

WINGS

#1 / 2022-2023



**New Eagle Showroom near Stuttgart
– a Space to Meet Investor’s Needs**

Customer Success Story
**ABB, a Pioneering Technology
Leader - Why did they choose Eagle?**





AUTOMATION SYSTEMS BY EAGLE LASERS

Perfectly integrated with the cutting machine to boost your productivity.



WELCOME TO THE WORLD OF EAGLE

In order to move forward, it's essential to delve deeper. There is no innovation without thorough research and investigation. In the dynamic world we live in, standing still is not an option, and constant change calls for equally constant adaptation, flexibility, and inventiveness to remain at the forefront of the industry. At Eagle, all our innovative efforts go towards developing best-in-class technology and efficient solutions that can equip organizations with the tools they need to chart their own path toward success. We're here to inspire the world. This is where we set ourselves apart.

Janusz Marcin Ejma, CEO



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- STAL: The Critical Role of Software in the Laser Cutting Process
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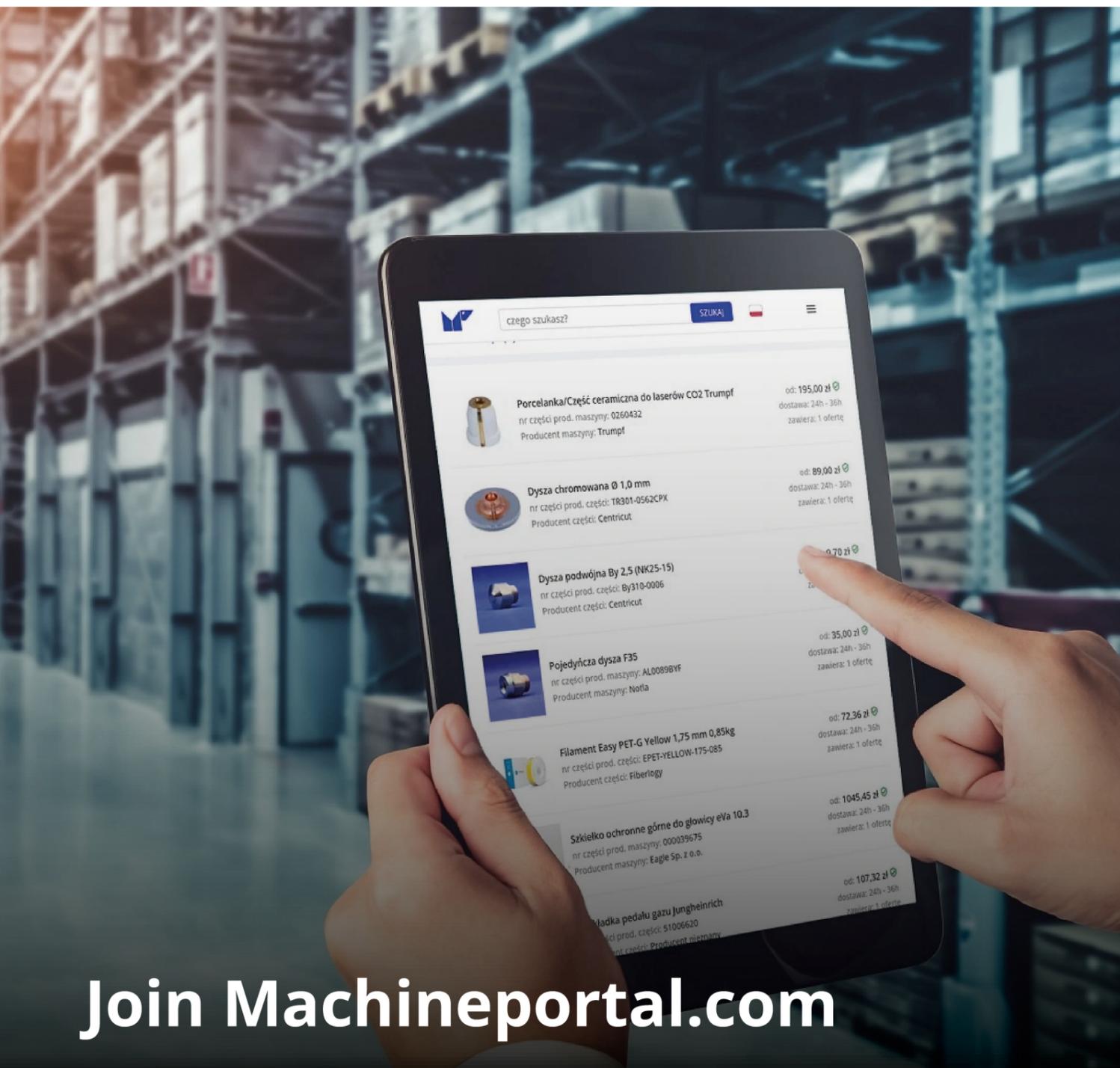
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HIGHER POWER, HIGHER PROFIT



At the core of Eagle Lasers' DNA is an unwavering dedication to innovation, an unending quest for knowledge, exploration, and action. We strive to create a supple balance between ingenuity and practicality, ensuring that our efforts are not only groundbreaking but also efficient and productive. To share our vision, we decided to create Wings: a repository of insights and ideas, gripping articles and interviews designed to give readers a gateway into our world and the essence of our company. I hope you enjoy reading the contents as much as we enjoyed giving them shape.

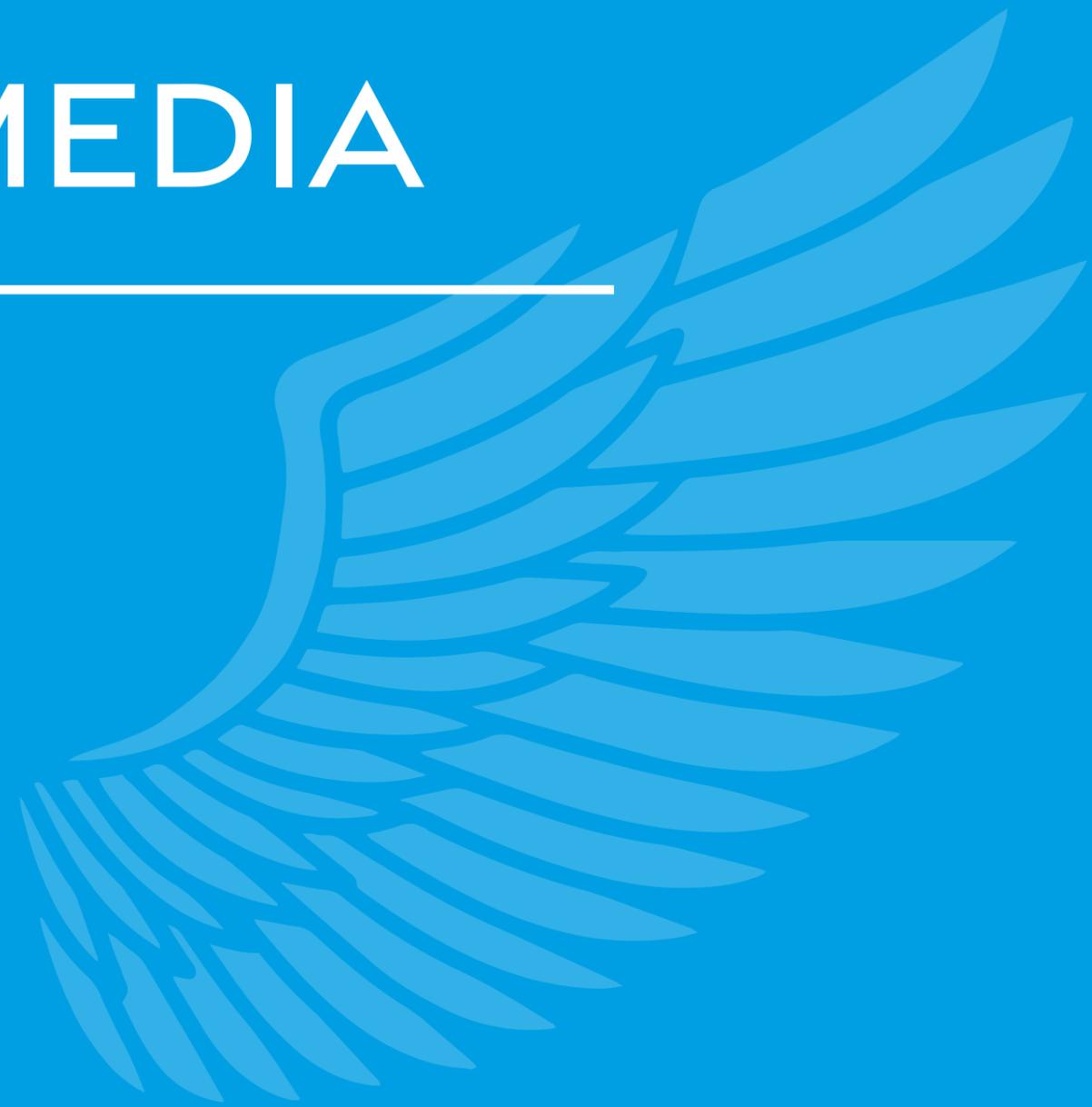
Camillo Brena, Marketing Director



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CONQUERING MEDIA



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AKTUELL PRODUKTION

The Cutting Head that Changed the Game

Swedish magazine Aktuell published a complete note on Eagle's cutting head, distinctive construction, and main advantages. Find some key fragments translated below:

“Thanks to its unique construction with fewer optics and moving parts, eVa is four times less prone to contamination than all other heads in the market.”

Less is more

Optics tend to suffer the most wearing in a laser cutting head. When lenses wear down, they affect the cut quality and reduce the predictability of the entire production process. Between lenses and protective glasses, most heads in the market have six optical elements within their structure. The more optics, the more wearing; This eventually leads to head degradation and decreased performance, which in turn lead to soaring operating costs due to frequent replacements.

Under the motto “What isn't there can't break,” Eagle managed to reduce wearing parts to a minimum. As a result, eVa only has three optical elements (collimating lens, focusing lens, and cover slide) and three wearing parts (cover slide, cover slide seal, and nozzle), which significantly reduce costs and downtime.

Aside from quantity, there's also the size factor. While most cutting heads have 36mm-diameter lenses, eVa's lenses are 62mm. That's a 72% increase in surface area, which translates into a five times lower energy density focused on the lens, hence a lower risk of damage and increased service life.

It's all in the details

In most heads in the market, the distance between the cover slide and nozzle is only 130mm, allowing contaminants to enter the nozzle and reach the cover slide to which they adhere, affecting cutting precision. On eVa, the cover slide is located 355mm above the nozzle. By almost tripling the distance, Eagle's cutting head requires ten times less frequent cover slide replacement. A smart shift with a huge impact.





JAKUB JACUNIAK
Eagle Product Manager

Minimal maintenance, maximum performance

To keep adding to the list of pros, the eVa is pretty much hassle-free. It requires minimal maintenance, and most servicing can be carried out by your personnel without needing an Eagle technician or even dismounting the head.

Eagle also emphasizes that its cutting head was designed for maximum reliability under the harshest conditions. As a result, the eVa delivers peak performance maintaining stability and precision even at 30kW and 6G acceleration, the manufacturer's current top-of-the-line parameters.

As if all this wasn't enough, a single eVa head can handle the entire spectrum of thicknesses and materials a fiber laser can cut. But this is not the final stage. Eagle engineers continue to perfect and upgrade the company's signature head year by year, and we can only predict its popularity will keep growing.

Scan to read
full article
(p. 56-58)



“Eagle engineers continue to perfect and upgrade the company's signature head year by year, and we can only predict its popularity will keep growing.”

STAL

The Critical Role of Software in the Laser Cutting Process

MYERS




Polish magazine STAL published an interview with Marcin Masternak, Project Director at Eagle, who talked about the latest solutions in this field. Key fragments of that interview are translated below:

Can you tell us more about the Eagle software family?

Our main software branches are MyERIS, MyESOFT, and MyERS. MyERIS is our flagship software product. It's responsible for starting the cutting process by running programs which are subsequently transferred to the machine via MyESOFT. Finally, we have MyERS, a cloud-based reporting system that remotely analyzes machine performance and efficiency and monitors the entire process through personalized dashboards.

We have recently implemented my MyESP or My Eagle Service Portal, a cloud-based application through which the operator can send service requests and part requirements directly from the control panel.

Eagle's is betting heavily on developing proprietary software. What are you most focused on at the moment?

We're concentrating on control systems. We aim to make the operator's job easier, more intuitive, and more efficient. Hence our primary focus is developing an easy-to-operate user experience and interface (UX and UI). We develop human-centric software. Before designing any option or application for our machines, we ask ourselves the fundamental question: who will use it and what for? Once that is established, we proceed with the development of a given project.

Eagle's is betting heavily on developing proprietary software. What are you most focused on at the moment?

MyERS is a must-have. We have many clients who, through report analysis, have discovered which processes need to be improved and thus have significantly increased the system's efficiency. It's a magnificent tool with three visualization options: for the owner, the manager, and the technologist. It considers every factor of the cutting process, including operator work, gas and energy consumption, and inventory status, so several areas can be optimized simply by analyzing reports.

What plans does Eagle have in store for software technology development?

We're betting on cloud-based solutions, such as MyERS and MyESP. Our efforts are not only aimed at developing software in line with current industry trends but also to establish those trends and set new standards. Eagle is currently working on expanding its machine portfolio, which means new challenges and projects for my department, so we have an intense but exciting time ahead of us.



Marcin Masternak
Project Director

Scan to read
full article



ISMR

The Productivity Principle



Last October, ISMR published a gripping interview with our Marketing Director, Camillo Brena. Camillo reviews Eagle’s trajectory, mentions our most recent milestones, and recalls our early campaign on high powers, back when it was a disruptive concept. Most interestingly, he gives us his views on the current industry trends and Eagle’s strategic plans for the future, which focus on providing higher productivity through increasingly efficient machines and smart automation systems.

“Eagle has become a benchmark for high-powered systems in a relatively short time.”

Camillo Brena, Eagle Lasers’ marketing director, outlines his view on laser-cutting trends, the global business climate and new market opportunities.

In an industry where higher efficiency and productivity at reduced costs are crucial, fiber laser-cutting systems must raise the bar with benefits such as higher powers, peak-level motion dynamics and material handling automation.

Eagle Lasers is a well-known high-power laser cutting machine specialist. In 2021, it was awarded the Forbes Diamond for the second year, an award handed over to Poland’s most dynamically developing companies. It was one of the first to launch 6kW, 8kW, 10kW, 12kW and 20kW laser cutting systems and, in mid-2021, premiered its 30kW fiber laser-cutter. Eagle’s iNspire machines deliver 6G acceleration, cutting speeds of up to 150m/ minute and 350m/minute positioning speed.

However, Camillo Brena told ISMR, laser power alone will not suffice. Motion dynamics, and more specifically acceleration parameters, must also rise to the occasion. In this interview, he outlines his view on laser-cutting trends, the global business climate and new market challenges/opportunities.

What are your views on the current global business climate for laser-cutting professionals?

In the last couple of years, we’ve all witnessed substantial growth and demand for high-mix, low-volume jobs. Companies must improve their response to an ever-increasing need for quicker change-over speeds. Because the market is evolving, so must companies.

Other issues shaping today’s market are labor shortages and an increase in the cost of energy and gas. So, the biggest challenge we’re all facing is the need to remain competitive without compromising quality or efficiency and maintaining constant revenues.

Now more than ever, the trend for manufacturers is on productivity through process optimization. Companies will have to focus on controlling and reducing waste, minimizing bottlenecks and repetitive tasks, errors or delays, and increasing their flexibility (being ready to operate 24/7). All this comes without sacrificing quality, productivity or profit margins.



Please give a brief background to your company and explain your strategic and technical objectives.

Eagle was founded in 2006 with a clear focus; to create the concept for an ideal fiber laser-cutting system. In this process, we studied existing machines, then researched and developed key technologies to enhance the strong points and reduce the weak ones.

One of our key differentiators is that, as a younger company, we didn't need to adapt any existing systems to fiber laser technology. Instead, we grasped its benefits and created an entirely new concept right from the get-go.

This has worked well for us because Eagle has become a benchmark for high-powered systems in a relatively short time. The company was one of the first to launch reliable high-power machines changing the market's perception about the need for more wattage and, in doing so, creating a new standard within the industry.

As of today, our Eagle iNspire machines are equipped with a 30kW fiber laser power source, 6G acceleration and a nine-second pallet changer, making them one of the fastest and

most reliable on the market. Other high-quality components include linear motors on all axes, a carbon-fiber traverse and the well-known eVa cutting head.

Which issues are of prime importance to your customers? How are you addressing these issues for them?

Our clients are very demanding and clear about what they want, and we like that. It keeps us on our toes, working on continuous improvements to fulfill their needs.

Some of their primary focus points are increased productivity; reduced costs and downtime; increased worker safety; higher precision and repeatability; higher speeds and better control over the whole operation.

Security and reliability are also obviously expected. They are at the core of our systems, and we make no compromises when it comes to component suppliers. We don't cut corners here and are committed to selecting only the best brands for all machine elements that are not Eagle-manufactured.

What is your strategic focus/vision over the next few years?

Our goal is to continue developing and perfecting our automation systems. They are not only productivity boosters but also act as a reliable connection between warehouse and production and ensure repeatability and precision. We want our solutions to contribute to achieving the balancing act between profitability and reliability, as well as creating a new business model.

"We didn't need to adapt existing systems to fiber laser technology. Instead, we grasped its benefits and created an entirely new concept right from the get-go."



Scan to read full article
(p.78-82)

DEFORMAZIONE

Together to Maximize Laser Cutting Profitability

DEFORMAZIONE, an Italian magazine dedicated to sheet metal processing, spoke to Eagle's – also Italian – Camillo Brena. The interview held by Edoardo Oldrati focuses on productivity through process optimization. It also includes a detailed description of our "Tower of Power" practical application to illustrate how higher powers bring higher profits, and touches on other relevant topics like the critical role of automation in reducing cycle times while tackling labor shortages and the quest to balance profitability and reliability. The publication features the article in both Italian and English.



Thanks to high-performance cutting systems capable of combining high laser power, high dynamics, and efficient automation, Eagle meets the requirements of companies in the sheet metal sector looking to optimize their processes to achieve higher efficiency and flexibility. We spoke with Camillo Brena about these issues and the many innovations which characterized Eagle's last few months.

Cutting better, faster, and reducing costs: this is the future for which Eagle develops and supplies new machines to provide companies with reliable, cutting-edge systems. "2022 has been a successful year for Eagle," confirmed Camillo Brena, Eagle's marketing director. "We have consolidated our market presence, added new business procedures, and further developed our products."

The company has had a year packed with innovations and celebrated its 16th anniversary by opening a new showroom in Stuttgart, Germany. On this topic, Brena comments: "We built a state-of-the-art showroom in terms of services and infrastructure to provide our customers with a strategic facility in the center of Europe. As icing on the cake in the showroom, we installed our top-of-the-line iNspire 30kW, a machine capable of 6G acceleration, with a cutting speed of 150 m/min and a positioning speed of 350 m/min."

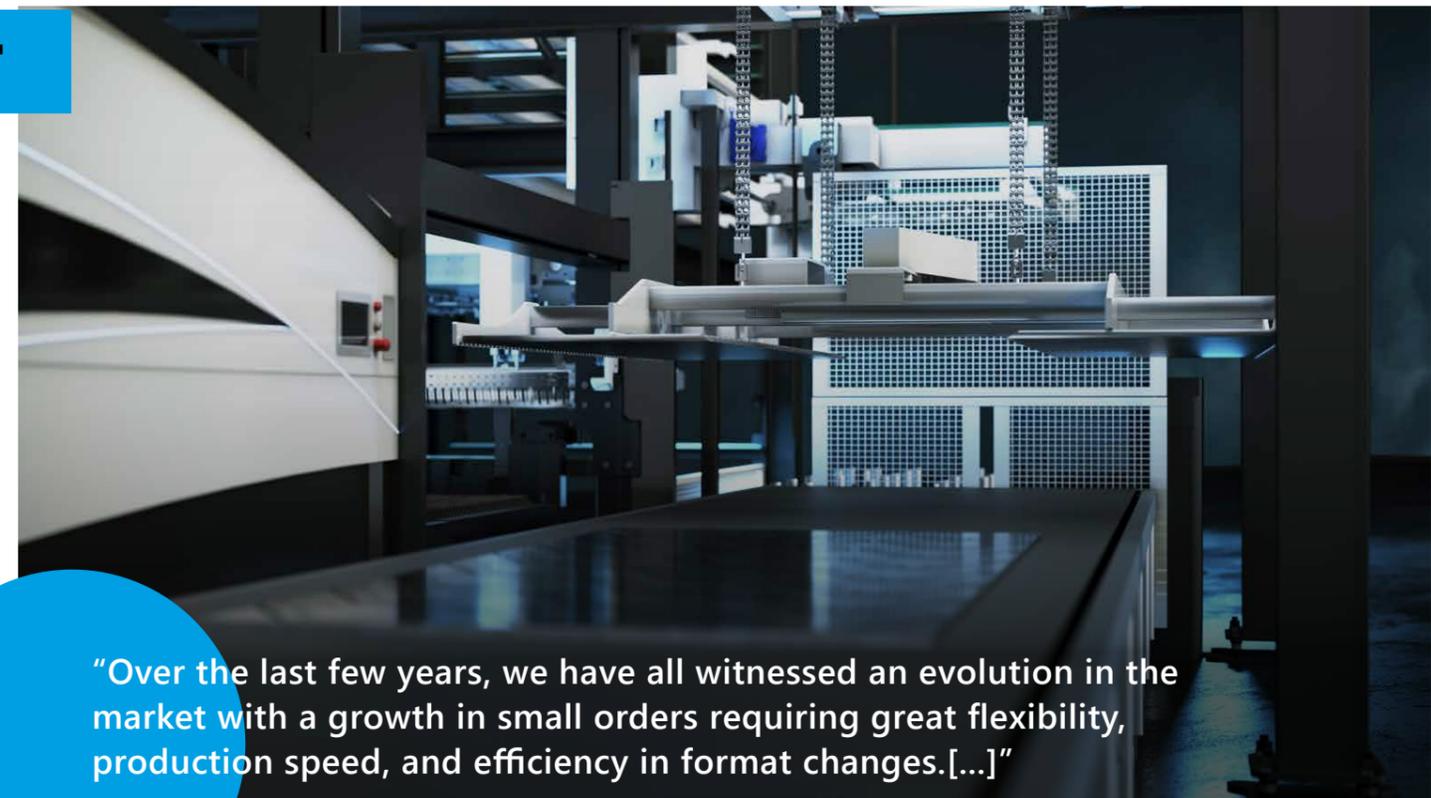
The iNspire is an incredible machine capable of ultra-high performance while maintaining precision and reliability even at 30kW power. This innovative laser-cutting solution represents the flagship proposal in Eagle's catalog and is the protagonist of an innovative marketing initiative that took it across Europe on a veritable tour. "Innovation is a fundamental part of our DNA, and so, to keep up with our reputation, we came up with an unconventional and creative way to showcase our latest technology: the "Power Your Future Metal Tour 2022", an initiative which is currently taking our iNspire 30kW 6G fiber laser machine to several European countries to perform live, almost like a rock star, to showcase all its capabilities. This fresh approach has characterized all the tour dates, and we are very pleased with the results."

Higher power, higher profit

The continuous increase in material and energy costs has reduced sheet metal-processing companies' margins which now require an even greater focus on productivity and reliability. Camillo Brena states, "Now more than ever, companies must focus on productivity through process optimization. In this scenario, focusing on control and waste reduction is essential, minimizing bottlenecks, errors, or delays and increasing flexibility, including non-stop and nonsupervised production. All of this, however, must be achieved without sacrificing quality, productivity, or profit margins. In this context, fiber laser technology's popularity is spreading



"With a high-speed fiber laser like Eagle's, an automated material handling solution that can keep pace with cutting speed and avoid bottlenecks is essential."



"Over the last few years, we have all witnessed an evolution in the market with a growth in small orders requiring great flexibility, production speed, and efficiency in format changes.[...]"

exponentially because its advantages are unquestionable: reduced production time, lower energy consumption, and lower cost per part. The fact that these machines provide a whole new level of productivity and efficiency is beyond dispute. It has become essential for companies that want to remain competitive today, to integrate and invest in new laser systems that can deliver high performances but are also capable of operating 7 days a week with maximum flexibility." Precisely for this reason, over the last ten years, Eagle has heavily invested in research for ultra-efficient solutions using high-power lasers.

The central role of automation

"With a high-speed fiber laser like Eagle's, an automated material handling solution that can keep pace with cutting speed and avoid bottlenecks is essential. Eagle's laser-cutting machines are equipped with fully integrated automation and material handling systems. For example, we can perform a pallet exchange in just 9 seconds, gaining precious time that can amount to up to 24 extra production hours each month."

The importance of automation in reducing cycle times is one of the major reasons why Eagle has developed a wide range of flexible and modular automation systems with great performances. Implementing an automation system also means increasing the working capacity of the laser cutting system, as the user constantly supplies the machine with fresh material and exploits its full potential. Besides, it can run several programs unattended, maximizing cutting times and

enabling 24/7 production.

To conclude, Brena adds: "Eagle has a clear path ahead for the next few years: we want to provide our customers with intelligent and safe solutions enabling them to achieve higher productivity and efficiency in a fully controlled environment while meeting their demand for flexibility."

The future of fiber laser cutting will undoubtedly see the implementation of increasingly intelligent automation systems. Through them, companies will be able to simultaneously tackle several issues, from less labor force to more precise processes. Besides, the more advanced these systems become, the faster the machining and the more flexible the processes. We aim to continue developing and refining these systems, so our solutions can continue to contribute to the balance between profitability and reliability and create a new and more efficient business model."



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METAALNIEUWS

Eagle Keeps Raising the Bar

Last August, Eagle was featured in the Dutch publication Metaalnieuws apropos our visit to Utrecht for Technishow 2022. The article touches on our early focus on high powers, motion, and the critical role of our ultrafast pallet exchange and automation systems in achieving shorter work cycles.

“Rockstar” iNspire fiber laser with 30kW power and 6G acceleration live at TechniShow.

The Eagle iNspire, equipped with a 30kW fiber laser source, is currently touring Europe like a true rock star. As part of the Power your Future Metal Tour 2022, this flatbed laser will also visit TechniShow in Utrecht, demonstrating its full capabilities in live cutting shows.

Just before the summer, the Eagle Group celebrated its 16th anniversary by opening a new showroom in the Stuttgart region. Their arrival at the industrial center of Europe underlines the ambitions of this Polish machine manufacturer, which has boosted the development of fiber laser technology since its foundation in 2006.

Motion dynamics

Eagle Lasers’ standard features have not only raised the bar in terms of power but also in motion dynamics. The Eagle iNspire system delivers 6G acceleration, a cutting speed of up to 150 m/min, and a positioning speed of 350 m/min while maintaining complete accuracy even at 30kW. “Strength and dynamics go hand in hand,” explains Brena. “When we talk about high wattages, we have to mention dynamics. Acceleration parameters are a crucial aspect to consider because they need to meet the standards to exploit the capabilities of such powers fully.”



Eagle Lasers aims to remain at the forefront of innovation in the long term.

9-second pallet exchange

With an extremely fast fiber laser, an automated material handling solution that keeps pace with the cutting speed is indispensable. Therefore, Eagle’s machines are equipped with a 9-second pallet changer for swifter production. “Once again, we have challenged the market standards in this area,” explains Brena. “A fast pallet changer saves weekly hours, greatly impacting productivity and cost reduction.”

Shorter work cycles

Automation invariably results in improved efficiency and productivity. Regarding this, Brena comments: “Automated systems allow manufacturers to benefit from a faster material loading/unloading process resulting in shorter work cycles. It also means increased production capacity because automated

handling allows constantly feeding the laser cutter with material, exploiting its full potential. In addition, it can line up and run several programs unattended, maximizing cutting time and enabling 24/7 production.”

Eagle Lasers aims to remain at the forefront of innovation in the long term. Not just with high powers but with an entire machine ecosystem that works seamlessly to harness those forces without compromising quality and accuracy. “As we have mentioned, acceleration, dynamic movement, and automation are essential,” says Brena. “But so is specialized software and technologies that enable faster cutting, better use of residual material, and energy saving. Our machines are designed with no compromises in terms of quality for every part. We know our cutting head is unique in the market, and more innovations and exciting releases are coming.”





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POWER YOUR FUTURE
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New Names & Software Identities

PREMIERE!

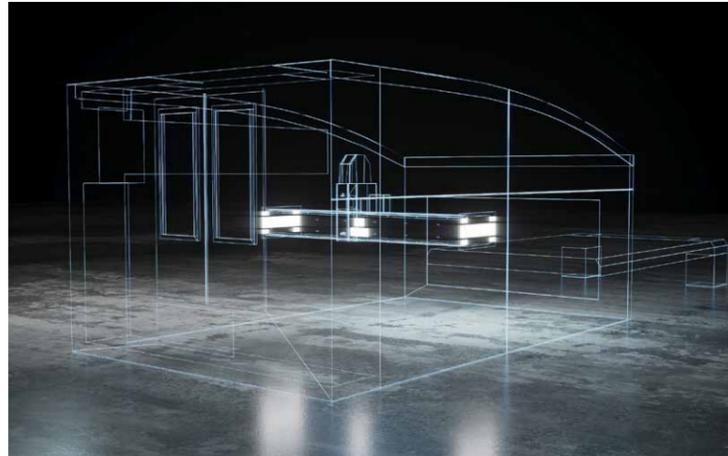


After many months of work, we are pleased to introduce the new names for Eagle Lasers' original software and technology along with their wholly revamped visual identity.

This change comes from the need to have our uniquely named products properly registered as Eagle Property. Regarding the names, we kept the characteristics of their predecessors but added a common denominator that would make them distinctively ours.

As for the logos, we gave them a fresh new look with more contemporary typography and a set of icons that serve as reminders of each technology's main benefits.

The upgrades to our software and tech are always cutting-edge, as are our machines. So we wanted our names and visual identities to reflect that we're always at the forefront of innovation.



Linear Motors by Eagle

Linear motors are one of the distinctive components of Eagle machines. Thanks to their unique structure and positioning 0.5mm above the magnetic path, they don't require oiling or bearing replacement, and, most importantly, due to their contactless nature, they lack wearing parts and gears.

A few years back, we began our quest to produce our own linear motors, and currently, all Eagle laser cutters feature Eagle-manufactured linear motors on the Z and Y axes. The great news is that we will also start producing them for the X axis this year. These motors have successfully passed all internal quality tests and are going through the last stage of mechanical refinements.

Thanks to the production of our own components, our electrical department can further develop and modify our products according to its own needs, for example, changing the length of the electric cable or the method of assembly, among others.

Moreover, by installing Eagle-manufactured components, we can be confident they meet the highest quality standards, are ideally suited to our machines, and have more production autonomy by relying less on external suppliers.

Pivatic & Eagle: New Partnership



In the picture (from the left): Bartosz Krzewina, Eagle Sales Director, Marcin Ejma, Eagle CEO, Jan Tapanainen, Pivatic CEO and Mika Virtanen, Pivatic Technical Director at the Eagle headquarters.

Eagle is a Polish manufacturer specializing in state-of-the-art fiber laser cutting machines and automation systems, and Pivatic; a Finnish producer of tailored high-performance oil and blank punching, bending systems, and automation solutions.

The two European high techs have been cooperating during the past two years to develop more efficient coil-fed cutting solutions, but 2022 has marked a milestone. Earlier this year, they delivered the first of these game-changing systems and have another delivery lined up.

Coil-fed laser systems offer a fast payback for customers looking for ultrafast sheet metal cutting. By using coils instead of blanks and integrating advanced material handling automation, this solution makes the absolute most out of metal, reducing waste and manual handling of parts and skeletons to a minimum.

All interested in sheet metal processing are welcome to contact Eagle and Pivatic to discuss their latest innovations. We invite you to their company websites at www.eaglelasers.com and www.pivatic.com

Eagle Team Summit 2023. Embracing New Horizons in Turin



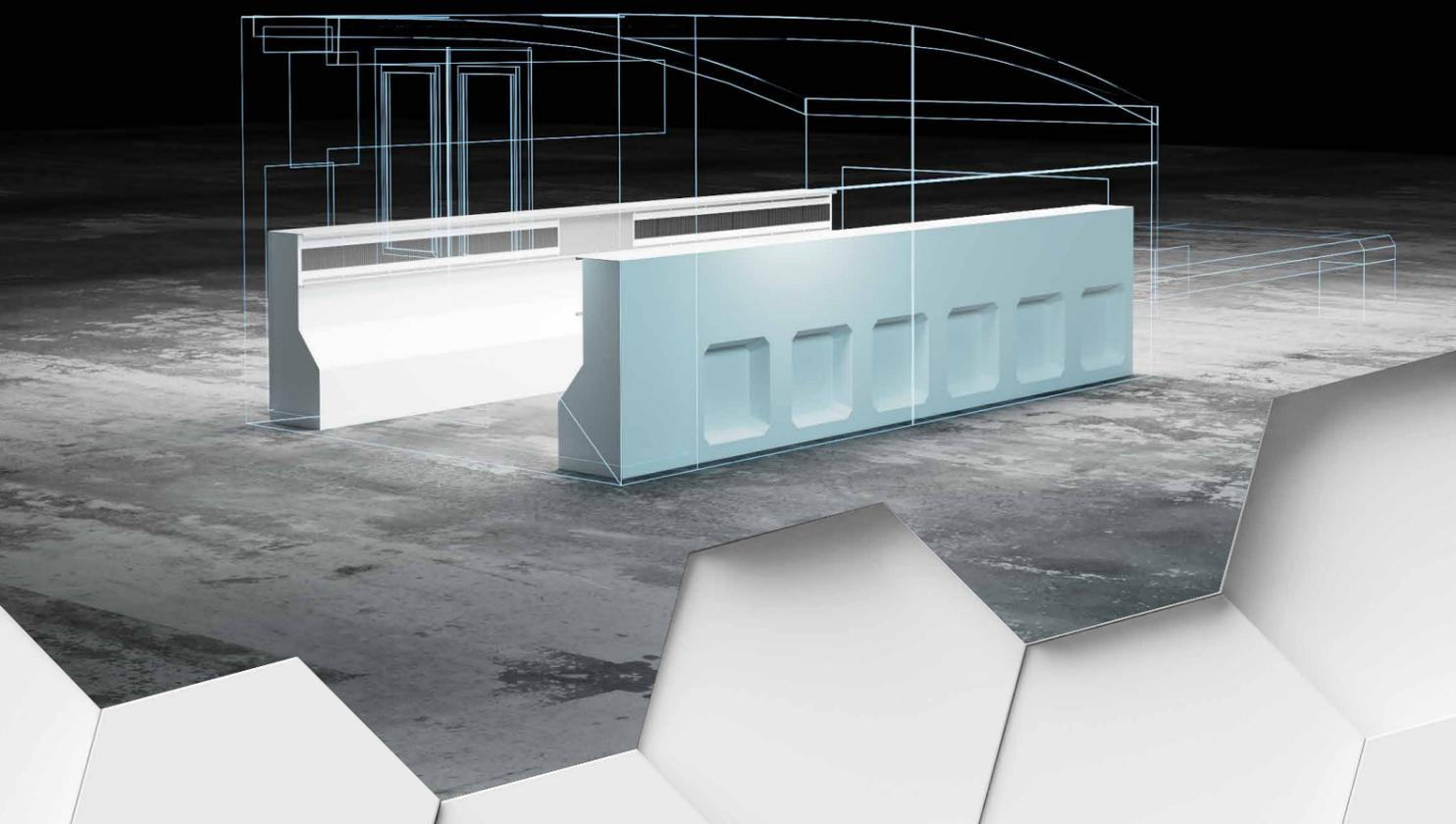
After the successful team gathering at Eagle's Headquarters in Poland last year, we decided to replicate our revamped presentation format in a brand-new setting: Turin. The capital of Piedmont boasts some of the most exquisite architecture and cuisine in Northern Italy, but there's an even more exciting reason behind our choice: the unveiling of our latest showroom in this dynamic city. While it's still an ongoing project, we couldn't wait to invite our team members to the venue that symbolizes our company's continuous expansion, not only within the Italian market but also across Europe and worldwide.

The event is set to take place on October 24th and 25th, 2023, and will bring together Eagle Team Members, partners, and distributors from around the globe for two days packed with engaging activities. Following our new event structure, attendees will gain valuable knowledge during short "TED-talk" style presentations and engage in one-on-one conversations with our team experts during technical round tables. This initiative, which made its debut at last year's summit, was highly appreciated as a unique opportunity to share information, address questions, and exchange the latest market insights face-to-face.

Regarding this innovative dynamic, Andrea Porta, CEO at Eagle Italy, commented: "I really enjoyed the technical round tables with experts. Overall, this event is an excellent opportunity for the whole team to come together."

Eagle board member Lidia Woźnica shared the sentiment, highlighting the critical role these in-person meetings play, especially for new members of the Eagle Team: "The Eagle family is growing yearly, and we try to ensure that those who joined us not so long ago also feel part of the team and are up to date with all the company novelties."

Overall, ETS 2023 is a unique chance for our team to strengthen bonds, engage in networking, reunite with familiar faces, and welcome new ones in a friendly atmosphere where we can all benefit from each other's expertise. And, of course, there will be time for relaxation, shared dinners, and enjoying the gorgeous sights of Turin.



RAMPF Machine Systems GmbH & Co. KG

A Winning Combination – Solid & Vibration-Damping Mineral Casting Meets High-Speed Laser Cutting!

ECO CREDENTIALS

An independent institute has confirmed – the CO₂ footprint of RAMPF mineral casting is significantly lower than that of other materials. The production of one ton of mineral casting generates 4.5 times fewer emissions than gray cast iron. Together with its unparalleled vibration damping and maximum rigidity, this makes mineral casting from RAMPF the optimal concept for sustainable and highly dynamic production machines.



MADE IN GERMANY

Our machine beds are manufactured in Germany according to the highest quality standards. For this, RAMPF has two self-sufficient production plants at the Wangen site and its own precision grinding center in Bessenbach. This seamless process chain enables RAMPF to deliver its products at the desired time, in the desired quality and quantity – even in times of crisis.

PRECISION GRINDING

Machine beds made from mineral casting stand for maximum precision. We achieve this with our holistic all-round service for precision grinding. In the RAMPF Precision Grinding Center, our experienced experts produce ultra-precise machine beds and components on two high-precision machines in a fully climate-controlled environment.



Find out more about RAMPF!

www.rampf-group.com

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SUCCESS IN THE SPOTLIGHT

High-Power Lasers and Automation Systems for Demanding Mass Production

State-of-the-art Laser Center

For over two decades, SERWISTAL has been supplying high-quality flat steel products for clients around the world. The company's success depends on the reliability and precision of steel and aluminum processing to serve different markets.

Their partnership with Eagle Lasers started in 2021 after thorough market research for a fiber laser cutting system able to fulfill SERWISTAL's increased need to expand their range of services and improve their overall efficiency and productivity.

The ongoing investment plan will make SERWISTAL one of Europe's most innovative and technologically advanced companies. This project includes sixteen fiber laser cutting systems equipped with full 24/7 automation, and the chosen machines to conquer this quest were Eagle iNspire fiber laser systems.

In search for an ideal partner

The research for a reliable partner lasted several months, as explained by Jakub Gróbarczyk, Commercial Director and Member of the Management Board: "We have been cooperating for years with fiber laser cutter users by supplying them with cut-to-size strips and sheets. Our customers' opinion about a potential equipment supplier was critical in our decision.



When choosing a manufacturer of fiber laser cutting systems, we counted on their knowledge and experience and had a clearer insight into the entire range of fiber laser system manufacturers. We finally made a decision, and it was Eagle Lasers. Their approach precisely fulfilled all our needs right from the start. It was also relevant that, like us, they have 100% Polish capital."

FLATINIUM the new age of steel

FLATINIUM is the result of several years of research and testing conducted under the supervision of some of the most eminent Polish professors and researchers. It is a patented sheet production technology that fabricates perfectly flat metal sheets on the entire surface and cross-section. Furthermore, FLATINIUM gives complete uniformity to the sheet, reducing and redirecting internal tensions. These features contribute to increased productivity and lower costs, keeping the perfect flatness of the sheets even after the cutting process.

FLATINIUM is propelling metal sheet manufacturers to a new age. With a clean, flat surface that enhances repeatability, cutting speed and efficiency while keeping waste at a minimum, this innovative metal sheet technology is also designed for 24/7 automation.

"Precision and repeatability are FLATINIUM's key features. Therefore, we were looking for those same characteristics in our pursuit of the ideal fiber laser system to process it. We were aiming for reliable, best-in-class systems that would deliver above-average speeds to build a competitive advantage from the get-go. In our opinion, only the Eagle iNspire Fiber Laser system was able to meet these expectations," - concludes Jakub Gróbarczyk.

Shorter work cycles

The iNspire fiber laser is Eagle's top-of-the-line series. There are no other laser cutter systems with its characteristics on the market; laser powers ranging from 2 to 30kW, 6G acceleration, 350 m/min maximum positioning speed, 150 m/min maximum cutting speed, a superfast 9-second pallet changer, and the uniquely built and patented eVa cutting head. This fiber laser system swiftly and efficiently cuts even the most intricate details while maintaining top performance and stunning edge quality.

Eagle's iNspire machines were the best solution for SERWISTAL's mass production, thanks to their one-of-the-kind parameters, which remarkably increase efficiency and productivity.

Overall, SERWISTAL's ambitious project required an outstanding product from a reliable company to create valuable and solid long-term cooperation. As the chosen manufacturer, Eagle Lasers has taken up the challenge and will provide best-in-class fiber laser cutting and automation systems in this joint venture, which both companies are incredibly excited about.

FLATINIUM is the result of several years of research and testing conducted under the supervision of some of the most eminent Polish professors and researchers.



Watch the full story on SERWISTAL's Laser Center built in partnership with Eagle Lasers.



JAKUB GRÓBARCZYK
Commercial Director, Member of the Management Board at SERWISTAL

SUCCESS IN THE SPOTLIGHT

Fiber Laser Technology for Speed & Innovation.



ABB - a global technological pioneer

The multinational Swiss corporation ABB has joined the Eagle family. With 130 years of history and 110,000 employees in over 100 countries, the Zurich-based company is a global technology leader that continues pushing boundaries in the automation, robotics, and energy industries.

Fiber laser for higher speed.

The ABB branch in Vaasa, Finland, manufactures 70,000 industrial electric motors annually. With such high production volumes, speed, efficiency, and automation are not only desirable but crucial.

ABB always keeps a broad vision and continuously explores new opportunities. Hence, as fiber laser technology grew in popularity within the market, they began to consider its benefits for motor manufacturing. These were crystal clear. Aside from efficient and speedy performances, fiber lasers require significantly lower energy, decreasing overall operating costs—a solution worth considering for electric steel cutting.

“Fiber laser technology is opening the possibilities for us to have full freedom in designing our products and prototyping. It creates an opportunity to speed up, which translates into much higher efficiency” - comments Johan Kalander, AME Manager at IEC LV Motors.

The switch to fiber laser technology was not a minor decision; thorough market research took place in the mission to find the perfect alliance. At the top of the list as equally important

decisive factors were peak performance and service. ABB needed a device that, above all, would provide the highest possible productivity; the answer was Eagle. The iNspire 4kW, with 6G acceleration and ultrafast 9-second pallet changer, proved to be the right choice for their Finnish branch.

“We needed a high-speed device with very tough tolerance and accuracy. We realized that the Eagle iNspire was the fastest machine on the market” adds Kalander.

Integration is innovation

The iNspire laser cutter installed in the Vaasa plant is now integrated into a blanking machine and two robots to boost its efficiency.

The integration between Eagle’s machine and ABB’s robots came in response to the corporation’s internal requirements for two technologies that could speak the same language to deliver a speedy and accurate joint operation.

How does this machine-robot collaboration work? First, one robot picks the material from the blanking machine and places it on the laser cutter’s pallet changer. Then, once the cutting process is completed, the second robot sorts out the material from the table and sets it on the unloading station.

Unsurprisingly, a pioneer in automation, such as ABB would enhance their manufacturing processes with innovative solutions in robotics. Paired with the ultra-fast cutting by the iNspire, the Swiss manufacturer’s material-handling robots are, once again, setting new standards in terms of productivity.

Satisfaction guaranteed

With its significant expertise and comprehensive portfolio of low-voltage motors, ABB’s goal is to help its customers improve their processes’ reliability, energy efficiency, and productivity. The same goes for Eagle’s fiber laser cutters, where every component is designed for the most efficient, precise, and easy-to-operate production.

“Speaking of benefits, the most significant advantage of the Eagle cutter is the speed. It’s the fastest machine I’ve ever experienced. What’s also crucial is its absolute precision and repeatability. But I have to mention the interface. Operating it is so intuitive and straightforward that you feel like you are working on your iPhone. I could not be a happier customer than I am with the Eagle machine,” - comments Kalander.

After this successful joint venture, we can’t help but think of the future. A next step could be to provide other companies with the advantages of this integration so that they, too, can benefit from ABB’s reliability and Eagle’s performance. Tomorrow holds endless possibilities.



Watch the full story on why ABB has invested in the Eagle fiber laser cutting systems.



JOHAN KALANDER
Advanced Engineering Manager at ABB

SUCCESS IN THE SPOTLIGHT

Enhancing Productivity in the Heavy-Duty Steel Industry



Miilux - Finnish quality trusted worldwide

Miilux Oy is part of the Miilukangas Group, founded in 1967 in Raahe, Finland. They manufacture heavy-duty steel products and provide steel processing services as well as repair and maintenance services for mining equipment. With more than five decades of expertise, Miilux prides itself on being a customer-oriented company that quickly, flexibly, and reliably serves its clients. Their high-quality steel products are used worldwide in several industries, including construction, mining, protection, recycling, and transportation.

“Nowadays, we are quite a versatile steel service center. We have structural steels, ballistic steels, and wear-resistant steels,” - comments Product Manager Harri Lukkarila.

Miilux acquired its first laser-cutting machine in 2018, a 6kW CO2 laser. But after a few years, this technology proved not to be efficient enough for their production needs, and they considered replacing it with a faster and more powerful fiber laser cutter.

“We have a lot of machines in this industry area, and because of that, we need to invest in technology every year,” adds Pekka Miilukangas, CEO at Miilux.



Fiber laser for demanding applications

After thorough research, the Finnish company purchased a 15kW Eagle eVision, debunking the myth that fiber lasers are not apt for cutting high thicknesses. In fact, because they fabricate products for such demanding applications, Miilux primarily processes thick steel plates. They found in Eagle's machines, not just a more efficient tool but a faster and more precise one, with overall lower operating and maintenance costs.

About their choice, Lukkarila states:

“The machines at Millux need to be rigid, sturdy, reliable, and suitable for heavy industry. In terms of fiber laser, we needed enough power to cut thicker steel plates and a big enough machine to handle larger material.”

As an answer to the last point, they went big and chose an eVision 2560 (2.5m x 6m), which is the size of their stock plate, to process it without previous cutting.

Efficiency is competitiveness

Their transition from CO2 to Eagle's fiber laser has definitely made Millux more competitive, not only because they can now process material much faster but also due to the reduced cutting costs resulting from fiber laser's overall efficiency.

Fiber laser cutters use less energy to generate light, don't need pressure regulation, and are less vulnerable to external conditions. In addition, Eagle's unique machine design features a simpler and more efficient construction with fewer but highly reliable components. As a result, they require less servicing and replacements and allow the machine to operate at full power without sacrificing accuracy.

Don't take our word for it, but instead, Harri Lukkarila's closing statement:

“I would recommend Eagle laser cutting machines to other companies. You gain the advantages of fast movement and fast cutting with good quality.”



Watch the full story on how Miilux boost their efficiency with Eagle.



HARRI LUKKARILA
Production Manager Miilux Oy



CUTTING-EDGE CUTTING TECH

Eagle's proprietary cutting technology enhances both quality and efficiency and is tailored to a wide range of material thicknesses.



MYECOCUT

Speeds up cycle time by piercing "on the fly" on thin sheets.

Watch this tech in action:



MYEFLY

Reduces gas consumption by 75% and significantly improves edge quality.

Watch this tech in action:



MYEMIX

Automatically changes between assist gases for burr-free cutting.

Watch this tech in action:



WE'VE BEEN FLYING HIGH



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Rockin' the Metal World

Last year we devised a new way to showcase our most powerful machine; the iNspire 30kW 6G. Eagle is a fresh, innovative company made up of creative people constantly coming up with new ideas. And ingenuity doesn't only apply to our technology but also our communication efforts.

The iNspire odyssey started in March at SamuEXPO in Italy, then continued its journey in Finland for the Vossi Open Days, followed by a particularly special event in Stuttgart: the official opening of the Eagle Showroom in Germany.

In line with this, we launched the Power Your Future Metal Tour 2022. An initiative that took our machine on tour, rockstar style, to "perform" live in 8 European cities. Our leading machine continued rocking the metal world with two stops in Spain, the first at BIEMH in Bilbao and the second at the SUPRAFORM Open Days in Barcelona. Next was TechniShow in the Netherlands and MakTek in Turkey, and finally, we closed with a flourish at EuroBLECH 2022 by the end of October. For Spain, it was a special occasion. Not only because it was the first time a 30kW fiber laser cutter landed in the Mediterranean country but because it included two stops in different cities. This was only possible thanks to the planning and organization skills of our official distributors, Supraform, and, especially, the commitment of CEO Oscar Santiuste and Sales Manager Jose Rios, whom we consider not only partners but also groupies at this point.

In this first issue of WINGS, we wanted to share their view on Eagle's Metal Tour initiative:

What did you think about the Metal Tour concept in general?

Jose: Undoubtedly, Eagle's Metal Tour has proven to be an innovative event, totally adapted to current times. Simply fantastic, fresh, and enticing. It matched the brand's innovative spirit, not only through its concept but also through its presentation. And it indeed picked up the essence of our Open Days. Plus, the refreshing branding matched today's digital trends and the modern appeal of Eagle's fiber laser cutters.

What did the tour mean for Supraform regarding logistics, audience, and sales?

Oscar: First of all, considering it was the first time this event took place, it was a great challenge. But, of course, in Supraform, we love challenges and are genuinely pleased with the impact and repercussions of this first Metal Tour edition. It was also great timing because we could follow one "show" after the other, first at BIEMH and less than three weeks after at our headquarters in Barcelona. This helped us achieve more product and brand awareness.

The fact that the Metal Tour allowed us to close a machine sale in BIEMH speaks for itself, and today we have many prospects that we hope to convert shortly.

How did you feel about the communication approach of the tour?

Jose: I must say Eagle's marketing and communication have become truly outstanding. Of course, being the first edition of the Metal Tour, there's always room for growth and improvement. But it will all be easier now that we've achieved greater brand visibility. Thanks to all the efforts we've put in the last year on a commercial level and the hard work that both Eagle and Supraform are doing: events, the social media campaigns, publications, and more.

In the picture (from the left): Bartosz Krzewina, Eagle Sales Director, Jose Rios, Area Sales Manager at Supraform, Camillo Brena, Eagle Marketing Director, Noelia Santiuste, Shareholder at Supraform, Oskar Santiuste, General Manager at Supraform, Gregorio Rocca, After Sales Manager at Eagle Italia, Andrea Porta, CEO of Eagle Italia.

INSPIRE THE WORLD METAL TOUR

What's your Metal Tour wishlist for 2023?

Jose: We would like to take the Metal Tour to the EMAF trade show in Portugal by the end of May, and we want to repeat the formula of BIEMH 2023, followed by the Supraform Open Days. Last year's presentation of Eagle's iNspire 30kW 6G in Bilbao was a huge success, exceeding our expectations. The number of visitors and inquiries was such that the Open Days in Barcelona became an excellent opportunity for those who didn't get the chance to visit the trade show. So, repeating this formula seems like the best idea.

Finally, how do you feel about Eagle's arrival in the Spanish Market?

Oscar: Eagle is here to stay. To have closed a sale during BIEMH has confirmed the audience's trust in this best-in-class product. We believe in it 100% and are convinced it will become a reference in the fiber laser market in the region.



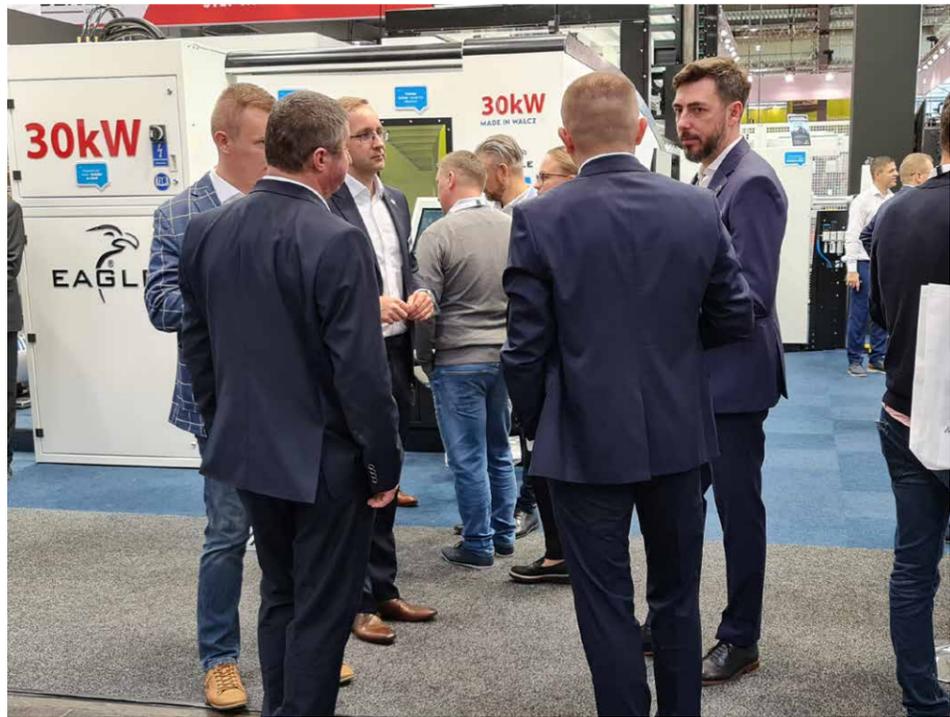
Power Your Future Metal Tour 2023

Last year's presentation of Eagle's iNspire 30kW 6G in Bilbao was a huge success, exceeding our expectations.



EuroBLECH 2022

There was no better place to close our “Power Your Future Metal Tour 2022” than Hanover. EuroBLECH is the world’s leading trade fair for the sheet metal processing industry, so Eagle had to be there. The 26th edition of the renowned exhibition showcased the latest metalworking technology with over 1500 manufacturers from 40 countries from October 25th to 28th—four days packed with live demonstrations, seminars, and presentations on all the industry hot topics.



Eagle displayed a killer combo for this event: the iNspire 30kW with top-of-the-line parameters and the Crane Master Store Extended + eTower 115 automation system. Productivity doesn’t get any higher than with these two working together.



Manufacturers, suppliers, and industry experts make up the lion’s share of EuroBLECH’s audience, one that’s ever hungrier for speed and efficiency. Unquestionably, Eagle’s display caught their attention.

Our stand was packed with visitors eager to see live cutting shows with a machine featuring some of the best parameters in the market. Aside from 30kW power and 6G acceleration, our eVa cutting head has a fan group of her own. This patented beauty’s unique construction makes it four times less prone to contamination and can cut all ranges of thicknesses accurately, even at the highest power.

Let’s not forget the carbon fiber traverse, linear motors on all axes, and a 9-second pallet exchange. Eagle carefully designed and implemented each of these components to

deliver the most efficient cycle time while maintaining stability and precision at ultra-high speeds.

When we add the CraneMaster + eTower automated material loading/unloading and storage systems to this peak-performing machine, we push efficiency to new heights allowing for 24/7 unsupervised production. A spectacle not to miss.

EuroBLECH was undoubtedly the ideal spot to close a successful tour with a flourish, and we’re already excited about the cutting-edge innovations we will unveil at the next edition.



We invite all interested parties to visit us and witness the latest on Eagle innovations during the 2023 edition of Euroblech.

New Eagle Showroom near Stuttgart: a Space to Meet Investors' Needs

One of the main highlights of 2022 was the opening of Eagle's new showroom in Schlierbach near Stuttgart. We spoke with Eagle Germany's CEO Ivan Melicher and Sales Manager Max Schmidt to dive deeper into the importance of this new space.

When did the idea of having a showroom in Germany first come up?

IM: The idea of having a showroom in Germany existed at least since 2017 when the company was based in Trier, and it became obvious that we had to change some things. We needed to be closer to our customers geographically to allow them to see Eagle's technology first-hand.

What is the primary purpose of this space?

IM: An investment in laser technology is a process. Customers are investors who need to have an opportunity to see the limits and possibilities of the laser they're considering. Currently, it's also challenging to convince a customer to travel for several days to see the technology, so the closer we are to them, the better.

From a sales perspective, what is the significance of this new showroom?

MS: It's of crucial significance and will play a valuable role. Since the showroom's official opening in May 2022, we have arranged 31 visits, 14 live cutting shows, and two technical workshops on gas and energy consumption. Before we implemented this space, it wasn't possible to perform live demonstrations, Eagle technology, or our technical solutions to potential customers. The showroom has changed the game entirely, and we are now professionally equipped for all this.

Also, from a logistics point of view, being close to the airport helps and makes it easier to invite customers for live demos.

Why was this particular location chosen?

IM: Stuttgart, as well as the surrounding area, is an industrial center for mechanical engineering. Not only in Germany but also in Europe. Many visitors come to Stuttgart every day to meet suppliers, and we have confirmed in our practice that, very often, visitors come to us who may want to visit our competitors or other producers in the field of mechanical engineering. For this reason, being here is a key position from which we are already profiting a lot.

How can potential international customers book a visit?

MS: Generally, reservations work the same as those for the main plant. The customer registers with us through the back office by filling out a simple form and has the appointment



confirmed. Over the last seven months, we have already had several visits from investors from Italy, Scandinavia, Belgium, Kazakhstan, and Uzbekistan.

What are the plans for this showroom in the near future?

IM: We will continue to build on its attractiveness and make it even more convenient for visits. Technology plays a vital role in this. We also plan to launch more activities, particularly service and online sales of spare and wear parts. We're already planning the further development of the space for this year with significantly more workshops to boost the popularity of Eagle technology in Germany.



IVAN MELICHER
Managing Director
Eagle Deutschland GmbH



MAX SCHMIDT
Sales Director
Eagle Deutschland GmbH

"We will continue to build on its attractiveness and make it even more convenient for visits. Technology plays a vital role in this."

In the picture: German Subsidiary Team and the Eagle Management Board members at the opening of the Eagle Showroom in Schlierbach.



Revolutionizing the Spare Parts Market with Machineportal.com

MachinePortal is a novelty in the e-commerce industry that has revolutionized the online parts trade. In this interview, its Commercial Director, Mariusz Puzynowicz, sheds some light on the reason behind this web-based marketplace and explains the advantages of purchasing parts through it.

Mariusz, briefly tell our readers what MachinePortal is and where the idea originated.

The idea behind MachinePortal was to create a space that would allow purchasing spare parts for industrial machines in a transparent, safe manner, considering the existing processes on the offline market. Why? Because we noticed there is no such place on the web intended solely for the industrial sector. Until now, someone who owned different machines from various industry sectors had to use different online platforms to purchase necessary parts. Machine Portal has changed that. It's a place that connects several industries meeting the needs of both small entrepreneurs and large companies. For now, we operate only in the Polish market, but we will soon enable operations in Germany, Italy, France, and Belgium to reach a larger group of potential customers.

Who is this portal intended for?

MachinePortal operates in the B2B market. It's intended for machine manufacturers who trade in parts, exclusive distributors, or those with several brands under their portfolio, but also for smaller traders. We cooperate with companies that use machines on a daily basis and have parts they want to resell. Then, on the flip side, we have purchasers, i.e., machine users and service companies that supply components. Our portal is steadily growing, and we have new users every day. This growth has confirmed that there was a gap in the market which we have filled. Therefore, we invite all the interested parties to cooperate.

What products does Machine Portal offer?

We have amassed plenty of products under one brand and in one online platform, and the spectrum of industries from which these come is broad: from the popular parts for the agro-industry, through parts for the construction, Horeca, and baking industries, to intricate elements for industries such as metalworking. There are about 30 different sectors in total. MachinePortal is wherever machines are and wherever spare parts are needed.

How does MachinePortal work, and how is it different from other marketplaces on the web where you can buy machine parts?

First of all, we are a B2B portal intended only for companies. Therefore, registration is required. At MachinePortal, we want buyers to have a large selection of suppliers and offers but also an insight into the location, prices, etc. In my view, what sets us apart from the competition is transparency. We also place great emphasis on transaction security. For example, we have something called the "Seven Days Safety" policy, which gives the purchaser seven days to confirm that his shipment is in accordance with the order. A point to highlight is that MachinePortal participates in the



trading process, meaning that the funds are transferred to the seller only after we receive a confirmation from the purchaser. This is beneficial to both parties because the buying party does not feel at risk buying from a seller they might not know, and thanks to this, sellers can also reach new target groups. An additional benefit is that you don't have to pay immediately for purchases at machineportal.com. Instead, you can take advantage of deferred payments. We know how important it is for the purchaser to feel safe and confident that they will receive their product on time, so we cooperate only with the most trusted delivery and courier companies.

What are the benefits of using Machine Portal for buyers?

As a follow-up to the benefits I mentioned, another advantage for the buyer is that we enable part searching by serial number, so the user doesn't have to click through catalog pages if they know the serial number of a specific part. One of the unique solutions we offer is the ability to "associate" parts. In the industrial sector, many parts are universal, meaning they fit into more than one machine. However, the purchaser often doesn't know this and is reluctant to buy replacements from a different brand, fearing that it will not fit their device. In MachinePortal, a seller who introduces "part A" can tag this to specify that it matches a given number from "manufacturer B." If the seller links their part to the original one, the buyer will get an offer for the original and another for its replacement from a different maker. Yes, the purchaser can decide to buy the original part or a completely different brand, depending on the price or location, but we give him a choice. MachinePortal also stands out with a clear and straightforward business model. Posting ads is free with us. The only fee the seller pays is the sales commission. We also allow users to add their clients via our "Automatic Basket" (an exciting functionality), with the trading options we have: deferred payments, credit limit, or global discount. The very process of adding products also distinguishes us. When a seller adds any part that has not yet been introduced to the portal, they

"First of all, we are a B2B portal intended only for companies. Therefore, registration is required. At MachinePortal, we want buyers to have a large selection of suppliers and offers but also an insight into the location, prices, etc."



become the owner of the part's photos, description, and specifications. Others who come second or third can't own them anymore, but they can add an offer to the product. There lies the importance of joining MachinePortal in the first place because being the catalog owner brings certain benefits, such as a lower commission or access to more extensive statistical data.

What is the deferred payment service, and what are the conditions and benefits for customers purchasing via it?

We offer our customers Spingo, a simple and secure deferred payment service for businesses that allows buyers to purchase the products they need through a fast and secure online process.

When the customer chooses Spingo as the payment method, he can set the terms of deferral and verification and then pay on a specific date up to 90 days from the date of purchase. There is no need for direct contact or negotiations with the seller. The service is available to sole proprietors, partnerships, and commercial companies. Businesses have had to exist for at least 12 months to be able to use the deferred payment option. The buyer is also expected to be an active VAT taxpayer without suspensions in the past 3 months. In addition, Spingo offers customers the opportunity to use funds under trade credit for purchases up to PLN 150,000. I cordially invite everyone interested to visit machineportal.com.



The Benefits of Automation in Industrial Laser Cutting.

Interview with Ivo Pasqualini, Sales Manager at Eagle Italia.

Ivo, you are part of the Eagle Italia team and have worked in the field for many years. What changes have you seen in the market since the introduction of fiber laser technology?

I've been through some historical moments in this particular field. Now is one of them. Technological evolution has never been so vibrant, and the industrial world is constantly changing. Research has improved production, making it more effective in enhancing human skills, which remain central to this evolution.

I've lost my hair, and my beard turned white, but I clearly remember when, more than thirty years ago, I created a laser cutting system with an automatic sorting system. Of course, it was science fiction back then. The laser was CO₂, and the powers were very low. The internet did not exist, and the operating systems were the old MS-DOS, and yet, what prompted me to accept these challenges? The irrepressible desire for innovation.

That's why technology has always fascinated me. On the one side, you have this drive for innovation; on the other, there are companies like Eagle that understand those needs and transform them into new solutions. Having the opportunity to amaze and be amazed by technology pushes you to achieve more stimulating goals.

The Italian market is known for being automation-focused. Is there a particular reason for this receptivity?

In Italy, the growth in the manufacturing field is made up of a myriad of small and medium-sized companies and job shops that not only make their own products but also manufacture for large multinationals. Therefore, maximum flexibility and finishing right on time are crucial. Those characteristics have led our industrial sector to rely on automation systems.

How are labor shortage and automation related, and what are your views on the new role of the human workforce?

The third millennium will be hypercompetitive. Globalization and long production chains can create fear and uncertainties, and yet, as history has taught us, the world has always moved forward by shifting work to where it was more convenient.

Cheap labor seemed to be an impossible barrier to overcome, yet, changes are already being implemented today to tackle this shortage. What brought the West to compete on equal terms with the East is that companies understood that, to remain competitive, they had to invest in automation, reduce costs and increase productivity. It was no longer a choice but a must.

That being said, staff training also plays an essential role in this transformation. New, highly trained workers have replaced poorly qualified ones. This change has improved efficiency, reduced production costs, allowed companies to grow and boost their profits, and, most notably,

created new and more interesting jobs for people.

What needs does automation satisfy, and what benefits does it bring to a company?

Automation brings enormous advantages in terms of increased productivity. Production can run smoothly, unattended, during day or night shifts, and even during weekends.

Then, the parts must be sorted, sure, but automation is already a huge step to accelerate workflow. There are many types of automation, from simple loading and unloading systems to much more complex ones with warehouses or systems connecting several machines and streamlining processes. In addition, automated solutions can be expanded and configured over time based on each company's changes, growth, and needs.

Anyone who thinks that automation will wipe out humans from the industry is wrong. Automation creates more jobs in complementary sectors, giving those who use it the opportunity to reduce their costs and improve productivity. Continuous technological evolution shortens the lifespan of products; production batches become smaller and more diversified, and companies must be flexible enough to adapt quickly to these needs. This involves a major transformation of all production-related departments.

Today, we can't talk about standalone laser machines anymore but about entire cutting systems, where automation plays a critical part when deciding what system to choose.

How would you describe the relationship between high-power cutters and automation systems?

The two go hand in hand. The more the power increases, the more sophisticated the automation system must be. In recent years there has been an exponential increase in the available wattage for fiber laser cutting. This abrupt growth has left many manufacturers perplexed in their choices because, until yesterday, they were using old CO₂ lasers. You need to know how to manage such high powers. Eagle has done a great job in this aspect. Our machines can control and handle high wattages and turn them into greater productivity.

Imagine the customer who, thanks to his high-power laser cutter, can cut the same volume on just one shift instead of two. It gives him an exponential cost reduction and the possibility of increasing turnover and acquiring new customers. This is the most significant advantage of high powers, which, if paired with the right automation, will boost the production rate even more, and the result will be truly striking.

In your opinion, what factors should investors consider when evaluating an automation system?

Well, this is all based on the client's characteristics and needs. For example, some companies have their own product and, therefore, must satisfy their internal production needs. The best solution for this client would be a compact system to save valuable production space and one that can store as much sheet metal as possible to be prepared for unexpected orders.

Eagle Italia Team with their customers: representatives of a company Cut Service. From the left: Teddi Rossi, Ivo Pasqualini, Andrea Porta, Alain Rossi.



The story is different when talking about a job shop where you work on behalf of third parties. In those cases, you don't have an immediate vision of what will happen tomorrow, so you require maximum flexibility.

In the first scenario, you must size the plant for internal needs. On the other hand, the job shop requires extreme flexibility and versatility, a warehouse prepared for a wide range of thicknesses and workstations, and laser power that can cut small, medium, and thick sheets and plates. These shops should also consider the possibility of greater autonomy in terms of unmanned work during all the phases at the end of the production chain.

The choice of automation must be evaluated based on the final objective. There are many factors to consider, including the average thickness you cut; there are those who cut thinner, those who cut thicker, and those who do a little bit of everything. In such a varied context, there is no standard solution, which is why the automation systems' flexibility is so important.

However, one common denominator to all those seeking automation is cost reduction and productivity increase. At Eagle, we know that the entire system must be well-balanced and focused on the efficiency and reliability of the process, so each proposed solution is carefully studied based on an analysis of the cycle times and the required productivity.

What would you say to companies considering purchasing an automation system who haven't decided yet?

Today in Italy, it's hard to meet any manufacturer with a laser machine that is not considering an automation system. So our job is not to convince them that they need automation but to advise them to make the right choice with Eagle. Customers are usually well prepared for ideas for configurations and layouts, which we can absolutely offer. There's a rising

demand for ever more advanced and high-performing automation solutions. The investors' goal is crystal clear: a rapid investment return reduced costs and increased productivity.

Finally, how will the automation systems market change in the coming years? What will be the trends?

I have a clear vision of the market trends regarding the evolution of automation systems because the answers are suggested to us by the customers themselves and by their daily needs.

A lot has been achieved in the past decades, first by creating simple loading/unloading systems and later towers for sheet metal storage. Today, warehouses represent real integrated systems with hundreds of storage pallets. As a result, productivity has increased, and we can deliver right on time, but there is still one thing that represents a bottleneck in the production cycle: sorting cut parts.

Dividing the different nestings by customer or by order is a significant handicap for these machines, which leaves this onerous task to a manual operation that requires additional personnel.

Even if some manufacturers have developed a few approaches, this is the main challenge that automation will all face in the future. The knowledge of the cutting process and automation systems are inseparable in order to obtain reliable results; the two aspects cannot be separated, and they would compromise the entire result. In that sense, it's much more reliable to have automation and machine made by the same manufacturer. For that and many other reasons, I see Eagle in a leading position in this research.

"Today, we can't talk about standalone laser machines anymore but about entire cutting systems, where automation plays a critical part when deciding what system to choose."



Ivo Pasqualini
Sales Manager
Eagle Italia

IPG Photonics: High-Performance Fiber Lasers

IPG Photonics: The most efficient high-power lasers make the best cuts and lower operating costs

When talking about solutions for high power cutting applications, there exists a wide range of conventional methods, each with its own benefits and limitations. However, none offer the advantages of fiber lasers. Fiber lasers provide increased uptime for higher throughput, higher energy efficiency for lower operating costs and overall improved quality.



Other advantages compared with more traditional methods include lower maintenance, higher reliability and repeatability, plus ease of integration.

Over the past couple of decades, fiber lasers have come to dominate the market for laser cutting of sheet metals, thanks to the ongoing development of kilowatt-class fiber lasers and newer ultra high-power (UHP) fiber lasers, which have transformed laser cutting from a method for very specific applications to a mainstream fabrication process.

The advent of UHP lasers, in the power range of 10 to 40 kW, have further contributed to fiber laser dominance, as these types of lasers provides a high-speed, high-quality cutting process with increased thickness capability, while reducing production time and overall costs.

Within the fiber laser market, IPG offers a wide range of solutions for laser processes, including cutting. Thanks to

decades of experience and constant innovation, IPG offers fiber lasers with unique benefits that distinguish them from other laser manufacturers.

IPG ECO Series: High efficiency fiber lasers drastically reduce energy consumption

One of the biggest features of IPG lasers used for cutting is energy efficiency. The use of these highly energy efficient fiber lasers can translate into considerable annual energy savings.

The IPG ECO series fiber lasers offer long-term power stability that ensures consistent, high-quality processing applications such as cutting, welding, brazing, cladding and surface treatment. They are also up to 2X more energy efficient than other lasers and have industry record energy efficiencies of over 50%.

As electricity costs continue to rise worldwide, high-power cutting applications with high duty cycles can result in higher than expected operating costs. Utilizing fiber lasers with high-energy efficiency dramatically reduces operating costs while also reducing CO2 emissions. Moreover, IPG ECO series fiber lasers are not only environment-friendly, but can save tens of thousands of dollars per year which, combined with world leading reliability for long-life operation, makes IPG lasers the best high-productivity processing solution.



IPG Fiber Lasers: The Top 6 Advantages for Cutting Applications

Not only are lasers manufactured by IPG the most efficient in the market, but when it comes to cutting applications, they offer unparalleled benefits.

1. Built to Last

Proprietary diode technology lies at the heart of every IPG laser manufactured. IPG produces and integrates the most reliable laser diodes in the world into their fiber lasers. Diodes manufactured by IPG produce lasers with unparalleled reliability, for demanding cutting applications year after year without the need for replacements.

2. Reduced Operating Costs

Offering the highest energy efficiency of any commercial laser, IPG fiber lasers not only consume less electricity when cutting parts, but the cooling required is also reduced proportionally, decreasing the size of the electrical service needed to support the cutting system.

3. Faster Cutting

Compared to CO2 alternatives, IPG fiber laser cutting of 1 mm thick steel is approximately 3.5X faster. The higher power density and beam quality, combined with virtually maintenance free operation provides reliable and consistent cutting at significantly lower operating costs with overall higher throughput.

Fiber lasers provide increased uptime for higher throughput, higher energy efficiency for lower operating costs and overall improved quality.



4. Micron-Level Precision Cutting

IPG fiber lasers are not only highly effective for thick material cutting, they also deliver very high precision for cutting small and thin parts. Through the use of single-mode lasers, which possess the narrowest beam profile, it is possible to cut with micron-level precision at higher speeds in materials such as ceramics, glass and polymers.

5. Virtually Maintenance-Free

IPG vertical integration ensures production of top-notch components for their fiber lasers. Utilizing rigorously tested, long-life laser diodes, unique active fibers and leading edge, proprietary technologies, IPG fiber lasers provide greater reliability for less required maintenance and fewer service interventions.

6. Ultra-Compact Size

IPG U-Series fiber lasers offer the smallest size and lowest weight in the industry with the highest output powers. IPG ultra-compact lasers deliver unmatched performance in minimal form factors with record power to volume ratios for easy system integration and reduced floor space.



IPG: The Best Laser Solutions for Cutting Applications

Compared with other methods, fiber lasers are the best option for cutting applications, providing advantages and flexibility that other techniques are unable to provide. This makes lasers the cutting tool choice among manufactures for a wide array of industries.

IPG lasers offer a level of quality and support that only comes from decades of experience and constant innovation. Each laser manufactured by IPG comes with exceptional design, world-class assembly, modular construction, ease of upgradability, highly integrated circuit design and efficient system integration.

IPG Photonics is the world leader in fiber laser technology, enabling greater precision, higher productivity and more flexible production providing customers the power to transform materials across any application and industry.

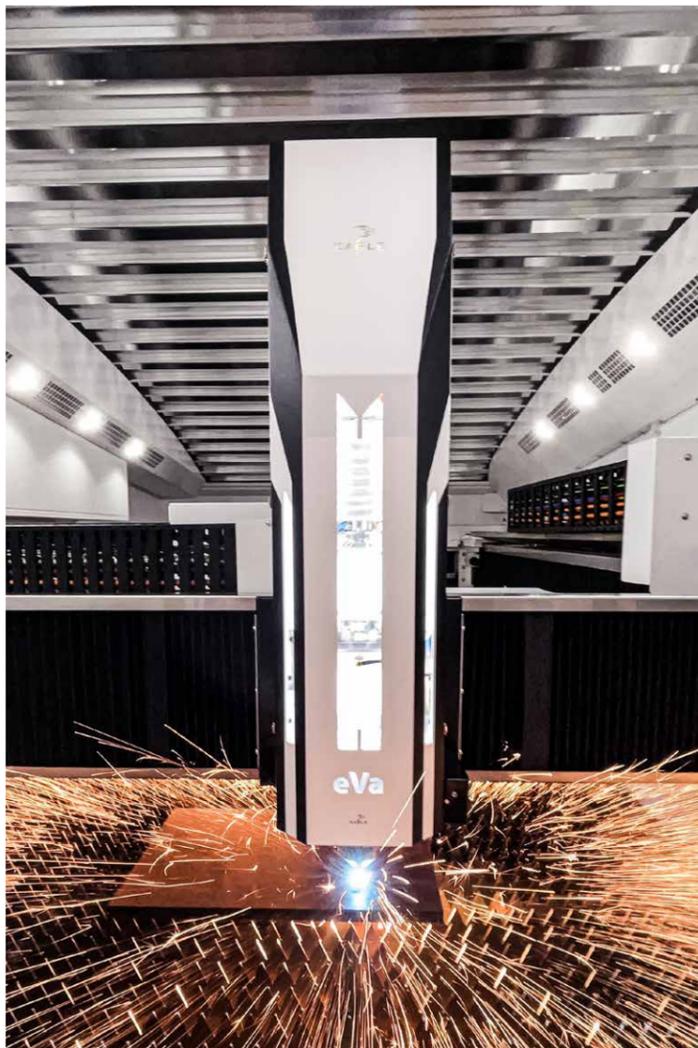
IPG Ultra-High Power Lasers: Highest Powers for Highest Productivity

IPG high power lasers range from 1 kW to over 100 kW and feature a wide range of operating wavelengths, single-mode and multi-mode options, high stability and extremely long pump diode lifetime.

UHP lasers are one of the reasons why fiber lasers continue to increase their share in the market. Compared to cutting with lower power lasers, UHP lasers enable dramatically faster cutting speeds which boost productivity while decreasing the cost per part for faster ROI and higher profitability.

UHP lasers provide these benefits in part as they can utilize the same gas pressure and nozzle size of other laser types, while being considerably faster. This in turn reduces gas consumption while increasing productivity. For example, when used to cut thick carbon steel, UHP lasers enable fast, dross-free cutting using high-pressure air, compared with the use of nitrogen, which is more expensive, or oxygen, which results in much slower cutting.

As UHP lasers continue to increase in power and efficiency, these advantages will only keep growing.



THE WIDEST RANGE OF HIGH POWER LASERS from the World Leader of Fiber Laser Technology



ULTRA-HIGH POWER LASERS ULTRA-COMPACT LASERS HIGHEST ENERGY EFFICIENCY LASERS ADJUSTABLE MODE BEAM LASERS



ECO-Series Fiber Lasers are
>50% Energy Efficient



LEARN HOW IPG FIBER LASERS
INCREASE PRODUCTIVITY and
LOWER OVERALL COSTS



Messer: Tradition, Experience and Innovation.

Interview with Zbigniew Mitukiewicz, Commercial Director at Messer Poland.

Messer is a reputable supplier of technical gases. Please tell our readers in which industries your products are used.

Virtually all industries are in the spectrum of our interest - from medicine through the food industry, metal industry, electronics, chemical, metallurgical and mining sectors. In fact, it's difficult to identify a product whose production is not, to a greater or lesser extent, related to the use of gases offered by our company.

Over the last century, you have become an internationally renowned corporation; however, to a considerable extent, you're still a family company with key values. Has this contributed to your success?

Definitely yes. As a family-owned and managed company, Messer guarantees stability and security, both for its employees and cooperators. It's no coincidence that we have been present in the technical gas market for 120 years. Experience, knowledge, consistency in action, and a coherent strategy all contribute to our credibility.

What would you say are the key points persuading customers to choose Messer?

We do our best to understand the customer's needs as accurately as possible and adapt our offer accordingly. An example is the launch of our newly designed cylinder bundles, which are technically ahead of the market standard. Another example may be the introduction of a new concept in cutting gas filtration, which protects lasers against particle contamination. These innovations and developments come from a deep understanding of the industry's needs. We adapt and evolve with changing conditions to provide our customers with safe and modern solutions.

Messer is a crucial partner for the metalworking industry, including laser cutting. How has the industry changed over the years from your perspective?

From our perspective, there's a dynamic development of laser-cutting technology. The market transformation from CO2 lasers to fiber lasers has accelerated the industry's growth, and virtually every year, we see new cutting-power records set. This is also a challenge because as the beam concentration increases, even the smallest impurities in the cutting gas can lead to serious faults. Keeping the technical concept in line with the power supply system is vital today. Therefore, gas quality and installation are more critical than ever.

In the testing phase, Eagle machines install filter boxes to ensure even higher gas quality. What can you tell us about filtration?

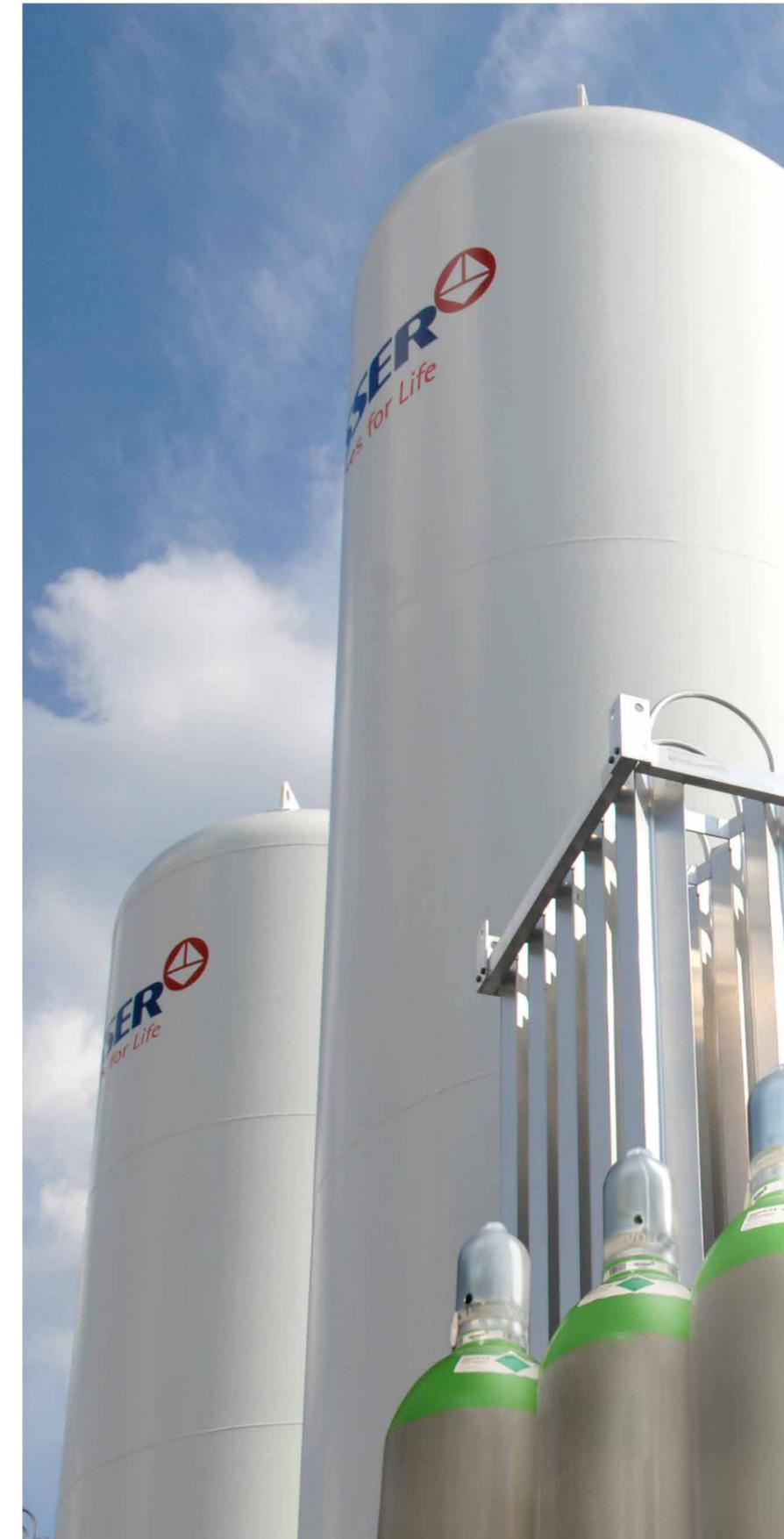
The filtration concept covers both the solution's technical side and the installed system's active care. Consequently, we guarantee that the gas used in our customers' machines meets the strictest quality criteria required in the laser market.



The filtration systems used in machine tests like Eagle's and the expansion stations used during the gas supply process have proven modern and efficient solutions. In general, we provide a complete system for supplying lasers with cutting gases right down to the point of attachment to the machine with a quality certified by regular measurements at the customer's site. As a result, our clients can focus on production while Messer ensures optimum gas quality.

From the point of view of a gas supplier, can you identify any notable trends in the laser cutting industry?

In this market, we see many customers starting their adventure with one fiber laser, and, in a relatively short time, they expand their production potential by purchasing additional machines. For us, this usually means changing our supply form from bundles to deliveries by tanker trucks, adapting the installation to higher gas flows, or expanding the supply network. When our clients take such steps, we advise them and help adapt older structures to their new needs. We have specialized in this field and cooperated with laser machine manufacturers for many years, so we understand the market's requirements. This has allowed us to build trust in the Messer brand, one that we will further strengthen in the future.



The image features a close-up, slightly blurred view of the American flag, showing the stars and stripes in shades of blue, white, and red. The flag is positioned on the left side of the page, with the stars in the upper left and the stripes extending towards the bottom right. The background of the entire page is a dark, textured surface, possibly a metal floor or a workbench, with some light-colored specks and scratches.

The American Quest for Power and Efficiency

The American market values high-power and ultrafast material handling that enable shorter work cycles. However, machine uptime and a trustworthy service network are also considered priorities. To understand these and other aspects in more detail, we spoke with Chip Burnham, co-owner and founder at Fairmont Machinery, our official distributor in the US.

What's the most crucial aspect US clients look for in a laser cutter?

Different customers have different needs – nearly all want to produce more at a lower cost, with less floorspace, less noise, and faster cycle times.

More specifically, some want part accuracy. For example, a customer making electromagnetic motors requires accuracy and high precision on thin metal. They considered many laser manufacturers. Ultimately, the Eagle Inspire cut the parts at a significantly faster cycle time than any other machine because of our 6g acceleration. We were also significantly more accurate due to the machine design, the steadiness resulting from the polymer granite base structure and carbon fiber bridge, and the drive system consisting of linear motors with absolute optical encoders traveling with the moving elements.

Most customers in the US come to Eagle for the benefits we provide in reducing cycle time and improving part quality brought to them by the marriage of power and acceleration. They intend to cut sheet metal and plate metal. Anyone can add power to a fiber laser, but Eagle's eVa cutting head does so with industry-leading reliability. Our 15, 20, and 30kW fiber lasers have a cutting head performance and reliability that exceeds other lasers even at 3kW – this is a crucial element of Eagle technology. Due to the fact that we have reliable ultrahigh-power, we can then couple the incredible cutting speeds that result from it with the Eagle Inspire series 6g acceleration. If your laser isn't fast enough to change directions and quickly return to the programmed cutting speed, then you cannot take advantage of the power. In other words, the cutting head has to move as quickly as the laser can cut, or the power is wasted. 90% of US customers who add an Eagle laser select 15, 20, or 30kW, and

they cut sheet metal and plate metal. Usually, they replace four 30kW lasers with one Eagle, freeing up labor and floorspace, and considerably reducing costs per part.

Why are Eagle's high powers so popular in the US market?

Mainly due to Eagle's capability and marketing focus, Eagle Lasers has carefully educated the US fabrication market to understand that we provide four vital elements that no other laser manufacturer can: power, acceleration, material handling, and ultrahigh-quality service. Eagle has a cutting head that can handle higher power and therefore cut faster, a 6g accelerating machine that is able to cut sheet metal parts much faster and utilize ultrahigh power on ever thinner material, a pallet changer that can exchange a cut sheet or plate for raw material in just 9 seconds, and a service network that keeps machine availability uptime at better than 97% on average.

The US manufacturer understands that producing more with one machine is the key to manufacturing success. With an Eagle, they get more work completed per shift at much lower costs, with less workforce and occupying less floorspace.

What advantages make Eagle a better choice than its tier-1 competitors?

Service, power, acceleration, material handling, uptime, and the brand overall. Eagle has quickly become a major brand in the US. In terms of service, US laser providers are known for having poor service – too many machines and not enough technicians. Eagle has less than ten machines per service engineer in the US, and we keep it that way. On top of that, we have a full video monitoring system that

tells the customer when the machine stops unexpectedly when in auto-mode.

We have a waiting list of Field Service Engineers who want to work with us at Fairmont, while others cannot fill in open staff slots or hold their staff because they're overworked and underappreciated.

Regarding power and acceleration, we cut parts in a much shorter cycle time but with the same hourly operating cost. Regarding material handling, we can swap a cut sheet for a raw sheet in 9 seconds on a 1530 machine, as opposed to 20 to 50 seconds, which saves hours of cut time per shift week and dissuades operators from climbing in the machine to look at the first part. Instead, they just hit the button, walk to the back of the machine, and the entire sheet is available for easy inspection. The whole system is beautifully engineered to significantly improve reliability

And, on the brand aspect, Eagle works hard to satisfy all its US customers with machine performance, reliability, service, part costs, and application support. Studies have shown that one negative reference has six times more market impact than a positive one. In the US, there are no negative references. The brand is the aggregate of all factors in the impression of Eagle here, and top brands gain

"We must underline our advantages in terms of unmatched performance, reliability, and service but also - and this is crucial - regarding production capacity and delivery."

momentum by word-of-mouth and repeat customers. Growth in the US is an indicator of brand excellence for Eagle.

What concepts does a customer need to understand before purchasing a machine?

Definitely power, acceleration, material handling, and their relation to each other. A client should have it clear how an Eagle machine takes advantage of these "Big 3", making it the best choice. The ideal way is to explain this visually, but not through a spreadsheet -that kills the sex appeal. It's also critical to understand the inherent reliability designed into the machine from an engineering perspective. To be sure that the service promise can be backed up by service infrastructure and corroborated by references.

Having referrals backing what you say is a must - and no one has the ultrahigh-power references that Eagle has. So, it's of keen importance that Eagle relies on these key elements.

What trends do you predict for the near future within your market?

Certainly, the number of competitors who claim to have the ability to cut at higher powers will continue to grow, and the same will happen with acceleration. This flood of ultrahigh-powered lasers will see brands competing in a different territory, so Eagle needs to strengthen its dominant position more than ever. We must underline our advantages in terms of unmatched performance, reliability, and service but also -and this is crucial- regarding production capacity and delivery.



CHIP BURNHAM
 Author of MARKETMD YOUR MANUFACTURING BUSINESS, co-founder of Fairmont Concepts and Fairmont Machinery

Dutch pioneers: Hoekman RVS Becomes the First to Install a 30kW iNspire in the Netherlands

MML, Eagle's official distributor in Benelux, is behind this success. To know more about the historic deal, we spoke to Jacek Chorazy, the MML representative responsible for this sale.

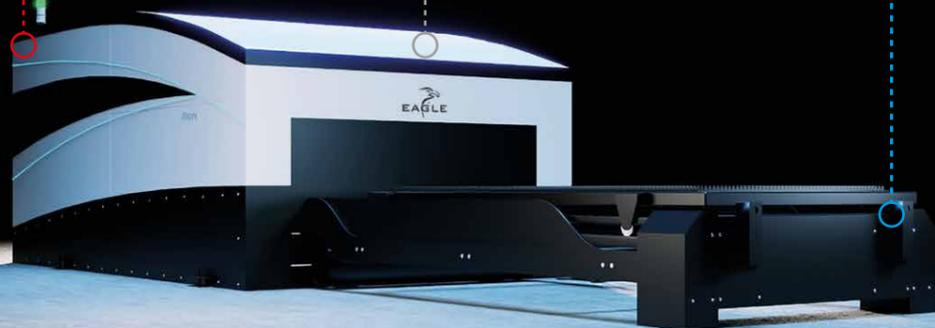


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fiber laser cutting system
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HIGHEST POWER
● 2 to 30 kW

QUICKEST MACHINE
● 6g acceleration

**FASTEST PALLET
EXCHANGE**
● 9 seconds



Before we move on to the main topic of our conversation, Jacek, please tell our readers how MML's cooperation with Eagle began.

It all started six years ago when Paul Minta, MML's owner, was looking for a new laser cutter for his plant. Paul already had cutters from reputable manufacturers in his machine park but needed another laser. That's how he got to Eagle. He visited the headquarters, saw the machines, compared the parameters, and quickly decided on a Polish-made laser. Shortly after the purchase, the then Commercial Director at

Eagle, Ivan Melicher, contacted Paul with an offer to cooperate.

Paul, who has over 30 years of metalworking experience, seriously considered the request; however, first, he wanted to test his own Eagle cutter to ensure that the machine met his expectations. After a few months of working with it, Paul was reassured of his decision and became the official distributor of Eagle for the Benelux region. I, in turn, joined the team less than a year after the start of the MML-Eagle collaboration.

The Hoekman RVS project is one of the company's largest installations in Europe and has received comprehensive media coverage being the first 30kW in the Netherlands, further enhanced by Remmert's automation system. Can you tell us more about how this venture started?

Hoekman RVS wanted to expand its production capacity. They searched the market for manufacturers with experience in the field and whose machines had proven efficiency operating in the market with powers 15kW and above. There were a few high-performance machines in the Netherlands, and Eagle was already present in the market. To our advantage, there was a reference customer with two Eagle cutters (one of which was 20kW) not far from Hoekman, which gave them a solid basis to regard us as a genuine contender.

In general, Eagle has been strongly marking its position in the Benelux countries recently, so we have more clients and references.

It's no secret that Hoekman considered buying another machine from one of our competitors since they already owned one. However, the moment of truth saw the Eagle iNspire 30kW as the favorite. The numbers spoke for themselves; cut tests, estimations, and comparisons provided black-and-white proof that Eagle was the best choice. If our client wanted to expand its capacity and cut thin to thick sheets while increasing efficiency, 30kW power was a bull's-eye. It's worth noting that Hoekman also opted for an automation system from Remmert, with whom they had already cooperated, thanks to which the efficiency of the entire laser system increased even more. That's a summarized chronicle of how the first Eagle's 30kW cutter landed in the Netherlands.

"High-power lasers are rapidly gaining popularity in the Benelux as people recognize their significant advantages in terms of efficiency and cost savings."



Scan to watch the video

What does Hoekman RVS produce, and what materials do they cut on their freshly installed iNspire?

Hoekman RVS is a job shop, so it doesn't have its own product but offers custom cutting services to other companies. It's a family business that has been on the market since 1986. They provide a wide range of cutting and further processing services, such as bending or welding, so they can manufacture products from A to Z. They're definitely enthusiasts, a company with great credibility and excellent reviews, which is highly appreciated on the market.

What is the history of Hoekman RVS when it comes to laser cutters?

When we got in touch for the first time, they had a CO2 cutter, two laser cutters from a competitor, and automation systems. Then they sold the CO2 machine and made room for a new 30kW fiber laser cutter. But that's not all. After purchasing the 30kW machine, they decided to sell one of the two previous fiber laser cutters because such a powerful system could easily do the work of two average-powered ones. So, ultimately, one high-powered machine replaced two lasers. In addition, Remmert's automation is prepared to receive a second laser cutter next to the existing one if necessary to further increase production capacity.

What prompted Hoekman to invest in such a high-capacity machine?

At first, Hoekman was considering buying another 10kW, but they decided to check the high-power cutters as well, and I think they didn't expect such a difference in performance. They wanted to expand their offer not only to include sheets up to 20mm in thickness but also to extend their cutting capabilities and provide more attractive prices to their customers. So, after the cut tests and estimations, they were convinced of the unmatched efficiency of these systems.

High-power lasers are rapidly gaining popularity in Benelux as people recognize their significant productivity and cost savings advantages. For some manufacturers, a 10kW or 12kW fiber laser won't be enough to remain competitive. By purchasing a 20 or even 30kW laser, they secure a solid competitive position for a long time. Hoekman RVS decided to make this bold and smart move, which I sincerely applaud because they will soon see great results from it.



“Hoekman RVS wanted to expand its production capacity. They searched the market for manufacturers who can offer a high-power machine, have experience in this field, and whose machines with a power of 15kW, and above are already operating on the market.”



Tell us more about the iNspire working with Remmert's automation system. Was the decision made from the get-go?

Yes, indeed. It was never under discussion. The matter was simple: if they bought a laser cutter, it would have to be paired with automation, especially if we're talking about a device of such high performance. This cutting machine can only show its full potential with an automation system able to quickly handle material and deliver the cut parts to the warehouse. Hoekman also has a modern trolley system that transports the cut sheets to a given point, where the material is manually unloaded, sorted, and prepared for the customer. The investment has resonated widely on the market; however, automation is becoming a standard in the Benelux area mainly due to the lack of labor, its very high cost, and the difficulties in finding employees. Another significant factor is the increasingly faster systems with which a person simply cannot keep up. Undoubtedly, it will soon be the standard in every country; it's only a matter of time.

What are the key advantages Hoekman gets from this high-performing cutting plus automation combo?

Reliability, efficient sheet delivery, and the capacity to work in automatic mode. It allows the company to grow while reducing the cost of cutting, giving it an advantage over its competitors because it can offer the product faster but at a lower price, increasing its profit margins.

High power is gaining momentum. Do you think the tendency towards increased wattage will continue in Belgium, Netherlands, and Luxemburg?

I do. In fact, I recently checked the average power sold by MML, and it's as high as 16.7 kW. Some companies do not even offer such power. But there will still be room for lower powers on the market. It largely depends on each customer and their production profile. However, our plans for this year are dominated by high wattages. Aside from the 30kW project at Hoekman RVS, other 20kW machines will be delivered this year, with more in production, all 15kW and upwards. The potential and popularity of high powers will only continue to grow.

To contact MML go to www.mml.be



JACEK CHORAŻY
Sales Manager at MML
Eagle Official Distributor in Benelux

Beckhoff: Maximized Precision and Speed in Laser Cutting

High-tech laser cutters rely on a powerful IPC platform and EtherCAT.

Due to its outstanding beam quality, fiber laser has quickly become the technology of choice in the sheet metal cutting industry. To enhance such efficiency and have total machine control, Eagle relies on powerful automation technology from Beckhoff.

Eagle laser cutters can cut virtually any shape out of metal sheets, ensuring burr-free edges on varying thicknesses. They offer three machine series in accordance with their customers' needs: the iNspire is the top-of-the-line with the highest powers and acceleration parameters, the eVision is a universal solution, also reaching high powers and able to cut thick or thin sheets, and the eSmart is the economic line for those in search of budget-friendly efficiency.

All three series feature easy operation, high reliability, and compact dimensions aside from the patented eVa cutting head, a high-performance head with unique characteristics that is four times less prone to contamination than all others in the market. Eagle customers can select powers ranging from 1kW to 30kW, with higher wattages becoming increasingly popular since the higher the power, the faster the cutting speed.

Speeds of up to 150 meters per minute

Eagle has always been a pioneer and continuously improves its cutters' performance. In 2013, the company introduced a 6kW machine; in 2016, a 12kW followed. The power increased to 15kW in 2018 and reached 30kW in mid-2021. "With the 30kW iNspire 1530, we introduced never before seen efficiency to the market. Paired with 6G acceleration, these machines have a maximum cutting speed of 150 m/min and a positioning speed of 350 m/min," comments Eagle CEO Marcin Ejma. "We are constantly working on making our lasers more powerful, efficient, and reliable because these three characteristics

have an enormous impact on productivity. A high-powered machine does the job faster, using fewer consumables which dramatically reduces costs per part and, thus, increases profits," he adds. To achieve motion and speed accuracy even at the highest machine parameters, Eagle employs advanced control and data communication systems from Beckhoff, the world-renowned German expert in industrial automation.

PC - and EtherCAT-based control: a dynamic duo

Eagle has worked with Beckhoff since 2010. "After a careful analysis of the market, we picked Beckhoff as our control system supplier," says Marcin Masternak, Project Director in charge of CNC/PLC systems at Eagle.

"EtherCAT was a decisive factor. Beckhoff's high-speed fieldbus system has become a global standard because of its performance. In addition, many suppliers of other Eagle machine components also use EtherCAT, which gives us great flexibility."

Furthermore, Eagle machines are also equipped with Beckhoff's Industrial PC and TwinCAT automation software as the standard control platform. "The openness and modularity of the PC-based control system allow us to expand each machine's functionalities with great flexibility, for example, by integrating CNC interpolation. We can also incorporate our proprietary solutions, such as the visualization system," explains Masternak.

On their control platform, the iNspire series laser cutters use a C6930 Industrial cabinet PC equipped with an Intel® Core™ i7 processor. To manage the axes via three AX5000 EtherCAT Servo Drives (single and dual channel), the X, Y, and Z axes are linked via CNC interpolation, with the X axis implemented as part of the gantry system.

Several machine units, such as the laser beam source, the cutting head, and the vacuum suction system, are integrated via analog and digital EtherCAT I/O modules with IP20 and IP67 ratings. As a result, operation and machine parameters are processed in real time, with data exchange taking only microseconds. Beckhoff components are also implemented into Eagle's integrated safety solution.

"With EtherCAT, we can meet the most demanding requirements regarding ultrafast, high-volume data exchange at cutting speeds of up to 150 m/min. With the outstanding support from Beckhoff control specialists, we achieved a single-axis positioning speed of 4 m/s and a speed of 5.6 m/s for all axes simultaneously. Our fastest machines feature

an acceleration rate of 6G, the highest in the laser cutting industry," summarizes Marcin Masternak.

Trouble-free loading and unloading system integration

Eagle's laser cutters are optionally equipped with semi or fully-automated loading/unloading and storage systems. For example, the CraneMaster is a fully integrated loading/unloading system that picks up sheets and places them on the cutter's pallet changer while the cut parts are simultaneously removed with a comb conveyor. "The CraneMaster system is connected to the machine via the EK1100 EtherCAT Coupler, which simplifies data communication," explains Marcin Masternak.

The collaboration between Beckhoff and Eagle is crucial in bringing unparalleled accuracy and efficiency not only during the cutting process but also within the whole machine ecosystem through automated solutions for material handling.

Article wrote in cooperation with Beckhoff Automation Sp. z o.o.

In the picture Eagle Lasers' PLC/CNC Department

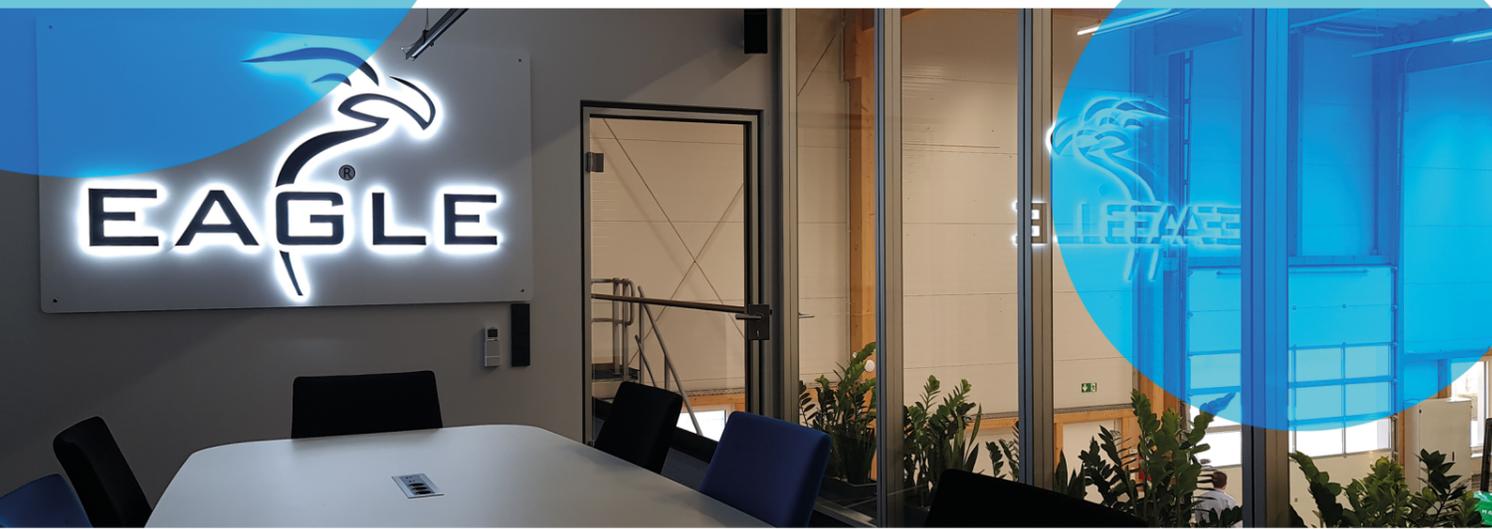
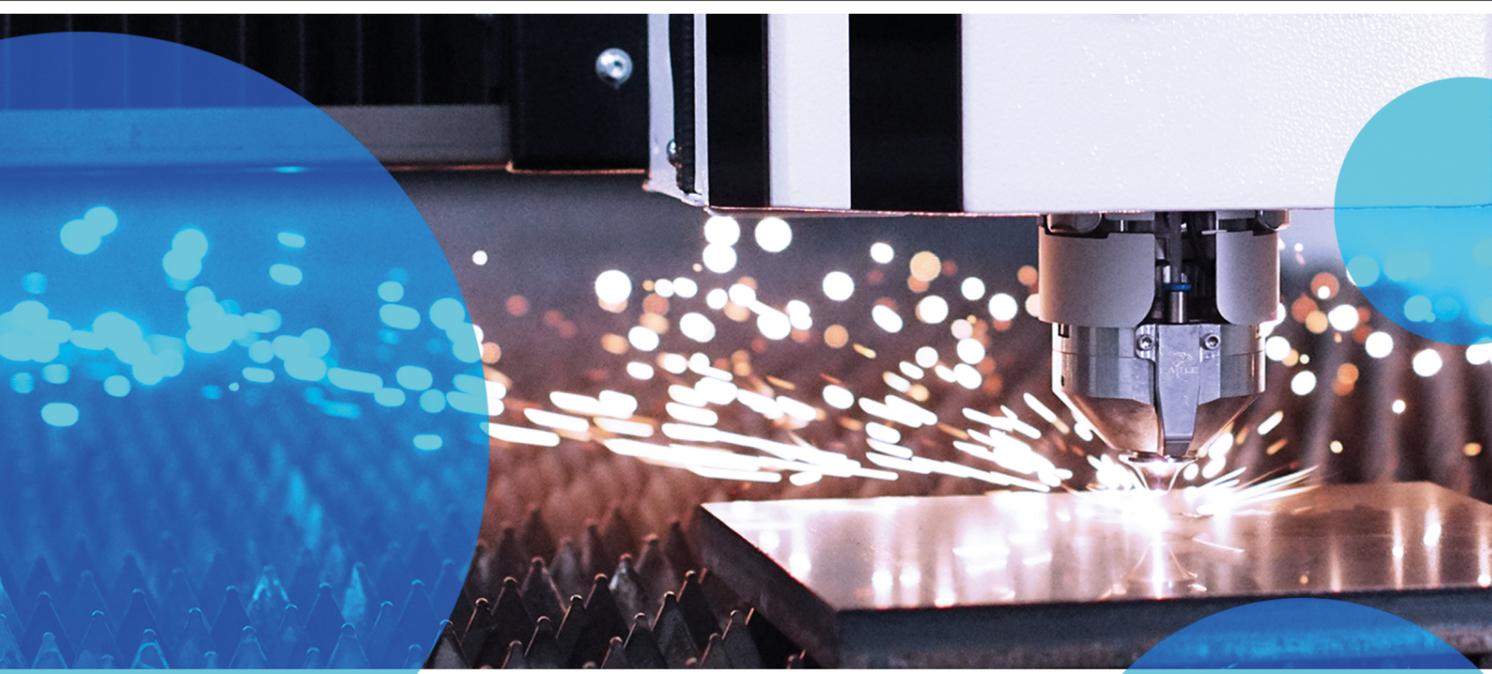


"[...] A machine with 30 kW cuts so fast that the manufacturing costs per work piece falls dramatically." - says Eagle CEO Marcin Ejma



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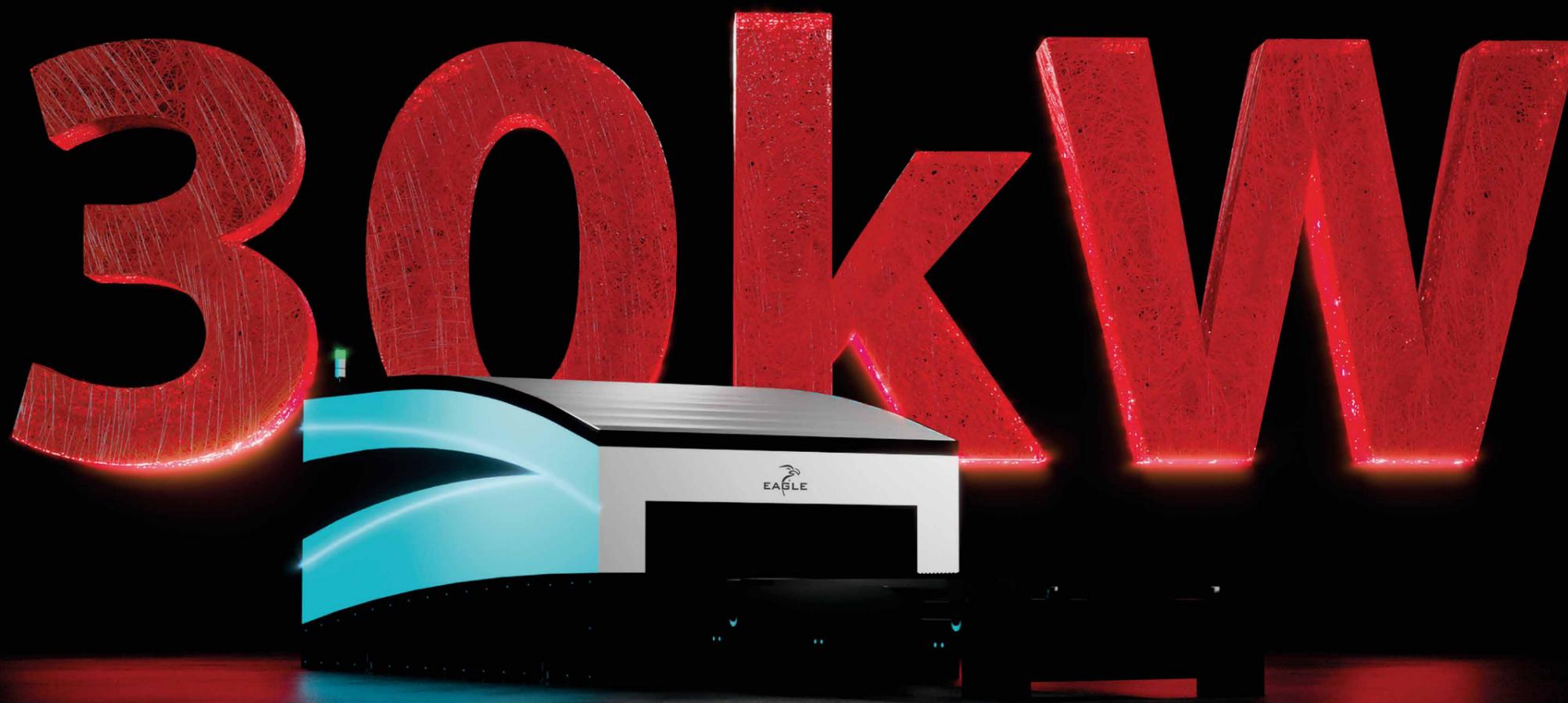


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Your profit is of crucial value. Let the numbers speak for themselves and see how your cost per part decreases to a minimum by increasing efficiency and productivity.

HIGHEST RETURN ON INVESTMENT

We are changing the industry by providing continuous innovations. Through a system with the highest power and efficiency we have set a new standard in productivity and cost-effectiveness.

REDUCED PIERCING TIME

Our engineers work every day to improve our technologies. In the 30kW machine, piercing time has been reduced to a minimum in order to ensure the highest effectiveness and uninterrupted operation.

EXCELLENT CUTTING QUALITY

Our goal is to empower our customers and provide them with high-class standards. Because innovation is in our DNA, we constantly improve and perfect all aspects of our cutting technology.

BEST CUTTING HEAD IN THE INDUSTRY

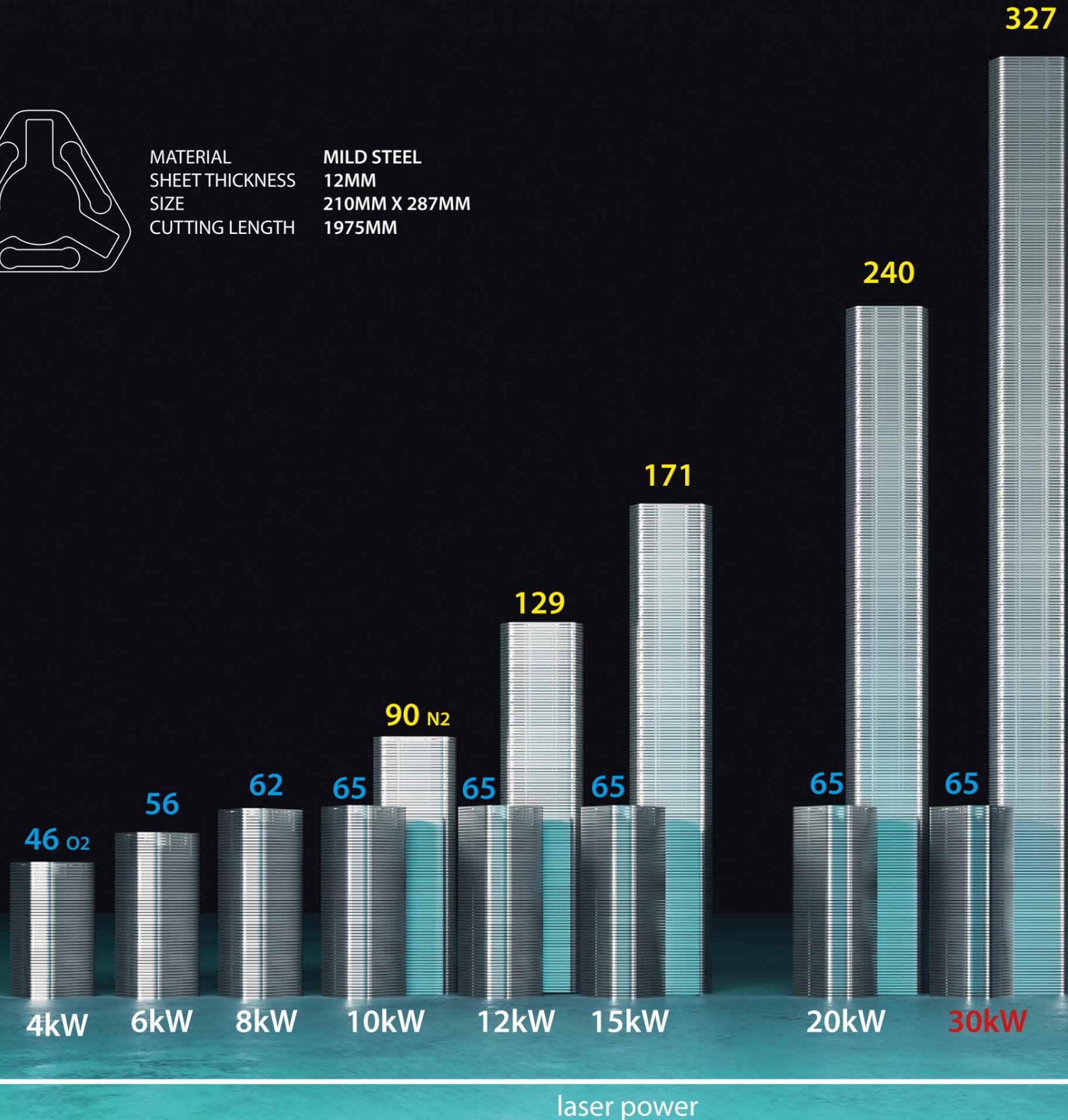
Our patented eVa cutting head, built for high powers, can cut different materials and thicknesses with the same accuracy. Its unique construction lowers operating costs and allows the machine to run smoothly throughout the whole production shift.

TOWER OF POWER



MATERIAL: MILD STEEL
 SHEET THICKNESS: 12MM
 SIZE: 210MM X 287MM
 CUTTING LENGTH: 1975MM

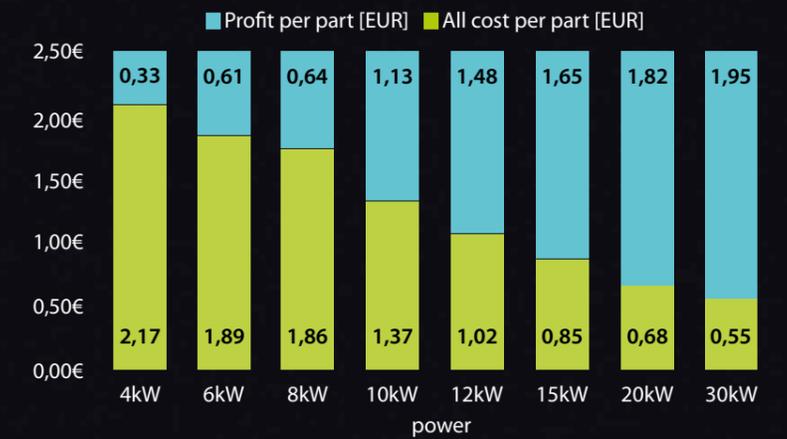
number of parts



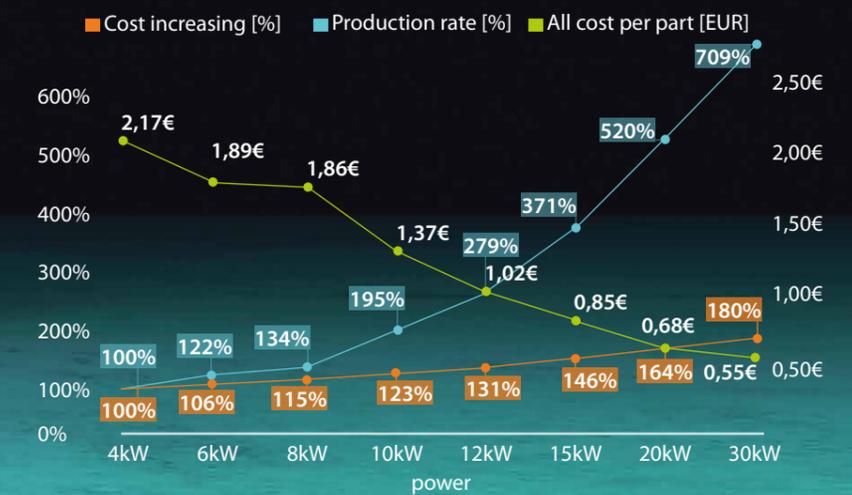
Production cutting speed



Profit per part



Cost per part





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