

CUSTOMER PROFILES

NEW TECHNOLOGY

PRODUCTIVITY

FLEXIBILITY

# POWER LINE

JULY 2021  
ISSUE 01

VOLUME  
#12

## LASER TECHNOLOGY: THE FUTURE IS BRIGHT

SINCE ITS APPEARANCE,  
NOTHING HAS BEEN THE  
SAME AS BEFORE. AND THE  
BEST IS YET TO COME.



POWER LINE is a Prima Industrie publication.





# CUT TO THE FUTURE, WITH LASER.

## A CONSTANTLY EVOLVING TECHNOLOGY THAT KEEPS ON SURPRISING

Talking about technologies that can make our future better is more important than ever in this period. This is why we decided to dedicate this issue of Power Line to laser technology.

Read on to discover how many new frontiers laser can open up in various industries, as the innovative, flexible and sustainable tool par excellence.

Our cover story focuses on the incredible potential offered by this beam of light, which has changed every industrial sector and is ready to take its seemingly endless capabilities to next-generation factories – even those destined to be built on the Moon! Indeed, laser technology is closely linked to all the evolutionary trends in the industrial sector, as well as to the guidelines for the ecological transition and digitalization that are a cornerstone of global recovery and development plans.

The customer stories in this issue are about entrepreneurs who chose our laser machines to grow, broaden the horizons of their business, restart and face new challenges with innovative and sustainable tools.

Our Group has always believed in this technology. We were among the first to understand laser's potential for sheet metal processing, and never stopped investing to continue our evolution and always remain at the forefront in this sector.

The most recent fruit of this commitment is our new 2D Laser Genius+ machine. With its impressive performance, uniquely versatile layout and quick installation, ease of use, and high level of automation and digitalization, this product stems from our passion for laser technology and from the awareness of the crucial role it plays, in achieving our clients' goals and in making their innovative ideas come true.

Another very important investment in laser technology is our new factory in Collegno. As I write this, our laser machine production department is being transferred to this new site within the Prima Industrie industrial complex, which also includes our Headquarters, Tech Center, and Advanced Laser Center for research. Here we make the machines that will build the industry of the future.

**Ezio Basso**  
CEO Prima Industrie

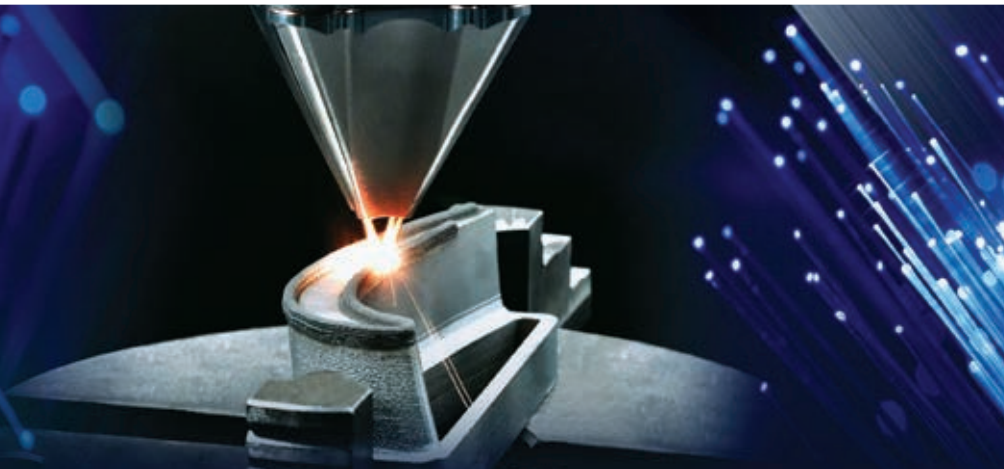


# CONTENTS

JULY 2021 | ISSUE 01 | VOLUME 12

## #06 THE FUTURE IS BRIGHT

*The technology that has changed the industry,  
between sustainability and new perspectives.*



## #10 WELCOME TO THE PLUS

*Top performance and doubling productivity  
at Laserlam with Laser Genius+.*



## #16 DIRECT ENERGY DEPOSITION KEEPS THE CIRCULAR ECONOMY SPINNING

*Application story.*



## #18 CHALLENGING TIMES DEMAND BOLD DECISIONS

*Relicomp makes a strong investment  
for quality and product consistency.*

## #15 ON-BOARD SOLUTIONS FOR SUPERIOR EASE OF USE

*Software corner.*



## #22 A LASER GENIUS TRIFECTA FOR METAL SERVICE CENTER CHAIN, BOYD METALS

*The Laser Genius with Compact Server comes  
with versatility and huge potential.*



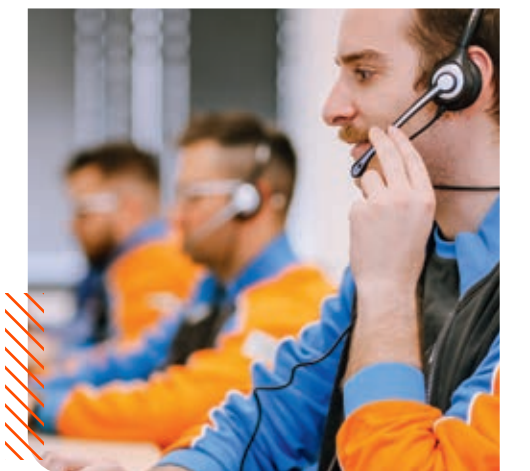
## #25 OPEN EXPERIENCE

*Technology comes back live.*



## #26 30+ YEARS OF EXPERIENCE AND STILL GROWING

*Thanks to the LASERDYNE® 430  
with Beamdiretor®.*



## #30 ALWAYS BY YOUR SIDE

*Service corner.*



**POWER LINE**  
A Prima Industrie Publication  
Printed in July 2021

**PRIMA INDUSTRIE**  
Via Torino-Planezza, 36  
10093 Collegno TO - ITALY

**EDITORS**  
Simona Di Giovanni [simona.digiovanni@primapower.com](mailto:simona.digiovanni@primapower.com)  
Daniele Grosso [daniele.grosso@primaadditive.com](mailto:daniele.grosso@primaadditive.com)  
Robert Kolcz [bob.kolcz@primapower.com](mailto:bob.kolcz@primapower.com)  
Dominic Louwagie [dominic.louwagie@primapower.com](mailto:dominic.louwagie@primapower.com)  
Ivana Montelli [ivana.montelli@primapower.com](mailto:ivana.montelli@primapower.com)  
Piia Pajuvirta [piia.pajuvirta@primapower.com](mailto:piia.pajuvirta@primapower.com)  
Massimiliano Tarable [massimiliano.tarable@primapower.com](mailto:massimiliano.tarable@primapower.com)

**DESIGNED BY**  
Angelini Design S.r.l.  
Via del Colosseo 23, Roma



# THE FUTURE IS BRIGHT

AFTER MUCH RESEARCH, TESTING AND ACHIEVEMENTS, LASER'S HISTORY CONTINUES AMIDST SUCCESSES AND NEW CHALLENGES

THE TECHNOLOGY THAT HAS CHANGED THE INDUSTRY, BETWEEN SUSTAINABILITY AND NEW PERSPECTIVES.

**SINCE ITS APPEARANCE, NOTHING HAS BEEN THE SAME AS BEFORE. AND THE BEST IS YET TO COME.**

Even a genius like Albert Einstein probably could not foresee the huge developments that laser would undergo in the decades following his 1917 article, *Zur Quantentheorie der Strahlung* (On the Quantum Theory of Radiation), in which he established the theoretical bases for laser and maser. After much research, testing and achievements, laser's history continues amidst successes and new challenges. This technology is now extending to new and broad fields of application, with many industries recognizing it as the ideal tool to achieve their production goals.

**THE TIME IS NOW**

Thanks to its flexibility and the ability to integrate with other types of technologies and even in the most complex production lines,

laser today is being used within supply chains that until a few years ago were out of its range of action, finding a leading role in the technological and application mix on which the industry of the future is based. By combining lasers with other technologies, many manufacturing companies will achieve a high level of efficiency and successfully respond to the challenges at their horizon. At the same time, thanks to relentless R&D efforts, laser technology is reaching ever improving specialization and increasing customization for specific applications (such as hardening, texturing, direct deposition) and materials (such as copper or high-reflective alloys). Its ability to evolve and broaden its field of use at the same time makes laser technology more and more efficient, compared to alternatives currently used in the same sectors. This is one of the reasons why lasers adapt perfectly to upcoming industrial and production scenarios. The future is approaching fast, and only by embracing new contexts with dynamism and a spirit of innovation will we be able to respond to a constantly evolving market.



### AI AND PEOPLE JOIN FORCES FOR THE FUTURE

Artificial Intelligence (AI) is one of the main players in the new production system and, in the near future, more and more machines will be able to work autonomously. AI will allow us to have knowledge anywhere, at any time and instantaneously, and will forcefully enter the manufacturing industry, especially for companies using lasers: combining the flexibility of this technology with the distributed knowledge generated by AI will lead to an increasingly massive spread of local manufacturing hubs. In this context, we will soon see the rise of "mass customization", i.e. a type of mass production that will respond to specific customers' needs with tailor-made solutions, thanks to the typical features of laser processing and digitalization. Even in this scenario, people will maintain a central role because their experience and knowledge, gained over decades, will be necessary to create the software and work programs destined for new-generation machinery, as well as to supervise the processes carried out independently by the latter. Laser's flexibility, combined with people's skills and investments in digitalization, will make laser technology one of the protagonists of Industry 5.0.

### LASER, CUT OUT TO BE SUSTAINABLE

More precise and much less energy-intensive than other technologies used in the same application fields, lasers make the fundamental principle underlying the circular economy come to life: Reduce, Reuse, Recycle – the famous "3 Rs". Indeed, laser is often used to create metal components that can easily be repaired, reused and recycled, but there's more: it can minimize waste generated during production, and can be used to repair and recycle high-value-added metal components. Also in this area, digitization is playing a role of primary importance in the drastic reduction of waste and consequent increase in efficiency, for the benefit of an industrial system that is becoming overall "lighter" in terms of impact on the environment.

The efficient use of machines and materials is crucial, both to contribute to the industry's awareness for sustainability and to minimize production costs for the customer. Efficiency, savings, productivity and sustainability are now closely linked concepts, and any project that tries to pull them apart is destined to fail.

### ADDITIVE TECHNOLOGY, FROM THE HEART TO THE MOON

Laser technology means efficiency, flexibility and sustainability, and in Additive Manufacturing (AM) these concepts take on a new, constantly evolving value. The scenarios that lie ahead in this sector are extremely promising and stimulating, because AM fits perfectly within a circular economy, in which products' lifecycle must be extended as much as possible. In AM there is a significant reduction in energy resources and waste that are produced during the production cycle, with clear positive effects both in business and in environmental terms.

This technology has different fields of application, and we can safely predict manufacturing companies will increasingly open up to the still untapped potential of the additive sector. As of today, for example, AM is used in the production of cardiac stents capable of meeting the specific needs of customization and durability required by the biomedical sector; in the automotive world and in traditional and electric motorsport, it is

implemented to build lightweight mechanical elements that limit fuel consumption; in the aerospace industry it comes into play for the production of sophisticated components necessary for satellite launchers or machinery designed to extract samples on the lunar surface<sup>1</sup>. All in all, there are many innovative projects in which additive technology is used, often in extremely challenging contexts. More in general, AM is a fundamental technology in any production area with a high technological coefficient, in which there is a strong need for increasing sustainability from both an economic and an environmental point of view.

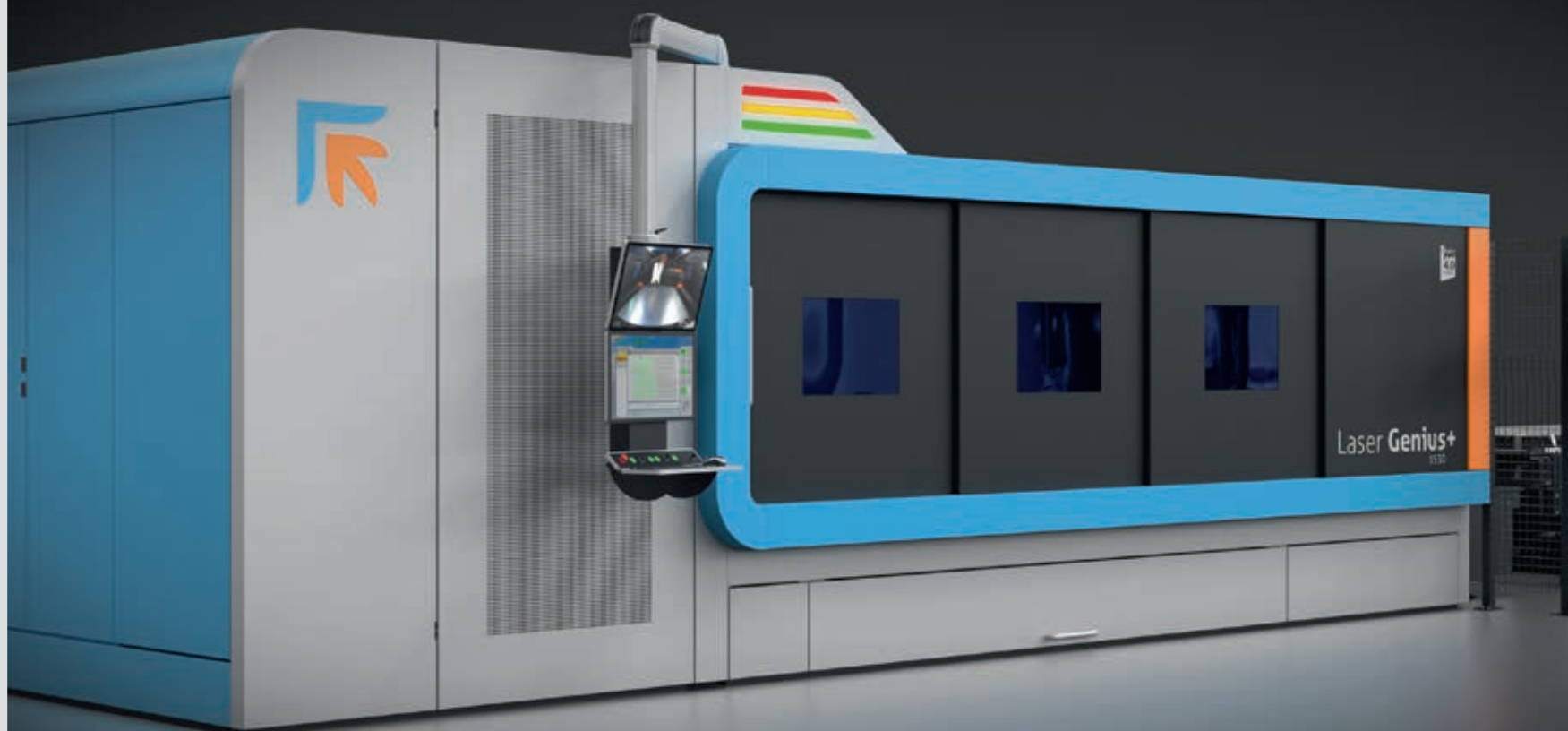
Laser today, with additive technologies, therefore represents an irreplaceable industrial resource – and an excellent travel companion on the road leading us to the future.

<sup>1</sup> One project brings together different companies (including Prima Industrie) – led by Thales Alenia Space in collaboration with the Italian Space Agency – to build the bases for a future human presence on the Moon.

LASERS MAKE THE FUNDAMENTAL PRINCIPLE UNDERLYING THE CIRCULAR ECONOMY COME TO LIFE: REDUCE, REUSE, RECYCLE



# WELCOME TO THE PLUS



DON'T MISS THE OPPORTUNITY TO DISCOVER THE NEW LASER GENIUS<sup>+</sup>

## NEXT EXHIBITIONS:

FABTECH - CHICAGO / 13-16/9

BLECHEXPO - STUTTGART / 26-29/10

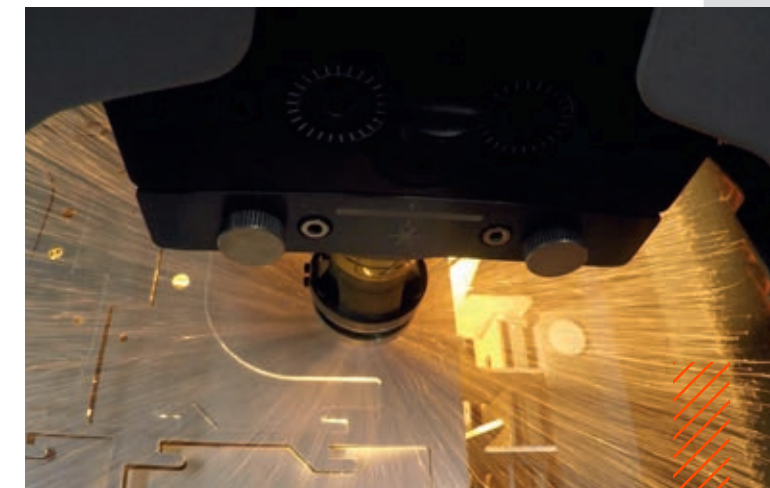
MSV - BRNO / 8-12/11

EMAF - PORTO / 1-4/12

Contact us to see it live in the tech center closest to you or book a virtual demo at: [primaathome.com](http://primaathome.com)

## CUSTOMER STORY

# TOP PERFORMANCE DOUBLING PRODUCTIVITY WITH LASER GENIUS<sup>+</sup>



While we are all familiar with the positive spin claiming crises are actually opportunities, success stories about entrepreneurs being able to actually make good business out of a global recession are quite rare. Yet, that is exactly what Carlo Ferraro, Bertrand Luchino and Giovanni Luca Davito Gara did, after founding Laserlam s.r.l. - based in Orbassano, Turin - in 2008.

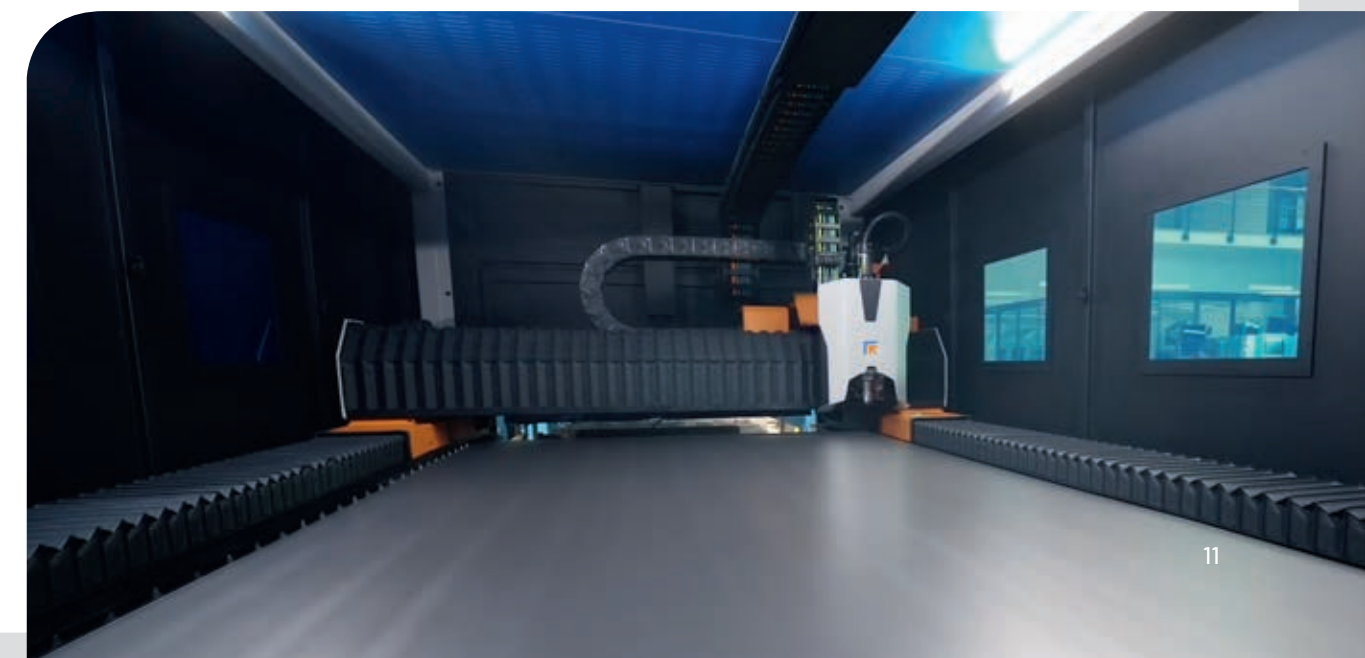
The three partners combined decades of experience in the sheet metal industry, and started out on this new venture by offering customers laser cutting and bending services. However, they soon experienced firsthand how the 2008-2009 financial crisis pushed many manufacturers to demand more of a 360°, turnkey service from suppliers, including a wide variety of fabrication processes and applications, as well as logistics, in order to simplify projects on their end as well as reduce costs. With hard work and business acumen, Laserlam was able to step up to the challenge and grow.

Thanks to strong R&D investments, solid partnerships consolidated over the years, and a people-first approach, the company today offers a complete range of services and has built a reputation for high quality, dynamism and great customer care. They even achieved the ISO 9001:2008 and ISO 14001:2004 certifications in 2010.

*"In 2008, we wanted to provide sheet metal cutting and bending. Today, our approach has changed and we aim to cover every phase in the production cycle: we receive a design and deliver the finished product, thermal treatments included. We cater to a wide range of companies, from workshops to major automotive multinationals, and can work on anything from single, one-off pieces to million-unit runs,"* says Giovanni Davito, Head of Sales at Laserlam. *"Our true strength is being able to cover anything that starts from sheet metal and can be done with a laser cutter and a bending machine, with a quick turnaround and no issues."*

**Above:** the Laser Genius<sup>+</sup> laser head as it processes a part.

**Bottom:** Despite its compact layout, the Laser Genius<sup>+</sup> provides best-in-class working area.







**Above:** Giovanni Luca Davito Gara (left) and Bertrand Luchino (right), owners and founders of Laserlam.

**Bottom:** Laser Genius+ cuts high thicknesses with quality and efficiency

#### EQUIPPED TO DO IT ALL

Laserlam operates with two Prima Power laser cutters, two press brakes (a 40-ton electric model and a 250-ton hydraulic one – which will soon be complemented by a third hP 1630 by Prima Power), seven welding stations and a long list of smaller machines dedicated to specific jobs such as tapping, washing, drilling and boring. All of this allows the company to offer customers a complete service in the shortest delivery time possible. *“In order to meet the market’s needs, we had to start making products that could uphold our high quality standards, while reducing costs for energy, gas and compressed air generation – which were extremely high with our CO<sub>2</sub> laser cutter, to the point they were almost unbearable. We had to replace our system with a more productive fiber laser cutting machine,”* explains Bertrand Luchino, Head of Production, Quality, Purchases and Logistics at Laserlam. *“We also have a Platino Fiber laser by Prima Power and are very happy with it, so we accepted their offer to test the new Laser Genius+.”*



*“In order to meet the market’s needs, we had to start making products that could uphold our high quality standards, while reducing costs for energy, gas and compressed air generation.”*

#### MAXIMUM PERFORMANCE, MINIMUM FOOTPRINT

Prima Power, the machinery business unit of the Prima Industrie Group and a global leader specializing in industrial laser systems and sheet metal working machines, was looking for a partner to confirm their new 2D laser cutter could handle intense working conditions with a variety of thicknesses and types of materials.

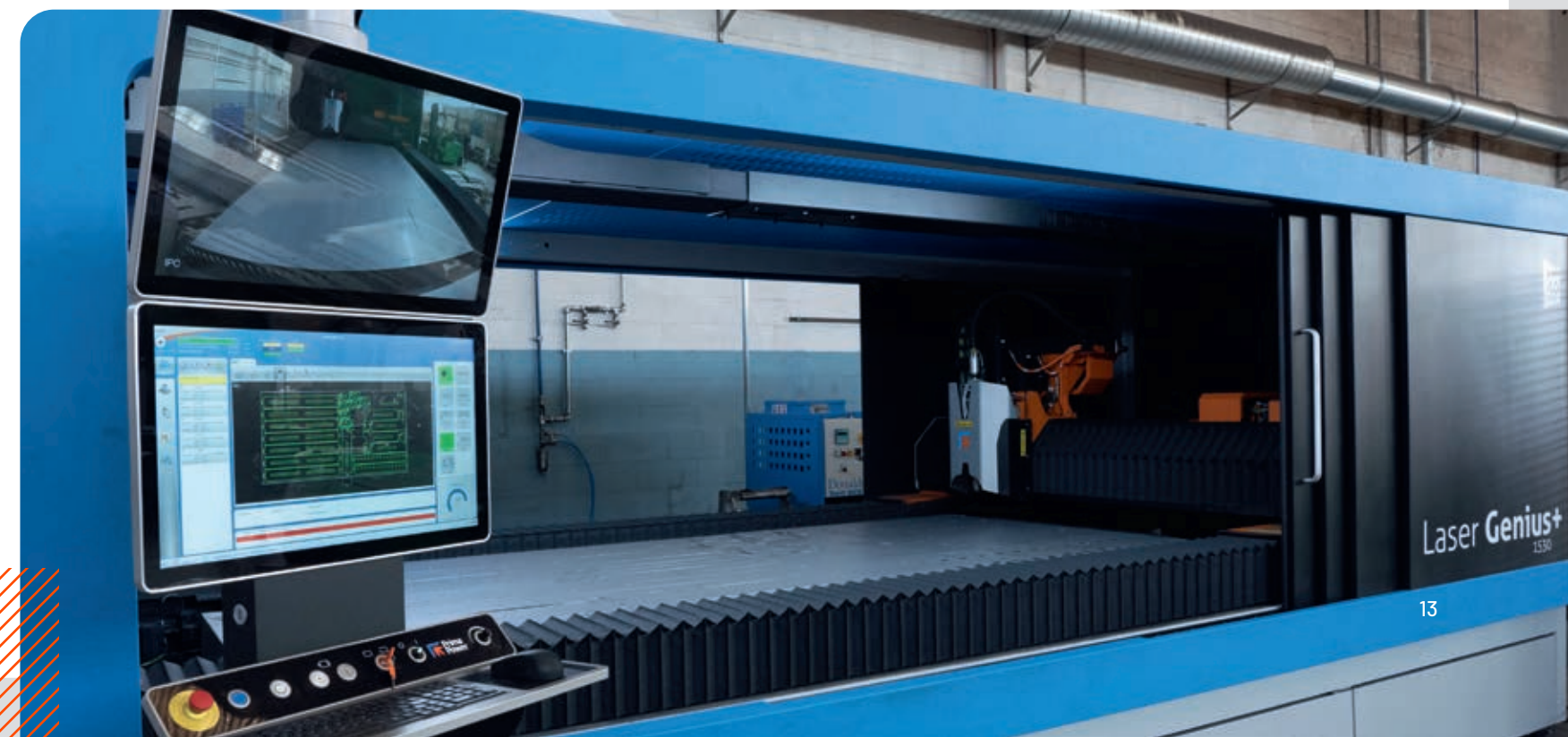
They passed the test with flying colors: *“Prima Power’s new Laser Genius+ offers outstanding technological advantages. With 6 kW of power, it impressed us with performances so high we had to reorganize our production process to keep up with its dynamics,”* Luchino reports. *“On some elements, the faster cycle times allowed us to double productivity.”* Needless to say, following the successful experimental phase the machine has now been permanently installed – and working 24/7 – in Orbassano.

The latest evolution in the innovative Laser Genius range, which Prima Power has decided to invest in for the future, is also an extremely compact system: this not only makes it easy to fit into any factory or workshop layout, but also translates into swift installation and easy maintenance and cleaning operations.

*“The Laser Genius+ has a completely new architecture: every detail is optimized for quick setup, reduced maintenance and better performances. It is made up of two units: the cutting machine, with the laser generator, chiller, motors and optics all integrated inside the service module; and the loading/unloading unit,”* explains Cristiano Porrati, Countries Manager South Europe at Prima Power. *“It’s a plug&play machine: you can install and start production anywhere in a mere two days.”* Last but not least, its layout is symmetrical and reversible – making it one of the most flexible fiber laser machines on the market, both in terms of footprint and capabilities.

*Prima Power’s new Laser Genius+ offers outstanding technological advantages. With 6 kW of power, it impressed us with performances so high we had to reorganize our production process to keep up with its dynamics.*

*The Laser Genius+ features a fully reversible layout and the possibility to have cabin doors opening on both sides.*





Technical assistance was always fluid and swift. Prima Power is still very much based on people.

**PRIMA POWER'S SMARTEST MACHINE EVER**

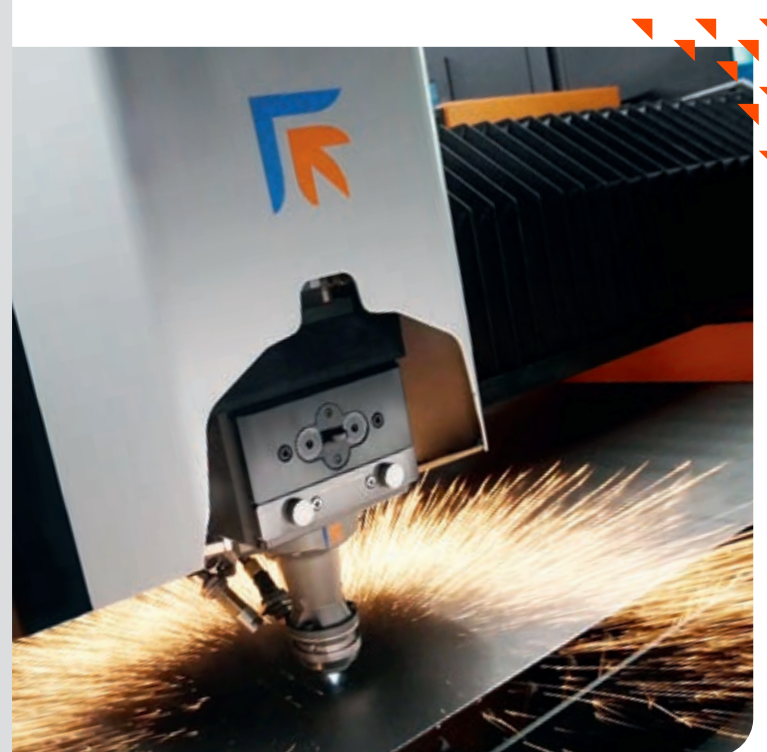
And what about digital manufacturing? With new laser head sensors and artificial intelligence algorithms for advanced monitoring and process control functions, the Laser Genius+ "is the smartest and most interconnected machine Prima Power has ever manufactured," claims Giulio Amore, 2D Laser Product Manager at Prima Power. Real-time data visualization and reporting on production processes guarantee the machine completely complies with Industry 4.0 criteria, and can connect to any analytical management system. "In fact, the standard equipment includes two 24" HD monitors," adds Amore: "One for the HMI interface and the other dedicated to showing what is happening in the work area."

**PEACE OF MIND WITH A SINGLE SUPPLIER**

With technical innovation pushed to the limit to achieve this outstanding combination of productivity, flexibility, small footprint, automation and easy maintenance, the Laser Genius+ seems to have – and offer – it all.

Yet there is one more benefit we cannot forget to mention: like all Prima Power systems, the machine comes with the company's efficient and highly-skilled customer care. "Technical assistance was always fluid and swift," states Luchino. "As a company, Prima Power is still very much based on people, so we often talked directly to the engineer that would come in for the maintenance operations: this guaranteed any issue was completely understood from the beginning. Furthermore, as all the high-tech components of the machine have been developed and manufactured by Prima Power – including the CNC, laser generators and mechanics – we always had them as our single interlocutor. This ensured we had complete control over the laser process and top reliability at all times."

Translated extract from "Prestazioni al top" by Edoardo Oldrati and Flavio Della Muzia, published on TecnoLamiera 02-03/21. Use the QR Code to watch the video interview to Bertrand Luchino, owner of Laserlam, or go to [https://news.primapower.com/igplus\\_customer\\_en](https://news.primapower.com/igplus_customer_en).



**Above:** the Laser Genius+ is available in a wide range of laser powers from 2 to 15 kW.

**Right:** an example of Laserlam's products.

# ON-BOARD SOLUTIONS FOR SUPERIOR EASE OF USE

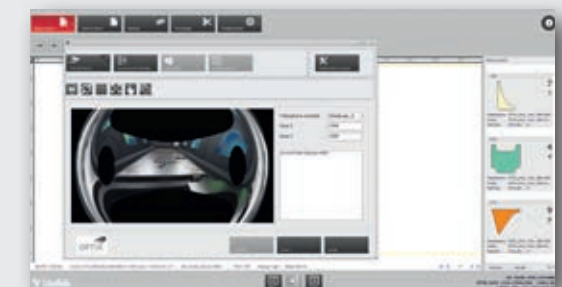


by Ivana Montelli  
Prima Power SW Product Manager

**THE NEW LASER GENIUS+ 2D LASER CUTTING MACHINE WAS DESIGNED TO FACILITATE WORK IN EVERY WAY, INCREASING EFFICIENCY AND ACCURACY. ITS THREE ON-BOARD SOFTWARE MODULES AND ITS INFO PANEL WERE INTRODUCED WITH THIS VERY GOAL IN MIND.**

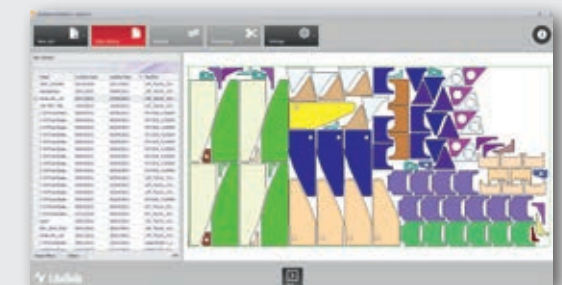
**OPTIA:**

scrap sheet digitalization by video camera streaming, used for subsequent nesting/technology operations to reduce waste. Now simplified thanks to the Prima Power machine standard 4K video camera, it requires no additional equipment or dedicated installation.



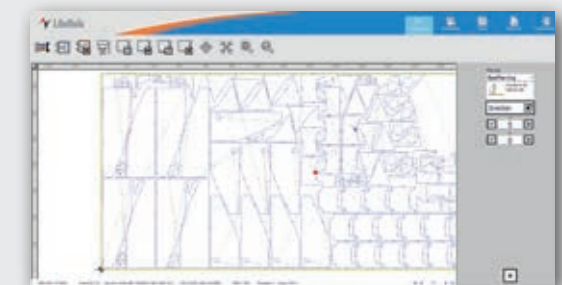
**WIZARD:**

a simplified, on-board Cam for nesting and cut technology. Four steps: import, nesting, cutting technology, post-process&simulate. Zero training required.



**2D EDITOR:**

a Part Program graphical editor allowing operators to change material, move lead-in, change lead-in, change and move microjoint. Offering safe simulation before new programs are created.



**INFO PANEL:**

the Laser Genius+ is also equipped with Info Panel, for the visualization of real-time data on processed materials, production, consumption and more. All useful information for both operators and production managers.





# DIRECT ENERGY DEPOSITION KEEPS THE CIRCULAR ECONOMY SPINNING



**ONE OF THE MOST PROMISING AND ECONOMICALLY VIABLE APPLICATIONS IN THE ADDITIVE WORLD IS THE REPAIR OF STRUCTURAL COMPONENTS: THE OPTION TO RE-USE A WORN COMPONENT, AND THEREFORE AVOID MANUFACTURING A NEW ONE, CAN SAVE A REMARKABLE AMOUNT OF RESOURCES, REDUCE COSTS AND CREATE NEW BUSINESS OPPORTUNITIES.**

The advantages in the repair of structural components are especially great when the parts to be repaired are large and with high added value. In this case, global energy leader Enel – which operates a Prima Additive LASERDYNE® 795 at its power plant in Santa Barbara (Arezzo, Italy) – was able to leverage important benefits by using Direct Energy Deposition (DED) technology.

*/// With the LASERDYNE 795 DED machine and the support of Prima Additive, Enel has successfully repaired the component.*



## STEP 1: PINPOINTING THE BEST OPPORTUNITY

First of all, Prima Additive and Enel jointly studied the repair application. After a thorough evaluation of various cases based on techno-economical criteria, Enel selected a centrifugal impeller used in the geothermal production site: a particular component that usually wears down after one year of continuous operation. Normally, the company produces a new one in order to replace it. However, with the LASERDYNE 795 DED machine and the support of Prima Additive, Enel has successfully repaired the component and set up a qualification procedure in order to integrate the repaired impellers in operation conditions.

## STEP 2: PREPARATION AND TESTING

The repair strategy started by rectifying the damaged component up to a flat and homogeneous surface on all blades, on which the material has been added – thanks to the DED technology – to reconstruct the original shape of the component. For the development phase of the repair application, Prima Additive's Powder Bed Fusion technology came into play and proved useful. Indeed, Prima Additive's application engineers created a replica of the end of the impeller in order to study and test the best deposition strategy on this piece, avoiding any failures when working on the customer's actual component.

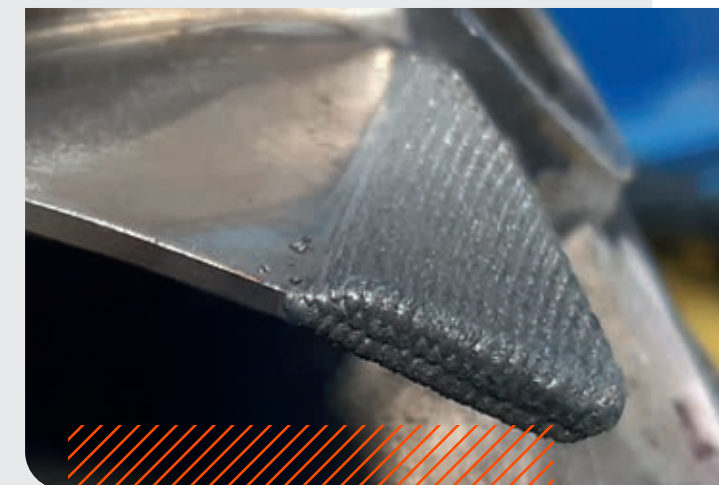
## STEP 3: A SUCCESSFUL APPLICATION

The application engineers at Prima Additive also evaluated different manufacturing approaches, and using the MasterCam software and the AMXpress plug-in came to suggest carrying out the repair activity using 3+2 axes for the positioning of the component. Once the repair procedures for the piece were defined, the 17-4PH steel alloy was chosen as the material because it features high mechanical strength and an increased resistance to wear. It took 2.5 hours to completely repair the impeller, followed by Enel's activities to analyze and certify the outcome of the process. After the material carry-over, Enel will proceed to mill the component, restore the piece to its original geometry and subsequently use it as a spare part; the company can now plan to repair the piece currently in use, and repeat the procedure whenever necessary.

## NEXT STEP: KEEP GOING!

After this successful implementation, Prima Additive and Enel continue to work to identify and explore new applications that can fully leverage the opportunities AM technology offers to repair components and reduce consumption, costs and environmental impact at once, opening the way to new and sustainable business models.

**BEFORE**



**AFTER**

**Previous page:** repair process using the LASERDYNE 795.

**Above:** the worn component before repair.

**Bottom:** the worn component after repair.



# CHALLENGING TIMES DEMAND BOLD DECISIONS

**RELICOMP MAKES A STRONG INVESTMENT FOR QUALITY AND PRODUCT CONSISTENCY.**

**DESPITE THESE UNCERTAIN TIMES, RELICOMP OY IN KURIKKA, FINLAND HAS RECENTLY MADE A NUMBER OF BOLD INVESTMENTS. A FEW YEARS AGO, THE COMPANY ACQUIRED THE COUNTRY'S LARGEST PRESS IN ITS SIZE CLASS. THIS YEAR, IT INVESTED IN A NEW COMBI GENIUS MACHINE FROM PRIMA POWER, WITH A 4-KW FIBER RESONATOR.**

Compared to the previous F6 turret punch press and LPe5 laser punch combination, the new machine's 1500 x 3000 mm sheet size is larger – making it possible to produce larger parts – and gives smaller pieces greater flexibility for nesting. The greater sheet size also improves efficiency and decreases the number of sheet changes needed. The new equipment contains all the necessary features: tapping, forming, punching, laser cutting, and more. Other advantages include the precision enabled by the servo-electric technology, as well as low noise levels and savings in both operating and lifecycle costs. Relicomp's investments are aimed at both strengthening quality and improving the consistency of end products.

The Combi Genius is equipped with an LSR robot, which automatically loads sheet material and stacks finished pieces in

*/// We have invested at least 1 MEUR annually in equipment and solutions, and we plan to maintain this bold investment policy going forward.*

the unloading area. With two loading places and two unloading places, it allows for flexibility in sheet changes, and also enables longer unattended operations. The investment required long and thoughtful consideration, and no detail was overlooked. "In subcontracting, it is difficult to predict what customers' needs will be in the future, which is what makes a combination machine such a great choice. It works for all sorts of pieces and sets of all different sizes, and it is adequately cost-effective in all situations. This combination machine is perhaps the most versatile of all our models, which makes it particularly well-suited to be the main production machine for a subcontracting company," says Mikko Fiskaali, Prima Power sales in Finland.

**COMPETITIVE ADVANTAGE DOES NOT HAVE TO IMPACT THE ENVIRONMENT**

The situation is brightening up again after last spring's halt, also in combination with many Finnish companies bringing their production back to Finland. Demand is expected to grow sharply once connections across the rest of the world open up again. "We have invested at least 1 MEUR annually in equipment and solutions, and we plan to maintain this bold investment policy going forward," states Relicomp CEO and owner Marko Jyllilä.



**Above:** Relicomp Oy manufactures e.g. various hoods and frames of vehicles as a subcontractor.  
**Bottom:** Combi Genius with LSR robot installed at Relicomp Oy.





Describing his company's investment stance, Jyllilä explains, "Compared to our competitors, we really do invest a lot for a company of our size. Each investment is an investment in quality and greater versatility of our services."

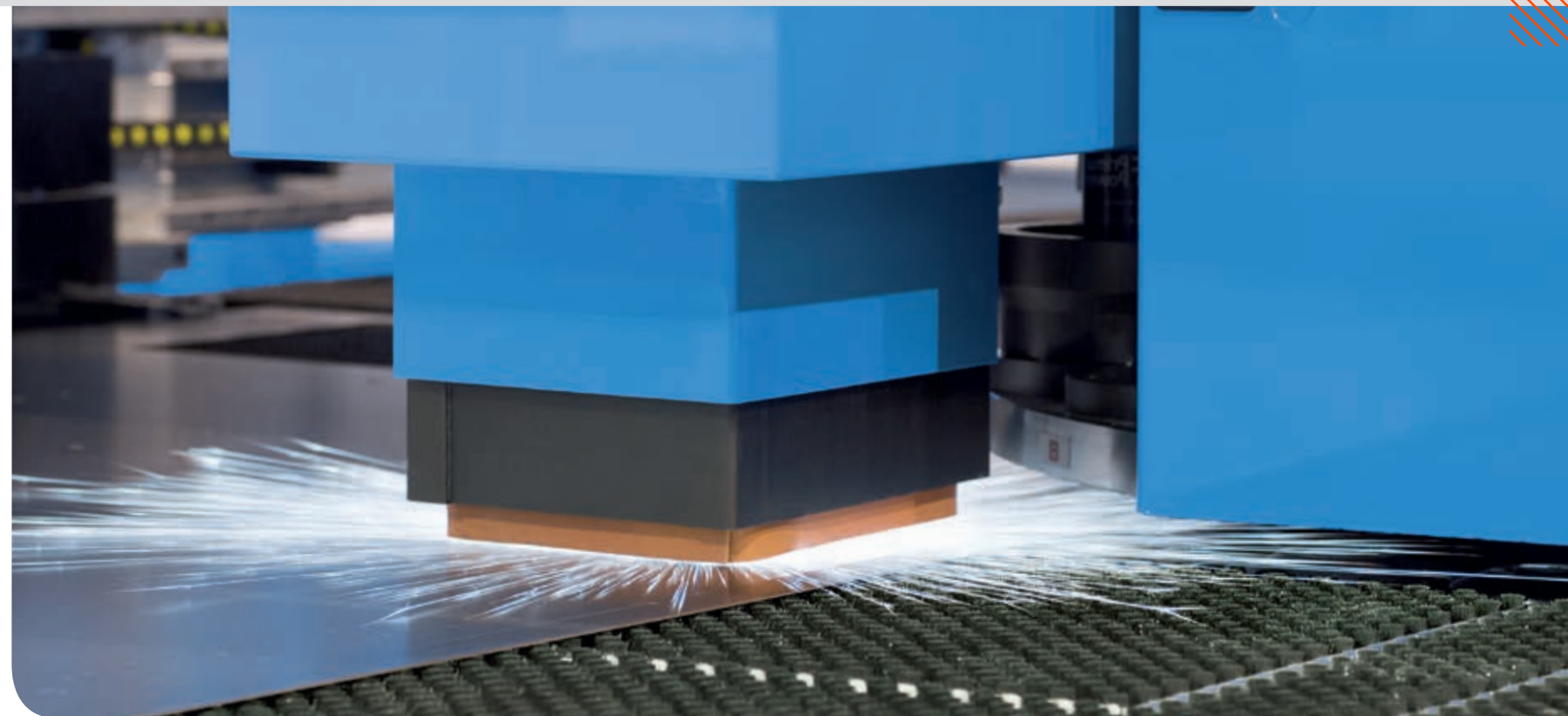
Jyllilä thinks investing now is advisable to have the company's machinery plant in optimal condition once the global situation improves, and to ensure that it will be possible to respond to the needs of current and new customers. Fiskaali also feels that it is important to continue investing: "The price of labor per man-year is high in all industrialized Western countries, including Finland. New technological solutions, plus a high degree of automation, help make companies competitive to the point where they can credibly match up against their peers, including foreign competitors, in the sheet-metal subcontracting field. Such investment considerably improves a company's quality and efficiency levels, making it possible to offer customers a larger and more complete package as a subcontractor," he says. He continues: "New technological solutions plus a high degree of automation help to make companies competitive."

"Even if we had previous experience on a combi laser machine with a robot, the new Genius series CG1530 has exceeded all our expectations with its features. The operators learned to use the machine very quickly and we have already reached the internal targets we had set for the investment. We chose the correct machine for our needs from a reliable supplier. We are very pleased with the machine and the cooperation," says administrative director, owner Tiina Jyllilä.

"For years, the core of Prima Power's product development efforts have been solutions that benefit both the business and the environment. Investment in new technology is thus also an investment in the environment - which helps companies get better funding as well. Servo-electric machinery, as exemplified by Relicomp's new combination device, is now quickly replacing old hydraulic models on the market. New machinery is extremely easy to use and ergonomic. And in addition to their speed and efficiency, they are noticeably quieter, which contributes to improving the work environment for operators," Fiskaali adds.

#### INTERNATIONAL AND LOCAL

Prima Power sells its devices to about 80 countries around the world. Currently, Finland has roughly a 5% share of its worldwide sales in machine tools. The bulk of its customers in Finland operate in the southern part of the country, but it has customers from its home region as well. "We have been working with Relicomp for some time now. It was great to be able to offer them a solution that we knew would meet their needs," Fiskaali says. "We find that Prima Power's machines have brought the fastest return on these investments," Jyllilä explains.



**Above:** Combi Genius laser head while processing a part.

**Bottom:** Mikko Fiskaali, Prima Power sales (left) with Relicomp owners Tiina and Marko Jyllilä.

/// New technological solutions plus a high degree of automation help to make companies competitive.



Although Relicomp operates internationally, when it comes to investing in machinery they prefer local vendors. "We buy as much as we can on the domestic market. Particularly in the midst of the current global situation, it's important to invest in Finland. Having a partner that operates in the same language as we do is a significant advantage when it comes to training personnel, when machines need to be serviced, or when we otherwise need to get information quickly. Workers' willingness to take initiative and quickly contact maintenance services and other experts at Prima Power is noticeably higher when they know they can talk to them in their own language, thus the machines' utilization rate remains high," Jyllilä says.

/// We find that Prima Power's machines have brought the fastest return on these investments.





# A LASER GENIUS TRIFECTA FOR METAL SERVICE CENTER CHAIN BOYD METALS

/// The trend is towards more value-added services, and we want to be a problem solver for our customers. ///

## THE LASER GENIUS WITH COMPACT SERVER COMES WITH VERSATILITY AND HUGE POTENTIAL

Boyd Metals is a metals service center that specializes in metal processing and distribution. Founded in 1991 in Fort Smith, AR, the company has added locations in Joplin, MO, Oklahoma City, OK, Little Rock, AR, and Tyler, TX. The company's inventory lines include carbon steel, stainless steel, aluminum, red metals, and fiberglass. Boyd Metals carries a wide range of products including structural shapes, sheet and plate, pipe and tubing, valves and fittings, and expanded metals and gratings.

"In the past, service centers were expected to just sell raw material," explains Audie Dennis, vice president & general manager of the Joplin facility. "Traditional machines in a service center were cut-to-length lines, slitting lines, saws, etc. However, over the past 25 years, customers have demanded more of a turnkey-type operation. Today it is almost expected that a service center can provide first-step processing capabilities like plate burning, sawing or laser cutting. The trend is towards more value-added services, and we want to be a problem solver for our customers."

In 2019, Boyd Metals formed a committee to "define what our present and future laser needs would be," says Steve Harvey, vice president & general manager of the Fort Smith facility. "We surveyed what was available in the 2D fiber laser market, and we

visited laser users in our areas. I happened to read an article on the Prima Power laser machines and coincidentally received a call from the Prima Power salesman introducing himself, so I invited him to visit. We have a good customer that has used their lasers for many years and they were willing to share their experience. After the committee met, we invited five manufacturers to our Fort Smith office. From there we narrowed it down by visiting the major laser companies in the Chicago area," continues Harvey. "Many of the features were similar, but when we left Prima Power's facility in Arlington Heights, IL, we agreed that their sales and technical staff seemed like they weren't just making a presentation, but were genuinely interested in helping us, like partners. With everything Prima Power had to offer, there was never any pressure – just good information. We purchased three Laser Genius machines for the Fort Smith, Joplin, and Oklahoma City facilities that were installed by early 2020."

### LASER GENIUS: SPECIFICS OF SUCCESS

Laser Genius is a high-range 2D laser cutting machine, designed for high productivity, quality and flexibility. Its main features include linear motors and the innovative frame application of synthetic granite and carbon fiber.

Laser Genius can be used to cut a wide range of materials. Fiber lasers are more effective than other laser sources for cutting highly reflective materials (e.g. aluminum alloys, copper, brass). Varied thicknesses can be cut with efficiency and quality. Productivity increases particularly with thin and medium-gauge sheet metal. Because of its wide range of automation modules, the Laser Genius is the right solution for both small batches and large-scale production. High-dynamic linear motors ensure a 15% increase in productivity compared with conventional drive systems. The Laser

Genius has a comprehensive range of automation modules and the effective CNC proprietary management guarantees accuracy in cutting and head positioning. It is a high-tech product with low operating costs, high-energy efficiency, no laser gases, and reduced maintenance. The Laser Genius has linear motors on X and Y axes, carbon fiber carriage, synthetic granite frame – unique characteristics allowing it to maximize fiber laser technology at its best. Another feature that stands out is the proprietary hardware and software for laser process control and the high brilliance 6kW fiber laser. The Prima Power fiber cutting head features single lens strategy, safe impact protection system, high dynamic focal axis with 35 mm stroke, lens drawer with quick alignment system (OPC), and protection glass drawer for easy inspection. These features make it an accurate, versatile, and efficient machine capable of 24/7 lights-out production. Boyd Metals also likes the Prima Power NC Express e<sup>3</sup>, a scalable CAD/CAM application that can be used for single part processing or as fully automatic batch processing software. No matter the production style, it offers support for any programming need for Prima Power lasers and turrets, from importing and unfolding 3D models to processing daily ERP data. Finally, Boyd Metals purchased the Compact Server with each of the three Laser Genius machines. This is our smallest loading and unloading device, handling blanks and processed sheets with dedicated storage units.



**Left:** Boyd Metals purchased three Prima Power Laser Genius 2040 machines that were installed in late 2019 and early 2020.

**Bottom:** Three Boyd Metals vice presidents & general managers from left to right: Audie Dennis, Joplin, MO; Richard Schultz, Oklahoma City, OK; and Steve Harvey, Fort Smith, AR.





# OPEN EXPERIENCE

## TECHNOLOGY COMES BACK LIVE

In 2020 and the first half of 2021, we streamed many digital events on our Prima@Home platform and found ways to remain at our customers' side relentlessly, sustainably, and in full compliance with anti-Covid rules. The key was a right mix of digital and physical initiatives, which also made up for the lack of trade shows that were canceled or postponed due to the pandemic. We are extremely pleased with the positive response we have received.



These are some of the initiatives we launched for our customers in the first half of the year:

- Tech Center visits allowed clients to interact with our experts in total safety, even when larger events were not possible.
- Launches were held in virtual or hybrid from: e.g., the new Laser Genius+ 2D was presented to the European market online and with a special in-person event in Italy.
- In April, Prima Power Suzhou organized an in-person Open House for Rapido+, the new 3D laser machine for the automotive sector manufactured and distributed in China.
- Our Collegno Headquarters hosted the first Open Experience: an entire week to book and safely take part in live demos and presentations.



### UPCOMING EXHIBITIONS WHERE WE CAN MEET

As the situation improves, starting from September we'll have new opportunities to meet at numerous trade fairs. See you soon!



Prima Power  
CHICAGO, USA  
13-16 / 09



Prima Power  
SHANGHAI, CHINA  
14-18 / 09



Prima Power  
TAMPERE, FINLAND  
21-23 / 09



Prima Additive  
TOULOUSE, FRANCE  
21-23 / 09



Prima Additive  
ARESE, ITALY  
22-23 / 09



Prima Electro  
MILAN, ITALY  
28-30 / 09



Prima Additive  
MILAN, ITALY  
04-09 / 10



Prima Additive  
BILBAO, SPAIN  
26-28 / 10



Prima Power + Prima Additive  
STUTTGART, GERMANY  
26-29 / 10



Prima Power  
BRNO, CZECH REP.  
08-12 / 11



Prima Additive  
FRANKFURT, GERMANY  
16-19 / 11



Prima Power  
MADRID, SPAIN  
17-18 / 11



Prima Power  
PORTO, PORTUGAL  
01-04 / 12



The Laser Genius has allowed us to expand our business.



### SMALL FOOTPRINT PLUS AUTOMATION

"We wanted to go with the fiber laser," adds Richard Schultz, vice president & general manager of the Oklahoma City facility. "And we wanted some level of automation, which the Compact Server provided without adding much to the Laser Genius's small footprint. Our operators love it: some jobs took hours to perform on our high-definition plasma. Today, we can cut the same parts in 10% of the time. Between order and installation, we began servicing a customer that needed a great amount of laser cutting," says Dennis. "They had to cut costs, and we were able to meet their needs by doing the laser cutting in-house, with the Laser Genius. It is now a top account with repetitive business with several hundred thousand dollars per year in laser cutting work. Our operators like the user-friendly and intuitive interface, and have a great relationship with the Prima Power technicians," adds Harvey. "The ability of the Compact Server automation to run lights-out has helped us tremendously."

### LASER GENIUS = NEW BUSINESS

"The Laser Genius has allowed us to expand our business," continues Harvey. "By producing in-house, we've been able to expand into the OEM products, where you must have the tight tolerances, repeatability, and precision to be certified as a supplier. We are now able to cut thinner material than ever, with tighter tolerances," concludes Dennis. "We can produce a higher quality part with tighter tolerances that can go right into production. This is increasingly important as we take on more fabrication operations for our customers: many of them had been sending their laser work elsewhere, and were excited when we installed the Laser Genius. We've picked up a great deal of laser cutting business from existing customers."



**Above:** Varied thicknesses can be cut on the Laser Genius with efficiency and quality.

**Right:** The Prima Power fiber cutting head features single lens strategy, safe impact protection system, high dynamic focal axis with 35 mm stroke, lens drawer with quick alignment system (OPC), and protection glass drawer for easy inspection.





# 30+ YEARS OF EXPERIENCE AND STILL GROWING

## THANKS TO THE LASERDYNE® 430 WITH BEAMDIRECTOR®

For over 30 years, Lasercraft, Inc. in Ohio, USA, has provided superior quality parts, specializing in formed metal parts with laser cut features, to demanding customers in fields as diverse as metal spinning and metal stamping. Their drive for responsiveness, continuous improvement, and superior quality is a normal part of their business process, and something they expect their suppliers to share.

### LASER FOCUS ON COMPLEX PROJECTS

Most of Lasercraft's projects call for laser cutting custom formed parts with complex geometries – work metal spinners and metal stampers often subcontracted to specialists, because it requires specific skills and equipment. As a long-time user of the LASERDYNE® 780 and LASERDYNE® 790 systems, Lasercraft has developed a strong expertise using 5-axis capabilities – but recently decided to make a major addition to its laser technology in order to seize new opportunities.

*"When we saw the potential with Prima Power's LASERDYNE® 430 with BeamDirector® system, equipped with Fasttrim Software and SmartTechniques, we made the decision to purchase one, with the plan to add a second one soon after,"* reported Gregory Claycomb, president of Lasercraft Inc. *"We were pleasantly surprised to see what it could do. It's fast, flexible and provides the high-quality processing that we needed to cut both small and larger formed parts. Since our part runs vary from a few prototypes to 10,000 parts a month, the system proved to be an ideal addition to the 14 different brand lasers we currently use."*

The recently introduced, all-in-one Fasttrim™ software enables users to model parts, define process paths, and feature locations, and build part fixtures. It allows posting a complete program for 2D and 3D laser welding and drilling, but most importantly for complex and challenging cutting applications. While continuing to use the earlier LASERDYNE 780 and LASERDYNE 790 systems successfully, *"the new LASERDYNE 430 was a revelation for the productivity improvements it provided,"* Claycomb reported.

Fasttrim CAD/CAM with full part simulation and collision detection allows programmers to eliminate potential issues before sending the program to the manufacturing floor. Auto programming automatically generates the part program based on the model's geometry.

An additional feature for complex parts is the Fasttrim software that supports up to 6-axes simultaneously. It also provides the ability to modify tool paths through sheet offset, cutter offsets and axis translations.

*/// The new LASERDYNE® 430 was a revelation for the productivity improvements it provided. ///*

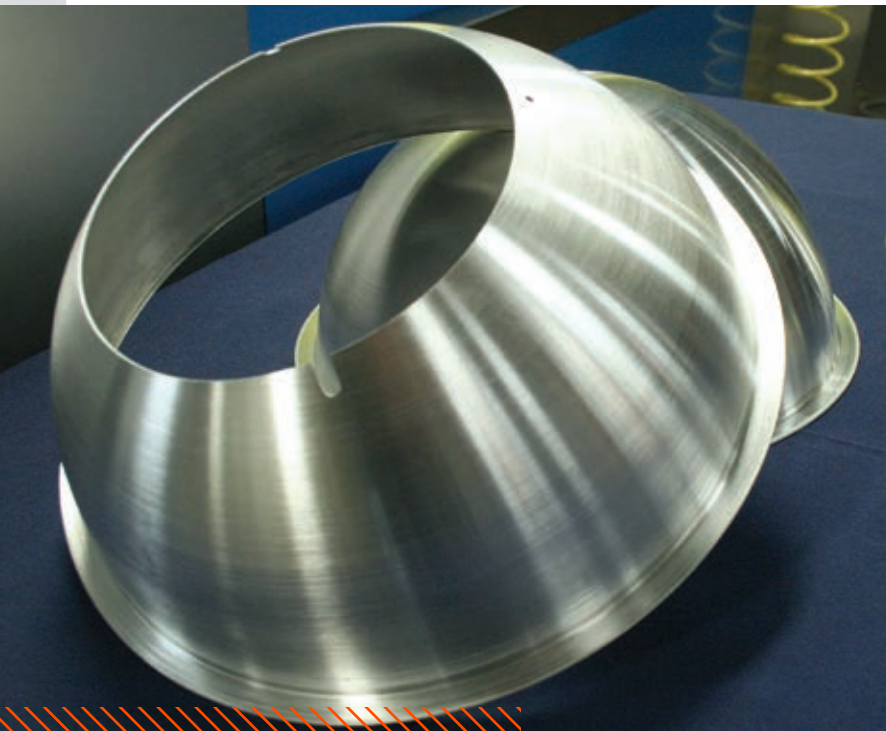


### EXPERTISE MEETS EXCEPTIONAL SPEED AND FLEXIBILITY

Ed Farley, Lasercraft's laser expert and a key part of their 30-year success, marveled at the LASERDYNE 430's performance and process improvements, from the first complex cutting run of 10,000 parts for inclusion in new HEMI automotive engines to a half dozen prototypes for an appliance customer. *"He was amazed, actually shocked, at all its productivity benefits – including the rapid output of part information and fast programming capability,"* reported Claycomb. *"Last week, a customer came to us on a Friday morning with prototype parts needing hole placement,"* he recalls. *"Using our LASERDYNE 430, we processed and delivered the parts by the afternoon."*

*Ed Farley of Lasercraft (right) holding a crankcase component for a HEMI automotive engine. At his left is Greg Claycomb of Lasercraft holding a fiber laser processed component for the lighting industry.*





**THE CUSTOMIZATION OPTIONS THAT MADE THE SOLUTION PERFECT**

"We've always included rotary tables on our LASERDYNE systems. They provide needed flexibility for tubular, cylindrical and the formed parts we process," reports Claycomb. "The system's air-cooled 3,000-W peak power fiber laser and S94P software gives us full 5-axis capability to process contoured parts in difficult-to-reach locations. Parts clamp up fast on the rotary table, so they are processed quickly and accurately with little or no operator intervention."

Among the many SmartTechniques™ included in the LASERDYNE 430's operating software, Smart Pierce™ stands out as an immediate productivity improvement. With SmartPierce™, there are no large pierce points and far less potential for part distortion. That's particularly important on thinner metal-spun and stamped parts, both for accuracy, and cosmetic appearance. The pierce time is very fast enabling the LASERDYNE 430 to cut closely spaced features in thin metal without heat distortion. Also, there is less piercing spatter.

Another nice feature that Lasercraft is starting to use are the standard focusing lens assemblies including right angle assemblies for processing inside cylinders having diameters as small as 60 mm. SmartPierce works equally well on the wide range of materials, including cold rolled steel, aluminum, and stainless steel, from the thinnest (0.06 to 0.120-inch) to the thickest (from 11 to 16 gauge). Part diameters include the smallest to 14 inches in diameter.

/// Last week, a customer came to us on a Friday morning with prototype parts needing hole placement. Using our LASERDYNE 430, we processed and delivered the parts by the afternoon.



**AUTOMATION NOW AND FOR THE FUTURE**

In addition to 5-axis laser cutting, Lasercraft designs, builds and operates automated machining processes for customers. The company has plans for automating its LASERDYNE 430 with BeamDirector (and a second one soon) for automated load/unload for its long run operations.

"The LASERDYNE 430 system is designed for automation with easy access from front and both sides," said Claycomb. "It's really helped make our laser operations be more efficient and productive at a time when our customers and the marketplace demand it." Several months ago, Lasercraft decided to trade in their LASERDYNE 780 machine for the LASERDYNE 811 with a turn table to support their high volume parts and further improve their production volume.

/// It's really helped make our laser operations more efficient and productive at a time when our customers and the marketplace demand it.



**LASERDYNE® 430**

**A FLEXIBLE LASER MACHINING PLATFORM FOR A WIDE RANGE OF HIGH-PRECISION APPLICATIONS**

Prima Power Laserdyne manufactures and markets LASERDYNE systems for precision laser cutting, welding, and drilling systems for aerospace, medical device, automotive and precision component manufacturers worldwide. Its sales and service network is active in over 80 countries, with direct presence and through specialized dealers.

Since 1981, Prima Power Laserdyne has been a resource for manufacturers requiring precision laser processing solutions around the world. The company is recognized for its ability to assist in the development of novel laser processing solutions for the most difficult applications, including 3D welding, drilling, and cutting.



**Above:** At Lasercraft laser cut parts are manufactured from a few prototypes to 10,000 units a month.

**Bottom:** LASERDYNE 430 installed at Lasercraft Inc.

LASERDYNE 430 with BeamDirector cutting shaped holes and contours.





# BY YOUR SIDE WHEREVER YOU ARE

by Massimiliano Tarable

Prima Power  
After Sales Trade  
& Marketing Manager



Our mission is to be your partner for a successful future, making your manufacturing environment as productive as possible. A service staff of over 600 people, including over 400 engineers, work hard every day to achieve this goal, providing you technical support and assistance, digital services, preventive and extended care service agreements, training and consulting services, spare parts, tools and machine enhancement modules.

#### QUICK, PRECISE, EFFICIENT

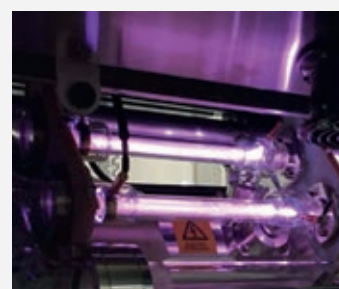
Our international field service staff, made of qualified technicians, with skills in all technologies, is at your disposal for detailed technical analysis. Furthermore, you can remotely connect your machine with our remote support, carry out a complete and effective diagnosis, and if it is necessary to replace a spare part on your machine, one of our service engineers will promptly be at your plant to restart the production of your machine. In case of extremely complex cases, Prima Power set up the «tech support escalation» that immediately involves the most skilled team to get the best solution in the shortest possible time.



#### ADVANCED TECHNOLOGY AT THE SERVICE OF EFFICIENCY AND SAVINGS

In line with industry 4.0, we help our customers build smart and connected factories with machines and systems which, equipped with sensors, are able to return a large amount of information (big data) for advanced diagnostics for superior efficiency, sustainability and cost effectiveness.

Discover the complete range of Prima Power Services by downloading our new brochure from the QR Code on the next page.



#### Active PROMO:

Until the end of the year we promote the following services:

- Upper tools kit for bending machines to keep the quality of your product high
- Resonator refurbishment of Convergent CO<sub>2</sub> laser sources for a long life and high performances

For further information or to activate the promotion, please contact your service center.



## SERVICE BOOK KEY TO BETTER PRODUCTIVITY

Thanks to our worldwide service, we will support you wherever you are.

Our worldwide service network consists of almost 40 subsidiaries and dealers that cover different areas and provide technical support, training, service intervention, and spare parts.



We have so many ways to be close to you.  
Use the QR code and discover  
all our services or go to  
<https://news.primapower.com/service-book>





