to visualize the ejector movement with the part.

The timing tool can be used to determine and change the punch penetration depth, the holding pin stroke, the gripper opening and closing processes, the die-side and punch-side ejector stroke, the gripper width, the transfer unit movement, and the pressram curve.

Representing correlations

In order to ensure that everything is presented in a clear, comprehensible manner, the tool only shows correlations. For instance, all other curves can be hidden. Thanks to the precise examinations, the tool layout can be designed reliable and ideally for the process, which also helps to reduce tool costs. Furthermore, process reliability can be improved thanks to the optimal design, which reduces machine downtimes to a minimum.

Checking tricky tools

Another benefit of the program is that it enables existing tools that cause recurring malfunctions to be read into the program. These can then be inspected, visualized and optimized.

The settings parameters used in the timing tool can then easily be output and read into the machine. The machine operator can use the checked, approved data to equip the machine and start testing the formed parts on the machine.

At the moment, the timing tool is configured for application for the CM 725 COLDmatic machine; additional machines will be added in stages.

Data provided:

- Pressram movement
- Holding pin stroke
- Transfer unit movement
- Open grippers
- Close grippers
- Punch ejector
- Die ejector
- Gripper width

Would you like more information or a personal consultation regarding the online timing tool? Get in touch – we'll be happy to help.
Tel. +41 (0) 61 716 21 11, info@hatebur.com

Impressive assembly plant in Brugg – AMP 50-9 and AMP 70 under construction

Text: Peter Schaller, Touchpoint Communication AG/Hatebur
 Images: Hatebur

Reinach The activity in Hatebur's expanded assembly facilities in Brugg is a spectacular sight: Specialists are assembling two Hatebur *HOTmatic* machines (AMP 50-9 and AMP 70). As soon as the assembly process is complete, both machines will be shipped to China.

The base for the construction of both machines is an impressive single piece of cast steel. Hatebur called upon expert companies that specialize in working with large workpieces of this kind for support when post-processing these parts.

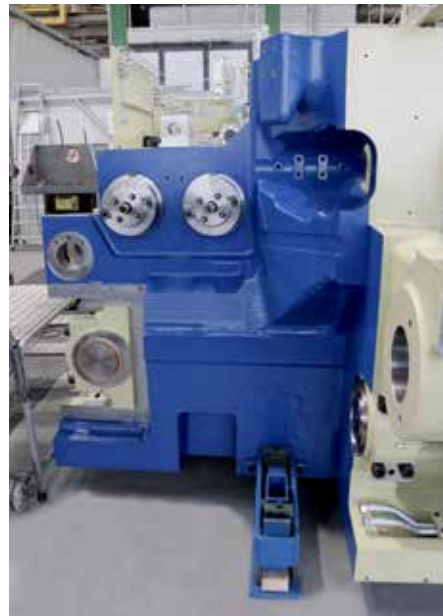
In the assembly halls, specialists from a wide range of technical disciplines are hard at work. They are assembling individual parts and assemblies, which will then be used in the final assembly process. After successful initial commissioning, the machines are put through their paces in a rigorous final check. After this, the systems are readied for shipping, packaged and sent on their way.

When they arrive at their destination – our customer – the systems will be reassembled, commissioned for a second time and tested with the tools produced by Hatebur. Next, in collaboration with the customer, the tools will be optimized, staff will be trained and series production can get started.

Highlights of the AMP 50-9 and AMP 70

- High process reliability
- Optimal material efficiency thanks to servo-infeed and electronic bar end elimination device (ESA 600)
- Intuitive operation
- Gentle part discharge
- Efficient cooling system
- Short retooling times

The machine components are perfectly tailored to each other, meaning that the highest of quality standards can be achieved in production.




Need to manufacture high volumes of precision forgings? The hotformers in Hatebur's HOTmatic series are the perfect choice.

The machines offer significant advantages as they combine precision and parts diversity with an unbeatably high production speed. The production process from bar material is performed fully automatically and is fully monitored. This provides the user with a few competitive advantages: Production costs are reduced, while efficiency and process reliability are improved.

The hotformers are sure to impress, right down to the smallest detail: The servo-infeed for the bars and the shearing mechanism work in perfect harmony. The resulting high quality of the cut-offs forms the perfect basis for the subsequent forming processes. In addition, the precise transfer unit ensures that parts are transferred on with excellent repeat accuracy and positioned precisely. What's more, the adjustable grippers guarantee that forms and geometries of all kinds are transported safely, and the forgings can be output with almost no points of impact. This is ensured by the lateral part discharge, which is designed specifically for this purpose and also significantly reduces cooling contact between the forgings and the cooling medium.

Combined, all these technical details provide a high level of process reliability.



The frame of all the machines is made of a single piece of cast steel; on the AMP 70, this weighs approx. 80 tons. 



Heading, pointing, threading – combined for maximum efficiency

Text: Bernhard Hagen, Hagen PR

Images: Carlo Salvi

Garlate — The progressive Carlo Salvi header CS 513 TH has been showcased at WIRE 2022. As a new add-on feature, the innovative header can now be ordered with a pointing unit.

In June 2022, the combined machine model CS 513 TH has given its international debut at the WIRE trade show in Düsseldorf. The innovative 5-station header represents a new chapter in Carlo Salvi's history, explains Marco Pizzi, the company's Chief Commercial Officer: "The CS 513 TH is our first combined, progressive header with integrated pointing and threading units and opens up a new market segment for us. It will reduce investment costs for our customers and increase their productivity."

On the CS 513 TH – the "TH" stands for "threading" – components are cold formed and subsequently pointed and threaded in order to obtain different kind of threads and grooves. "Actually, we had planned to present the machine in 2020 already, when the main, intensive R&D was concluded, but we needed to postpone it because of the Covid pandemic. In the meantime, we designed and implemented improvements to the technology of the machine," states Mr. Pizzi.

Efficient pointing unit

The main, recently implemented improvement was the addition of an integrated pointing unit as an add-on feature. "The heading, pointing, and threading units are all designed 'in line', with parts moving effortlessly from one station to the next," explains Mr. Pizzi. After the forming station, the parts are directed to the pointing unit. There, the diameter gets reduced, and the extremity of the parts get tapered. Just like the thread rolling

unit, the pointing unit is also designed and manufactured for maximum user friendliness and easy setup. Many different shapes and geometries of points can be produced. From the pointing unit, the parts are then fed to the threading unit. Marco Pizzi says: "The pointing unit is an add-on feature. It can increase the efficiency of manufacturers in various industries, for example in the production of automotive parts."

Attention to detail

The progressive five-die-header can process wires with a diameter of 6 to 13.5 millimeters. The minimum and maximum thread diameter is M6 and M12. The maximum length of a thread is 100mm, while the maximum length of a shank is also 100mm. "Because the heading and rolling units move in the same direction, we can have bigger flat dies than the competition. Using the maximum capacity of the header, we are able to reach the same measure both on the headed and the threaded part. This is a unique technical advantage in the market," stresses Mr. Pizzi.

The heading, pointing, and threading units are positioned in parallel, which results in better accessibility and optimized ergonomics for the operator. The threading movement is driven by a desmodromic cam for gradual deformation and perfect synchronization between ram movement and the introduction of the parts into the flat dies. The Carlo Salvi engineers have also developed a special device that prevents two parts from being fed into the flat dies at the same time. The flat dies housing is suitable for bigger flat dies thicknesses for materials with high mechanical resistance. A control system brings optimized overall efficiency.



- Representing a new chapter in Carlo Salvi's history: the innovative progressive header CS 513 TH.

Many advantages for customers

The CS 513 TH combined header offers a range of advantages to customers: It speeds up production processes, minimizes the risk of mixing up samples and lots, reduces investment costs, and offers maximum flexibility. Another key advantage of the CS 513 TH is its compactness. While many companies used to purchase a thread rolling unit to further process forged parts, they can now minimize the floor space with the integrated machine. Because the thread rolling unit is integrated, it uses the same mechanical drive. "The concept saves space laterally, facilitating the positioning of other machines alongside the CS 513 TH," says Mr. Pizzi. "As a combined header based on an 'in line' concept, the CS 513 TH is a true innovation in the market. It is designed to increase the efficiency in automotive fastener markets around the globe."

"Just the beginning"

Following the launch of the CS 513 TH, the R&D experts at Carlo Salvi are already eyeing their next steps. The team is working on a single-die two-blow combined machine for manufacturers in the construction and automotive sectors. Marco Pizzi says: "The CS 513 TH is just the beginning – we will continue to focus on innovation, develop new headers and grow our portfolio. Visit us at WIRE to learn more."



- The combined header CS 513 TH can process wires with a diameter of 6 to 13.5 millimeters.

The integrated threading unit


- saves floor space for customers.



The pointing unit is an add-on feature. It can increase the efficiency of manufacturers in various industries.

Interview



 Martin Fassbender

Name: **Martin Fassbender**

Role: **Digital Process Manager**

Worked at Hatebur: **Since November 2010**

What is your role at Hatebur and what tasks are involved in your area of work?

I took on the role of Digital Process Manager in December 2021 and I support the Hatebur Group during its digital transformation. This includes providing our employees with information and advice, as well as managing digitalization projects.

How long have you been working for Hatebur and what training and experience is necessary for this job?

In November 2010, I arrived at Hatebur as a trained truck mechanic. I spent three years working with our customers around the world as a service technician. After a year working in the spare parts service, I then became responsible for a region; this meant I was responsible for providing our customers with the best possible advice and offering them suitable solutions. Alongside my work, I went to evening classes to obtain a commercial qualification. Of course, my new role requires even more specific knowledge, which is why I am currently completing a distance learning course on digitalization.

Which bigger projects are you currently working on?

Something that might be of interest to our *COLDmatic* customers: The development of a timing tool that we can use to digitalize the process of determining machine setting parameters. This will make it easier for our customers to set out suitable setting values for their processes and transfer them to their machines.

Internally, we are working on further digitalizing our methods of collaboration in order to ensure that we are ready for whatever the future holds. Among other things, we are very optimistic about our new CRM system, which we hope will enable us to better meet our customers' needs.

What role does digitalization play in the machine industry?

While digitalization is fairly advanced in the B2C sector, the B2B sector and the machine industry are lagging a little way behind. The journey from being an automotive manufacturer to becoming a machine manufacturer, involving OEMs and TIER suppliers, is still a long one – but more and more often, our customers are requesting IoT connections, digital services and smart products. Digitali-

zation has well and truly arrived and we will do everything we can to be a reliable partner in this industry too.

Are there any digital requirements that are particularly challenging?

New terms and abbreviations seem to pop up everywhere, so it can be difficult to stay up to date all the time. In addition, many technologies need to be assessed, but at a point when it is not yet clear what benefits they could yield or if they even have a future at all. In order to keep up with these developments, it's essential that we remain informed about new trends and that we can rely on expert colleagues and partners, with whom we can discuss the benefits with respect to our own company.

Have customers already been asking for digital solutions? If so, in what areas? What plans does Hatebur have in this respect?

In many cases, the central demand is for support in the event of problems with the machine or in production. Currently, we have two methods of offering support at any location: Secomea remote access and Kiber helmets.

However, we are also working with various partners on machine data analysis so that we can provide our customers with troubleshooting information even more quickly and successfully and, in the best case, detect problems before they arise.

What do you enjoy most about your work?

My role is located at an intersection between the specialist departments, management team, product management and IT. This gives me the opportunity to be involved in many change processes, concepts and new developments and, subsequently, to link these together. I feel that Hatebur trusts me and my work, and I'm looking forward to seeing what comes next.

What do you enjoy doing in your free time?

I enjoy playing and watching soccer – I also train a junior soccer team in our village.

My mountain bike was a little neglected toward the end of last year, so I'd like to be more active and get back out on the trails this year. Whenever possible, I try to spend my free time with my children. Happily, we have lots of things in common, so it's never boring for any of us.

Is there anything else you'd like to say here?

Dear readers,

We don't just want to implement digitalization for digitalization's sake – rather, we are aiming to offer you solutions that help you achieve success.

Get in touch to let us know what issues you come across in your everyday work and how we can help you to overcome them.

Send an e-mail to info@hatebur.com with the subject "Digital" to discuss what we can do for you now and in the future.



See us live!



September 28–29, 2022
EuroForge conFair, Spain

Location: **Bilbao, Spain**
Company: **Hatebur Umformmaschinen AG**

November 16–19, 2022
Thai Metalex

Location: **Bangkok, Thailand**
Company: **Hatebur Umformmaschinen AG**

November 30–December 1, 2022
Fastener Fair Italy

Location: **Milan, Italy**
Company: **Carlo Salvi S.p.A.**

December 8–11, 2022
ChinaForge Fair, China

Location: **Shanghai, China**
Company: **Hatebur Umformmaschinen AG**

**We look forward to seeing
you there!**

All dates are correct as of June 2022 –
please search for the latest dates online
before attending an event.

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