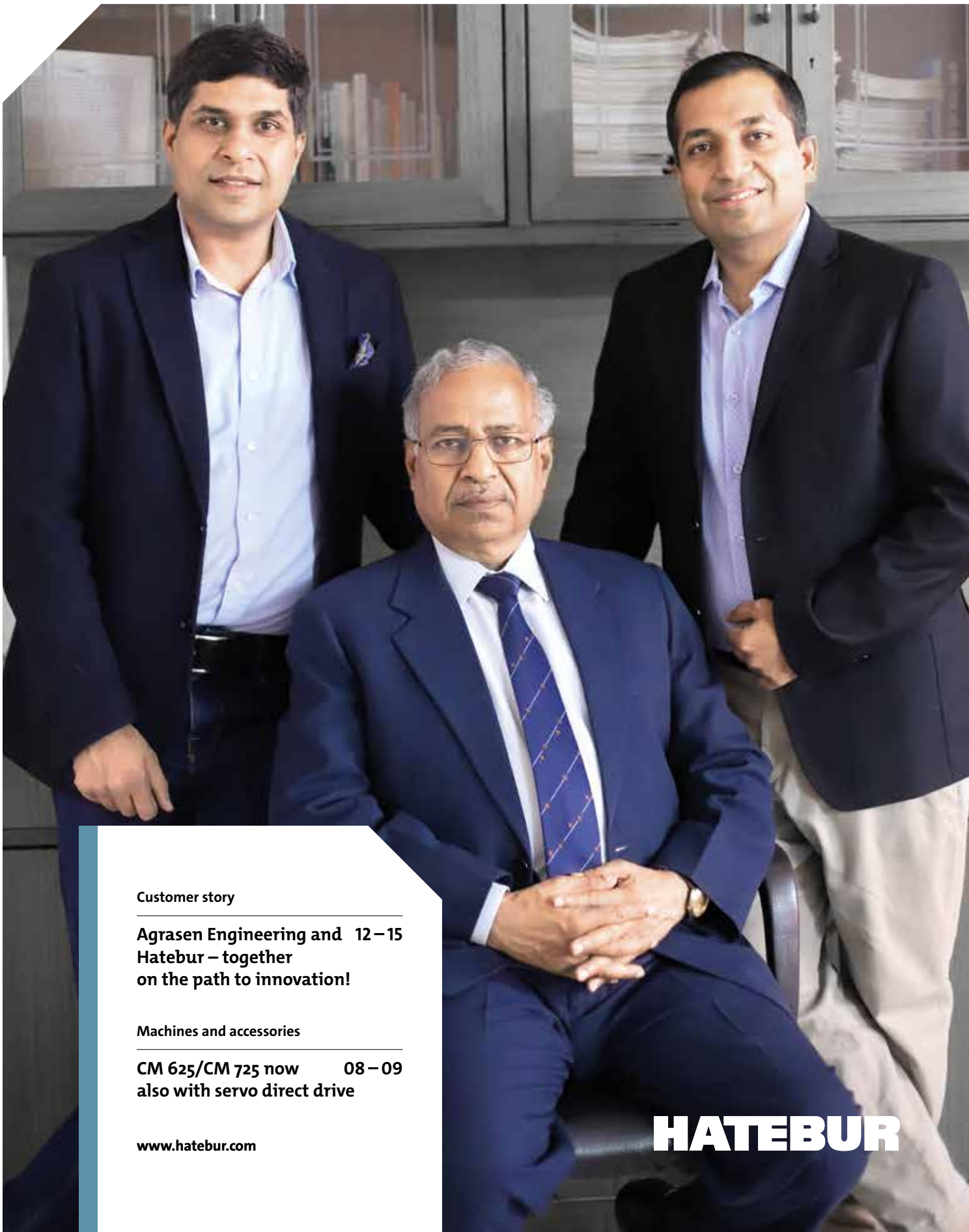
Our performance. **Your advantage.**

NetShape

02 | **2020**



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HATEBUR

Personal

Dear business associates,

Currently, we are all experiencing first-hand the challenges of providing products and services to our customers. Travel regulations are changing almost daily in Europe and there are highly restrictive regulations on travel to and from other parts of the world.

While digitalization has enabled us to do things which were unthinkable not long ago, our employees are also missing direct contact with and mutual support from our customers and suppliers on site. This requires a great deal of dedication, flexibility and perseverance from everyone – whether they're in Reinach, Garlate, or at our subsidiaries and representatives all over the world. We would therefore like to extend our heartfelt thanks to our employees as well as our partners, whose daily work is helping to overcome this extraordinary situation and these unprecedented times.

Since none of us can travel at the moment, in this issue we would like to take you on a journey to the Indian subcontinent to introduce our long-standing customer, Agrasen Engineering, in this diverse and fascinating country. During a brief stopover in Italy, we'll take a look at the details of the new complete line CS 513 TH and get to know two of the significantly involved developers. Then we'll return to Switzerland and introduce the team whose job it is to develop customized solutions for new machines and service projects. After a glimpse into process and tool training, last but not least, we'll look at Hatebur's vocational training program that transforms our apprentices into professional specialists.

Have a great trip and stay healthy!

Thomas Christoffel
CEO

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Cover image: The Agarwal family of Agrasen Engineering Industries Ltd.

Imprint

NetShape – Hatebur's magazine for horizontal cold and hot forming
Published by: Hatebur Umformmaschinen AG, Werbung/Kommunikation, Reinach, Switzerland
Editors: Reinhard Bührer, Christine Steiner, Hatebur Umformmaschinen AG
Translation: STAR AG **Layout:** Montfort Werbung AG **Printing:** bc medien ag
Print run: 3800 copies

Current

Fifteen years of collaboration with SQ Tech Co., Ltd. in South Korea:

In 2005, Hatebur had already entered into an agency contract with SQ Tech Co., Ltd. in South Korea, a company headquartered in Incheon. SQ Tech represents various European companies on the Korean market and offers consulting for Korean customers and interested parties locally. Their team of sales staff and service engineers provide customers with information and the best service for all aspects of Hatebur HOT*matic* and COLD*matic* machines.

SQ Tech has also represents Carlo Salvi S.p.A. on the Korean market since 2017.

New forms of communication

As a result of the global COVID-19 pandemic, many specialist trade fairs have been postponed or canceled entirely.

For Hatebur and Carlo Salvi, trade fairs are important platforms where we present our innovations and new developments to a keen international audience. Now that these opportunities have become rather unreliable, we are working at full speed to develop new communication tools.

Our first newsletter with up-to-date information and news was sent out to readers in November 2020. This newsletter is intended to become an integral part of our communication and will be sent to subscribers at regular intervals.

What's more, we are working on a video conference platform, which will allow us to hold meetings and deliver presentations – even to distant audiences. We are excited to show you this new opportunity soon.

Employee anniversaries

Both of the following employees have worked at Hatebur for 25 years:

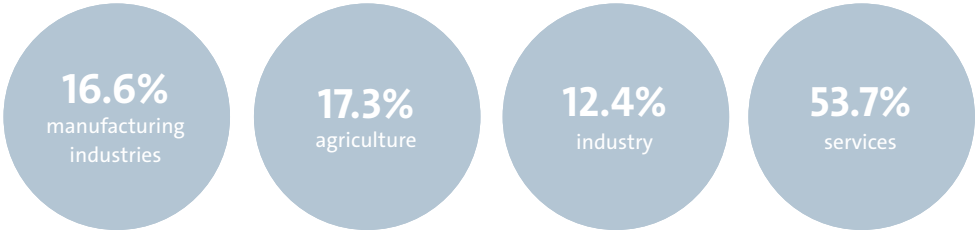
Name: **Christian Bürgin**
Position: **Head of the New Machines Business Unit**
At Hatebur: **Since 1995**

Christian Bürgin joined the Hatebur team as a young engineer in February 1995. He has constantly expanded his skills and expertise through his work in technical consulting and in projects, gaining comprehensive knowledge in forming technology and Hatebur machines. He has also become a member of the management team and is responsible for the area of new machines, including the assembly plant in Brugg.

Name: **René Brunner**
Position: **New Machines Manufacturing Coordination**
At Hatebur: **Since 1995**

René Brunner started working for Hatebur in the spare parts service. He worked on large spare part quotes and conversions of all kinds and created assembly drawings. René Brunner moved to the newly established Manufacturing Control department in February 2016, where he was able to actively contribute his knowledge to build up the group. He now creates and processes assembly parts lists and, alongside many other duties, supports the team in processing manufacturing orders.

Facts and figures
India



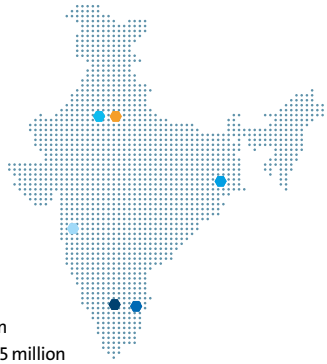
India at a glance

Capital city: **New Delhi** States: **28 and 8 union territories**

Area:
301,277 km²

Currency:
Indian rupee

Inhabitants:
1.38 billion



Largest cities: Mumbai 18.5 million Delhi 16.3 million
Kolkata 14.1 million Chennai 8.7 million Bangalore 8.5 million

Economy

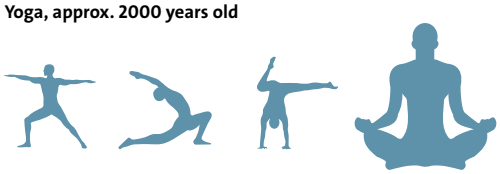
Top four exports
1. Technical goods (24%)
2. Precious stones/jewels (16%)
3. Crude oil products (11%)
4. Textile manufacturing (6%)

2 869
GDP, in billions of USD

2 098
GDP per capita, in USD

Health and wellbeing

Yoga, approx. 2000 years old



Cuisine

Rice, chapati, naan bread, pulses, curry/masala, masala chai

Religious beliefs

approx. 80% Hindu
approx. 14% Muslim
approx. 2.3% Christian
approx. 1.7% Sikh
approx. 0.7% Buddhist
approx. 0.4% Jain

Its name

The country of India takes its name from the river Indus.
This name derives from the ancient Greek, Persian and Sanskrit word **"sindhu", meaning "river".**

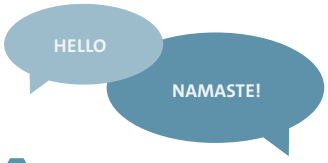
Most famous building

Taj Mahal

National flower

It's not for nothing that the **lotus flower** is also often considered a holy flower: In Buddhism, it symbolizes **purity of the heart, fidelity, creativity and enlightenment.**

Language



Hindi and English, as well as 21 other official languages in India.

Providing customers with expertise

Text: **Kim Weber**
Images: **Hatebur**

Reinach — Hatebur provides its expertise built-up over many years directly to customers.

Hatebur's service packages offer customers a broad spectrum of specialized knowledge in order to operate forming systems reliably.

Options include training sessions on tool design, machine operator training and maintenance. They are made up of basic and refresher training sessions, or individual, customized training sessions. Hatebur specialists also provide expertise and production support for complex formed parts.

Offered either in relation to a machine purchase or as a separate service, the training sessions are led by experienced specialists who work on all aspects of Hatebur forming machines every day. Customers' new employees in particular benefit directly from Hatebur's many years of expertise.

Process and tool training
Hatebur has a considerable interest in providing customers with access to the very latest expertise in terms of both tool design and processes. Tool quality and process and tool development are important to ensure efficient forming machine operation, for which intensive tool training sessions are indispensable.

Machine operator and maintenance training
Operating the system correctly helps to prevent typical errors and ensures that the necessary skills are quickly acquired. The greatest advantage is that the system's efficiency

Specific questions are discussed and solutions proposed together with the customer. What's more, participants learn how to develop their own solutions in future.

All training sessions combine theory and practice in a meaningful way, which helps participants quickly learn their way around forming technology with Hatebur machines.

and output are increased. Moreover, a specially trained employee is appointed for regular machine maintenance, which is planned in advance, helping to prevent production failures and unnecessary costs.

Training in Reinach or on-site on the customer's premises

In these times when travel is almost impossible, Hatebur is now offering straightforward online training sessions with various tools, providing the best opportunities to refresh and expand employees' expertise, or to convey basic knowledge to employees regarding Hatebur forming machines and process and tool development. The training sessions can be carried out in the same way as in-person training, meaning that several people can participate, as before. This saves both money and valuable time that would otherwise be spent traveling.

Even though the training programs that we provide are extremely varied, they are precisely tailored – at all times – to the needs of each course participant. Want to know more about what Hatebur has to offer? Contact us for further information with no obligation to buy.

hatebur@hatebur.com/T +41 (0) 61 716 21 11.

Your advantage:
No need to develop your own expertise from the ground up – benefit from Hatebur's knowledge, gained over many years.

Hatebur COLD*matic* CM 625/CM 725 now also with servo direct drive

Text: **Carsten Sieber, Christian Bürgin**
Images: **Hatebur**

Reinach **The direct drive, combined with the existing local drives of the CM 625/ CM 725, opens up a wide range of untapped possibilities and savings potentials.**

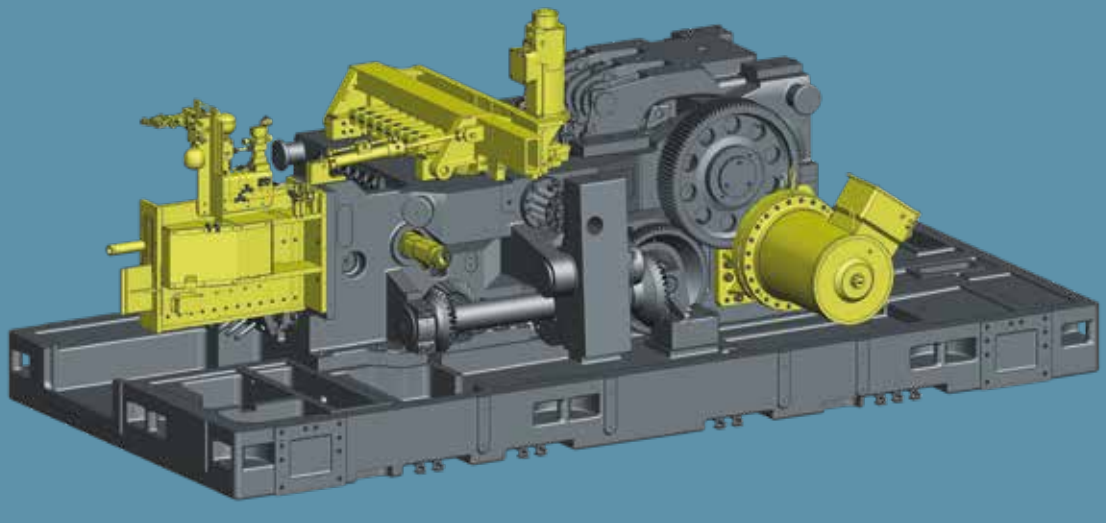
Following the successful introduction of servo drives in parts transport and wire feed, the resulting development of the CM 625/ CM 725 is progressing with the launch of the direct drive.

Direct drives have already been used in sheet forming for some time and are already widespread. Their use is less common on horizontal multistage forming machines, due to the complex technology and costs involved. The solution developed for the CM 625/CM 725 now offers the greatest advantages of this technology with a very good cost-benefit ratio.

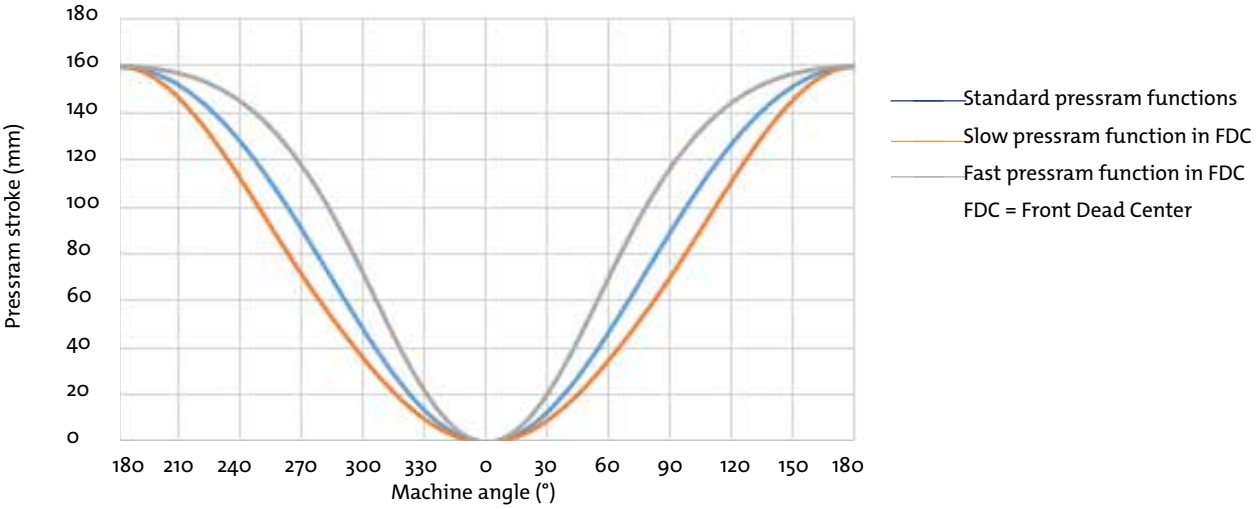
Using the servo drive means that the drive belts, flywheel and clutch/brake combination, amongst others, are no longer necessary. The additional components required for the direct drive are virtually maintenance-free.

The drive motor used, known as a torque motor, is a water cooled multipole synchronous motor, which works using permanent magnets. As with every servo motor, an encoder system regulates speed and position.

As already mentioned, direct drives do not have a flywheel, meaning that they do not have kinetic energy storage. A capacitor bank is built into the drive cabinet to provide the energy required for forming. These capacitors are able to release large amounts of energy during forming and are charged in the off load phase of the coldformer. This made it possible that the machine connection power with direct drive remains at the level of the standard coldformer.



Pressram functions



With the standard locally driven systems for wire feed and parts transport, the CM 625/ CM 725 already offers a level of flexibility in kinematics that was unheard of until now. For example, the gripper movement or transfer unit speed can be changed independent of the machine.

This means it is possible, to optimize the forming tools or make parts transport more reliable at a higher output level. Combining these options with a direct drive can also influence the pressram movements. Generally, the speed in the front dead center of the machine, i.e. during the actual forming process, can be changed, without reducing the output level.

For example, a movement similar to the knuckle joint press can be generated by reducing the pressram speed in the front dead center. Functions like this can significantly improve the tool life of the forming tools. Production costs can therefore be saved on standard tools in general and segmented tools in particular. Even various aluminum alloys can be better formed at slower speeds.

At the same time, the new drive also offers advantages on long or heavy parts. The pressram movement can be distorted in such a way that the pressram moves slower in the rear area than in standard operation. This means that a larger time window can be provided for transporting longer or heavier parts, leading to more stable parts transport. At the same time, however, an opposite application is possible: Long parts can be transported more quickly than in standard operation, which prevents collisions with the tools already progressing from the next stage. For operators, this results in the option of manufacturing longer parts on the same type of same machine.

Partially increasing the speed during the shearing process is also possible, as are asymmetric functions whereby the front dead center of the machine is not in the middle of the pressing cycle.

With the huge torque that the drive provides over the whole speed range, parts can easily be formed in set-up mode (setting speed), where the forming machine can be set more quickly, since there is no need to raise the flywheel after adjustments.

Left: CM 725 with standard drive
Right: CM 725 with servo direct drive

Assembly plant: Consolidation at the Brugg site

Text: **Christine Steiner, Reinhard Bührer**
Images: **Hatebur**

It has always been of great importance to Hatebur that the machines are assembled in Switzerland, thereby meeting our customers' exacting demands for Swiss precision. For decades, the machines have been assembled at the Brugg and Kriens sites in cooperation with partner companies.

In 2013, Hatebur took over the assembly plant in Brugg, which was primarily where the small and medium-sized HOT*matic* and all COLD*matic* machines were assembled, integrating it into the Hatebur organization. In November 2020, the assembly of the large HOT*matic* machines was taken over from Kriens and consolidated at the Brugg facility. Three experienced specialists from Kriens are also joining the ranks of the assembly team in Brugg.

Above all, consolidating the assembly of the entire machine range at the Brugg site also allowed logistical processes to be simplified and standardized. An expert team of specialists is responsible for everything from material provision, pre-assembly and final assembly to machine acceptance, packaging and delivery to the customer.

A glimpse behind the scenes in the assembly hall: The first HOT*matic* HM 75 is assembled in Brugg.

India – The signs look set for growth

Text: Reinhard Bührer
Images: Hatebur

Hatebur had a very early presence in India thanks to representatives and agents, successfully supplying forming machines to the subcontinent for many decades. While in the beginning demand was overwhelmingly set for small BKA-2 and BKA-3 coldformers, which were used in the fastener industry, the last ten years have seen demand for increasingly large forging presses from the HOT*matic* series AMP and HM.

The Indian automotive industry is today the sixth largest in the world, making it a key industry for India's economic boom. It comes as no surprise, then, that in recent years there has been increased investment in technologically advanced and efficient production facilities from Hatebur, through to the HOT*matic* HM 75 with its 20,000 kN total press load. Over this period, Indian suppliers have gradually replaced their old, conventional production lines with modern, high automated forging lines, thus adapting their production capacity to the increasing demand.

These customers produce not only parts for the local market, but also more and more so for the international market. Due to the surging export of high-quality components, the corresponding demand for the machines to produce them is also increasing and with it the need for customer-oriented support. This is why Hatebur decided to adapt sales and service organization for India.

With the aim of strengthening our presence in India in general and being in closer proximity to our customer base in particular, Hatebur entered into cooperation with Maier + Vidorno (M+V) in early 2020. Thanks to M+V, Mr Firoz Kumar Sethi as a service engineer and, from January 2021, Mr Neten Ranjjan as National Head of Sales will be working exclusively on behalf of Hatebur – as first contact partners for our customers in India. Our efforts are additionally supported by Mr M. R. I. Shaikh in his role as Senior Sales Consultant. His decades of experience in Hatebur business make him a reliable contact partner for our customers locally.

Name: **M. R. I. Shaikh**
Position: **Senior Sales Consultant**

Name: **Neten Ranjjan**
Position: **National Head of Sales**

Name: **Firoz Kumar Sethi**
Position: **Service Engineer**

Agrasen Engineering & Hatebur – together on the innovative track!

Company:	**Agrasen Eng. Industries Pvt Ltd.**
Location:	**Jaipur, India**
Employees:	**270**
Annual sales:	**EUR 20 mil**
Machines:	**AMP 30 S, AMP 30, AMP 50-9**
Soon to come:	**AMP 30 S End of 2020**

Text: **Bernhard Hagen, Hagen PR**
Photos: **Agrasen Eng. Industries Pvt. Ltd.**

Jaipur The story of the Indian company Agrasen Engineering is a fairytale success story. What started in 1968 with four people in a backyard in the historical "Pink City" of Jaipur, developed into one of India's leading manufacturers of automotive components. To accelerate its expansion and boost productivity, Agrasen relies on state-of-the-art hot forming machines from Hatebur. But let us begin our story earlier, where it all started.

After migrating from the village to the city in 1965 to continue his education, Mr. Vinod Agarwal was always interested in starting something of his own. With no engineering experience and by learning through observation, he started with the machining of bearing rings in his residential backyard. With a setup consisting of just one lathe, which he operated himself with one assistant, nobody could have predicted what was about to follow in the next decades. In 1983, Agrasen Engineering was officially founded with the vision to manufacture bearing rings from tubes and bars with high quality standards and economical prices. The first manufacturing plant was established in Vishwakarma Industrial Area, Jaipur. In the early 1990s, two more plants followed – one for ground components, one for machined parts. Today, after decades of innovation and growth, the company employs 270 people and reports an annual sales volume of over 20 million euros.

Agrasen plant in Jaipur

Technological leap
A key step in the company's development came in 2005, when Agrasen installed its first Hatebur machine – the AMP 30 S – and started with forging processes at a capacity of 6,000 tons per year. "We were impressed by the rigidity, precision and superior quality of the HOT*matic* AMP 30 S. Their state-of-the-art technology enables the Hatebur machines to consistently run and be productive," explains Vinod Agarwal, Chairman of Agrasen Engineering. "With this machine upgrade we were able to set ourselves apart from many competitors in India, China and Japan."

The AMP 30 S is a three-station hot former for medium-sized forgings with a diameter of up to 67 mm and a production output of up to 140 parts per minute. It is ideal for the fully automated production of forged parts for the automotive industry and it impresses with its versatility and ease of set-up and operation.

Agrasen Engineering continued on the innovative track, installing robotic solutions and opening its fourth plant in 2010. Mr. Vinod Agarwal: "This is our largest plant to date – we merged one of the existing plants into the new one. We started with vertical forging and heat treatment and expanded our forging capacity to 10,000 tons per year. Two years later, in 2012, we successfully started a Skill Development Institute to cater to the needs of skilled manpower. It provides a pool of resources and know-how. This expertise, the talent and innovative spirit are the pillars of our success."

Hot former AMP 50-9
After having installed another AMP 30 in 2015 and increasing the forging capacity to 13,000 tons per year, Agrasen Engineering set its eyes on the new hot former AMP 50-9. "We wanted to increase our capacity and were convinced by the strong design of the machine," says Mr. Vinod Agarwal. The AMP 50-9 HFE is a more powerful variant of the AMP 50 and was introduced by Hatebur in 2015.

Quality control during production

The primary new features include a higher press load of 9,000 kN, instead of the former 8,000 kN, and an increase in maximum part diameters from 104 to 108 mm. Agrasen Engineering placed the order and the machine was installed in 2018, more than doubling the company's forging capacity to 33,000 tons per year. The AMP 50-9 immediately proved itself as a heavy-duty roller-bearing processing system with improved productivity – while maintaining the flexibility to produce a wide range of other parts. Namit Agarwal, Managing Director of Agrasen Engineering, explains: "We have eight people working on the AMP 50-9 in 20 shifts per week. The high productivity and the OEE – the overall equipment effectiveness – are truly outstanding. It gave us the required advantage over most of the competition to produce complex parts, e.g. Gen3 Wheel HUB."

Today, Agrasen produces bearing rings, cam lobes and constant velocity joint (CVJ) parts on the Hatebur machines AMP 30 S, AMP 30, AMP 50-9.

"And a new AMP 30 S is scheduled to arrive in December 2020. It will increase our overall forging capacity to 40,000 tons per year," emphasizes Mr. Namit Agarwal.

The Agrasen products are tailored to the needs of the automotive industry for various bearing applications, for example ball bearings, taper bearings, cam lobes, gear blanks and CVJ parts. Agrasen mainly processes different steels and steel alloys including bearing steels which are some of the toughest steels to forge.

60% of total output on Hatebur machines

With an installed capacity of 100 million bearing rings and automobile components per annum, the Agrasen manufacturing facilities are amongst the best in the industry. "In one month, we produce approximately 2.2 million sets of two rings on each Hatebur AMP 30, and 1.8 million sets on the AMP 50. Altogether, we produce 60% of our total business on Hatebur machines," says Mr. Agarwal.

From left to right: Mahesh Prajapati, Dilip Agarwal, Namit Agarwal, Rajesh Kumar in front of the HOT*matic* AMP 50-9 machine.

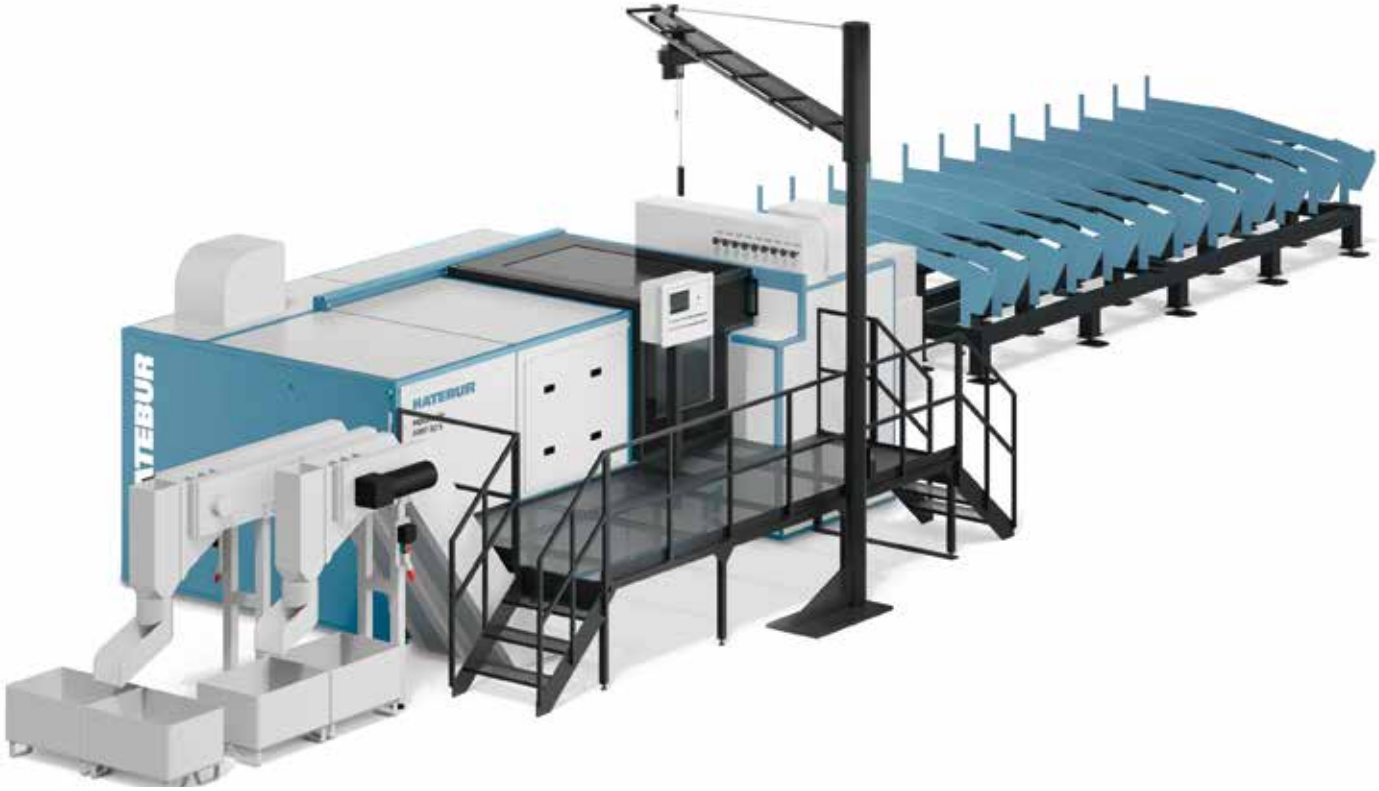
Thanks to the combination of different high-speed hot formers and vertical forming lines with hot ring rolling, the company is able to offer both high volume products and larger-sized low volume demands. Apart from domestic customers in India, Agrasen Engineering sells its products mainly to the United States, Europe, Indonesia, Malaysia and Thailand. Companies like ILJIN, JTEKT Corp., Nachi, NEI, NSK, SCHAEFFLER, SKF, Tata, and TIMKEN are a few of their satisfied customers.

Efficient with Industry 4.0

Chairman Vinod Agarwal and Managing Director Namit Agarwal intend to continue to push for innovation and increased productivity: “We have already initiated the first phase of Industry 4.0, most of our machines are connected and we are able to get the required data in real time. In 2021 we will continue to push ahead to improve the overall productivity and efficiency as well as integrate our full production, inspection, and logistics processes into Industry 4.0. With Hatebur, we have a strong partner at our side, who is a true technology pioneer and understands our needs.”

Hot parts produced in Jaipur are welcomed by many companies world-wide.

The new HOT*matic* AMP 30 S from Switzerland will arrive at the end of 2020.



CS 513 TH – The making of a new star

Text: **Jürgen Fürst, SUXES GmbH**
Images: **Carlo Salvi S.p.A.**

Garlate **Before market launch, Carlo Salvi machines are thoroughly put through their paces – an insider reports.**

Presenting a new machine is a highlight for customers and all those involved. We usually only have a vague notion of the amount of effort that goes in for a machine to be functional and ready for the market, especially when completely new functions have been integrated for the first time, such as with the CS 513 TH from Carlo Salvi, which now has a thread roller unit. We had a unique opportunity to talk to the Carlo Salvi testing engineer about the what goes on behind the scenes – enjoy this exclusive insider information.

Paolo Bormida is a calm person, but when he talks about his work as a Carlo Salvi testing engineer in Garlate, he radiates excitement. He had to ensure that not only the progressive five-stage header unit works perfectly on the newest Italian machine: For the first time, Carlo Salvi has also integrated a thread roller unit into a machine.

The advantages for customers are obvious, since the machines no longer require external thread roller machines, work more quickly and efficiently and save space thanks to a smaller machine footprint.

A Carlo Salvi machine is only ready for the market when Paolo Bormida and the testing team grant approval after extensive tests.

Forming and rolling threads: The new CS 513 TH from Carlo Salvi can do both.

Launch at Wire trade fair falls victim to the coronavirus pandemic

Over the four-month test phase up to the planned launch at the wire trade fair – which was canceled due to the coronavirus pandemic – Paolo Bormida would often break into a sweat. The supply to the new thread roller unit in particular required a great deal of attention, since first the two functional units – the five-stage forming unit and thread roller unit – were tested separately before the machine as a whole.

The screw blank is used as a demonstration piece before the whole process of forming and thread rolling is run through. In the test, commercial screws are produced under live conditions.

As Carlo Salvi's regular area of business for the last 90 years, testing the forming units is like playing on home turf, whereas the new thread roller unit requires the utmost care and attention. Eventually, it will later be used primarily to produce screws for automotive manufacturers. "Anyone familiar with the 0 PPM requirements needed here knows what I'm talking about," emphasizes Paolo Bormida.

Precisely synchronizing the header and threaded part

The main focus here was on the supply unit, which conveys the pressed parts to the thread roller. From loading the parts to inserting them through to phase adjustment, everything must happen smoothly and completely in sync, without parts tilting, slipping or going missing. Tests were first carried out with a preformed screw blank, a demonstration piece, before later it was the turn of the whole process of forming and threading. Next, tests were carried out under live conditions and real, commercial screws were then produced.

Paolo Bormida tells us about the stress of finding some small irregularities that caused the transport to stop. The double system, where the parts are supplied longitudinally and transversally into the washer dies, is intended to ensure that the perfect positioning is reliable and accurate. "If both the movements are not exactly in sync, parts may fall out or become stuck," says Bormida, who holds an engineering degree and has been leading the Carlo Salvi testing department for three years, about the test phases.

Commitment and perseverance required for testing

The music and wine fan's main tasks include organizing test activities, carrying out feasibility analyses of the details and setting up the equipment. Although the experienced engineer has only been at Carlo Salvi for three years, he has been working with the machines for over three decades. Bormida has been involved from the very beginning with the new Carlo Salvi machine, which brings together a header and a thread roller unit in one machine for the first time. The project demands his full commitment: "It requires a great deal of perseverance and commitment to get the project successfully through the testing phase and to make the machine ready for the market," he assures us.

Development already in the works

The launch of the market-ready machine CS 513 TH did not take place as planned at the wire trade fair 2020 in Düsseldorf, although everyone involved kept to the original schedule. Since the summer, customers have been able to purchase the first Carlo Salvi combi-machine. However, that certainly does not mean Bormida and his team are short of work – quite the contrary, since Carlo Salvi is currently already developing the machine further, and development and testing have always gone hand in hand. The material being formed also needs a thread. In the next development stage, customers will have the choice and will be able to carry out the processes separately – but only after Paolo Bormida and his team grant approval for marketability after extensive testing.

The cornerstone of customer service

Text: **Matthias Prischl**
Images: **Hatebur**

Reinach **Our Technical Development department is often not noticed by many customers. However, it is a cornerstone of customer service.**

The department comprises electrical engineers and machine tool technicians. Their tasks include:

- Developing customized solutions, both electrical and mechanical, for new and used machines
- Undertaking repairs from quote to delivery
- Electrical commissioning new machines in the assembly plant and at customers' premises
- Carrying out conversions and modernization work on machines, e.g. new control systems, servo infeed, body exchange, impact mark optimization, safety updates and much more.

Do you have any problems when manufacturing a product or need an additional function or local performance improvement on your machine?
Ask us and we'll do our best to fulfill your requirements.

Name: **Wolfgang Müller**
Position: **Head of Technical Layout and Design**
At Hatebur since: **February 2009**

Tell us about your career at Hatebur.
Before studying mechanical engineering, I undertook training as an industrial mechanic and also worked in manufacturing for two years.
After completing my studies, I worked as a designer and project manager for hydraulic presses and was a manager in mechanical manufacturing.

At Hatebur, I started off as a designer and, alongside my colleagues, was responsible for mechanical customized adjustments to new machines and peripheral equipment (foundation, materials handling technology, induction, etc.) for the machines. After about a year and a half, I took on the role of heading up this design group. Our current team was formed during restructuring in early 2016.

What is your job as team leader?
On the one hand, coordinating tasks and supporting members of the team if they have technical questions. On the other hand, planning professional development for colleagues (with internal/external training).

Who makes up your team?
In our team, we have four mechanical engineers/technicians and three electrical engineers. Projects can be implemented efficiently thanks to quick agreement within the team.

What tasks come under your department's remit at Hatebur?
_ Developing conversions on machines, both electrical and mechanical
_ Doing calculations for conversions
_ Creating layouts for new systems
_ Implementing customized requests on new systems
_ Commissioning new machines and modernizations
_ Processing the machine parts and assemblies sent to Hatebur for repair
_ Discussing requirements/problems and developing possible solutions with customers and suppliers
_ Supporting service engineers in troubleshooting

What work are you and the team especially proud of?
That we can develop solutions for new challenges directly with the customer.

One example might be the induction systems for coldformers discharge that reduces impact marks, or new control systems for old machines, and so on.

The best part of the work is when customers come to us with a problem and we work together to find a good solution. Even ideas that look bold at first can be developed into practical solutions.

Vocational training at Hatebur

Text: **Hatebur**
Images: **Hatebur**

Name: **Heinz Frank**
Position: **Instructor responsible for design apprentices**
Training: **Mechanical engineer, University of Applied Sciences**
At Hatebur: **Since 2001**

Learning how to read and assess drawing plans and data sheets correctly is a crucial part of training. Practice is therefore of great importance, as Outhman Aabid, a second-year apprentice, knows well.

Reinach **Hatebur has been training apprentices since 1954. This means that young people receive solid theoretical and practical training in the mechanical engineering industry. In doing so, the company provides young people with prospects for the future and, if needed, can hire well-educated specialists after they finish their apprenticeship.**

Hatebur has offered design apprenticeships for 66 years. Completion of this training results in a Swiss technical certificate, acknowledging the new employee's clearly defined expertise to future employers. So far, Hatebur has provided training for over 60 designers.

Four years of training in theory and practice
An open day allows both sides to get to know each other and try out working together before training starts. Currently, one woman and three men are completing their design apprenticeships at Hatebur in Reinach. The apprenticeship lasts four years in total. As an introduction, a young designer undergoes basic training in metals, learning the important work when dealing with various materials and machines. Apprentices are also trained in CAD software in their first year. On one or two days per week, educational training takes place in the vocational college. On the other days, apprentices at Hatebur get to grips with a wide range of work areas and take part in developing high-quality machines for customers all over the world.

Important day-to-day practice
Hands-on learning and practicing professional principles takes place in regular intercorporate courses. In addition, apprentices attend placements in a foundry and in the Hatebur assembly plant, which gives them a deeper insight into work that, although not strictly linked to their area of specialism, still enhances their understanding of how things are linked for other vocational fields. During their activities in professional practice at Hatebur, the apprentices design individual parts and components for the Hatebur HOT*matic* and COLD*matic* machines and their tools. They also create precise technical drawings using CAD programs.

Hatebur offers apprentices the opportunity to take the Swiss Federal Vocational Baccalaureate during their apprenticeship, thereby enabling them to receive an internationally recognized qualification in addition to the Swiss Federal Diploma of Vocational Education and Training.

High requirements, yet a good deal of variety
Beyond the professional wish to be designers, young specialists usually harbor a desire to work in the technical industry, with opportunities for further education and the joy of mathematics, physics and geometry. The requirements are high: Enjoyment of mechanical systems and design is a must, combined with a good visualization skills, technical comprehension, analytical thinking and good technical drawing abilities. Successes during the apprenticeships are motivating. The apprentices at Hatebur have the opportunity to contribute in exciting projects where they can start to contribue their own ideas.

Skills learned theoretically are put straight into practice using machine parts.

The Swiss dual education system – the advantage of a flexible system

One reason behind the success of the Swiss economy is its dual education system. During an apprenticeship, young people complete vocational training in a company and attend a vocational college. This means that they receive high-quality training and have direct access to the labor market. The opportunities are the result of collaboration between the federal state, canton and organizations in the working world. They support high-quality vocational training and help to provide sufficient apprenticeship opportunities, ensuring that, amongst other things, students who are not academically inclined can receive solid training – with the result that youth unemployment is low.

Apprenticeships may last two to four years depending on the field, and result in a Swiss Federal Certificate in Vocational Education and Training (two years) or a Federal Diploma in Vocational Education and Training (three to four years). In addition, young people with strong academic performances can also complete the Swiss Federal Vocational Baccalaureate and then an undergraduate degree. This means that the students are at the same level as graduates from a university or a Swiss technical college.

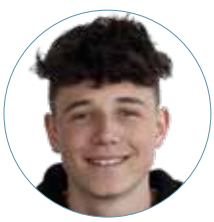
Vocational training facilitates a range of career paths and is open to everyone; adults can also complete training like this later in life. Successively higher levels of education can be reached through various training and further education paths. Studying is not necessary – young trained specialists can concentrate on the vocation they have learned and receive the corresponding Swiss Federal Diploma or attend a College of Higher Education. Overall, the level of education for specialists increases, as do career prospects and salaries.

The ability to study after completing vocational training is very important. Vocational specialists have access to further education at any time, which can be completed at whatever pace is required and also at a later point. There is no need to decide whether or not to study early on, enabling young people who may only feel ready later on to learn their chosen vocation then.

Name: **Nicolas Oehler**
Position: **4th year design apprentice**
At Hatebur: **Since 2017**

Name: **Eliane Hess**
Position: **3rd year design apprentice**
At Hatebur: **Since 2018**

Name: **Outhman Aabid**
Position: **2nd year design apprentice**
At Hatebur: **Since 2019**



Name: **Florian Aerni**
Position: **1st year design apprentice**
At Hatebur: **Since 2020**

Interview

Andrea Valnegri

Matteo Panzeri

Name: **Matteo Panzeri and Andrea Valnegri**
Role: **Mechanical draftsman and designer**
Year joined Carlo Salvi: **Matteo: 2005/Andrea: 2008**

What is your role at Carlo Salvi?
M+A: Within the company we both perform the role of mechanical draftsman and designer.

Have you always held this role at Carlo Salvi, or did you work in other roles before?
M: I joined the Carlo Salvi team as an intern when I was at university. Once I had finished my studies, I was offered the opportunity to develop my career within the company and I jumped at the chance. My internship had been very motivating.
A: When I joined Carlo Salvi I did not work in the same role as I do today, instead I dealt with spare parts for headers and their corresponding manuals. The various aspects of our technology that I learned during that time later turned out to be extremely useful once I became a designer.

What is your experience as regards education and training?
M: I have a degree in mechanical engineering.
A: I have a diploma in mechanical engineering.

Did you know Carlo Salvi and their headers before you started to work in Garlate?
M: Yes, I did because I lived in Garlate and everyone knew Carlo Salvi. Particularly when I was a child, I remember Mr & Mrs Salvi supporting the local football team I played for.
A: Yes, I had the chance to get to know the company and their technology during my previous internship.

When did you start to think about the new CS 513 TH project?
M/A: As designers, we think it is extremely important to start every day with the desire to provide and design something new. In February 2019 we were given the task of developing a new line of products to sell on the market. To this day, we are thrilled to have been chosen, in spite of the difficulties we encountered.

What was the most difficult part when developing the new machine?
M/A: The start. The first encounter with a different reality, born from concepts that were new and had barely been explored. We were aware of the great responsibility we had and wanted to meet expectations as best we could.

What part of the development of the new machine did you enjoy the most? Why?
M: Definitely developing the roller. It was interesting to be able to use our technology alongside a completely new technology. You never stop learning!
A: Developing how parts move from the header to the roller. It was difficult at the start, but I love a challenge!

Will you develop a roller to insert in other machines in the range?
M/A: Definitely! The aim is to continuously develop our machine range, meaning we can explore markets that up until today we haven't explored at all. We would really like to develop combined machines for every thread measurement: The next step would involve a header with 2 dies/4 punches, but obviously we are waiting for the final decision by the management.

Describe your main tasks throughout the day.
M: I spend most of the day working with CAD tools and making calculations, but I also support the production department and deal with customer demands.
A: During the day I design using CAD tools and provide assistance and support for both spare parts and the assembly of multi-station headers.

If you could change any part of your job, what would you change?
M: I would definitely like to spend more time in the R&D department, I find it very motivating.
A: I would spend more of my day experimenting with new prototypes to continually improve our technology.

What will your new project or special task be?
M/A: We are working on developing a new roller unit to incorporate in other header models in order to extend the range and offer customers increasingly complete solutions.

Are you married and do you have kids? If yes, how old are they?
M: I am married and father to an almost one year old.
A: I am married and have two children aged 11 and 18.

What do you do in your spare time? Do you have any hobbies?
M: I like trekking in the mountains and practicing kick boxing.
A: I am passionate about cycling and love skiing in winter.

See us live!

18th–20th May 2021
Fastener Fair Stuttgart

Location: **Stuttgart, Germany**
Company: **Carlo Salvi S.p.A.**

24th–28th May 2021
Metalloobrabotka, RU

Location: **Moscow, Russia**
Company: **Hatebur Umformmaschinen**

22nd–24th June 2021
Fastener Fair USA

Location: **Cleveland, OH, USA**
Company: **Carlo Salvi S.p.A.**

We look forward to seeing you there!

All dates are correct as of October 2020 – please search for the latest dates online before attending an event.

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