

CUSTOMER PROFILES

NEW TECHNOLOGY

PRODUCTIVITY

FLEXIBILITY

POWER LINE

2022
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VOLUME
#15

SUPPLY CHANGE

NEW PERSPECTIVES
ON THE SUPPLY CHAIN



POWER LINE is a Prima Industrie publication.



TEAMING UP FOR FUTURE-PROOF SUPPLY CHAINS



THE WORLD OF MANUFACTURING IS UNDERGOING RADICAL CHANGES. THE COMBINED EFFECTS OF A SEQUENCE OF EMERGENCIES AND DISRUPTIONS, WHICH HAVE IMPACTED ALL SECTORS GLOBALLY, AND THE ONGOING INTRODUCTION OF NEW TECHNOLOGICAL SOLUTIONS HAVE COMPLETELY TRANSFORMED THE WHOLE MARKET.

What are supply chains' new perspectives? This is the central topic of the cover story in this issue of Power Line, which analyzes crucial trends such as the transition from the traditional linear model to an integrated and widespread ecosystem, the importance of tools that enable greater responsiveness, agility, and rapid adaptability to a constantly changing context, and the fundamental role of digitalization and sustainability. The customer stories in the following pages confirm that choosing partners able to efficiently integrate smart solutions and technological expertise into their clients' value chain is key to succeed.

While supply chains are becoming more and more digitalized, human relations continue to bring strong value into our work. After a long period of forced virtual interactions in business relationships and in trade events, we now enjoy again the pleasure of face-to-face meetings and real handshakes. In October, the return of EuroBLECH – live in Hannover, after four years – was welcomed as a turning point, and the Prima Power team took part in the event with sincere enthusiasm for this “newfound”, in-person exhibition that brings together the entire international sheet metal working supply chain. With the same passion, in November we also took part in a successful edition of the FABTECH trade show in Atlanta.

An essential human factor for a future-proof supply chain is competence. Machines and processes are smart because they are designed, built, programmed, used and maintained by skilled people. In order to better satisfy our customers, we feel it is our responsibility to help train qualified personnel and guarantee lifelong learning to keep up with technological evolutions. On this front, we are also working on innovative projects, joining forces with other business and education organizations, to prepare the experts of the manufacturing of the future. Once again, teaming up is essential to win.

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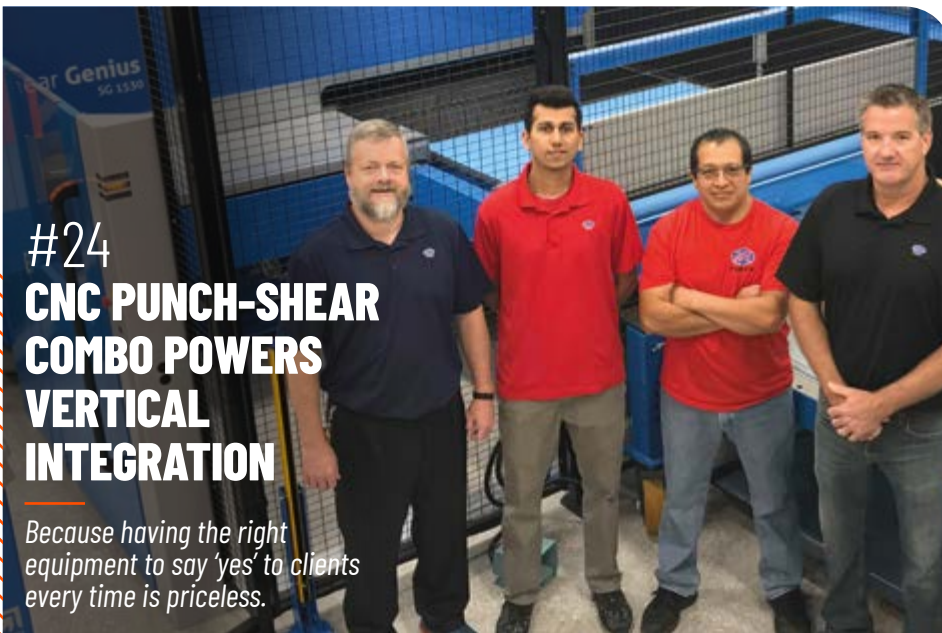
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*Stremet Oy grows sustainably,
thanks to the cooperation
of valuable partners like Prima Power.*



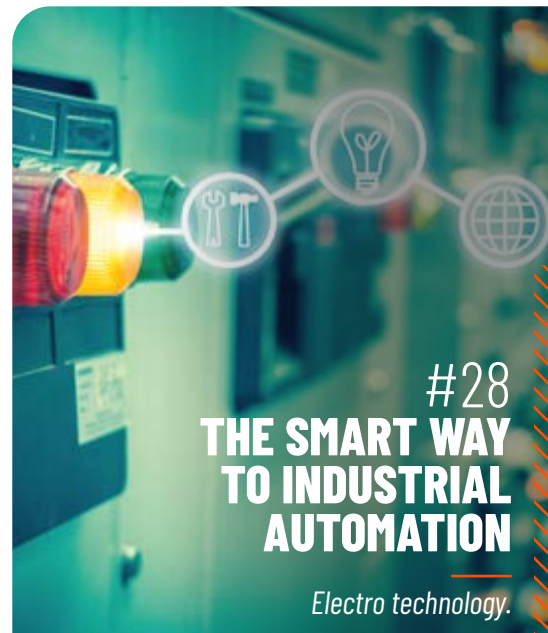
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COVER STORY

SUPPLY CHANGE

NEW PERSPECTIVES ON THE SUPPLY CHAIN

SMART MANUFACTURING, THE REVOLUTION IS ON

The rise of Industry 4.0 has represented a real revolution for the global production system. The increasingly decisive presence of automation systems – designed to allow an increase in production and a simultaneous improvement in work conditions – has transformed the industrial world and the way we think about the entire production system. In many cases, and following a strong and steadily increasing trend, the manufacturing plants of the recent past have given way to smart factories, characterized by new technologies that bring together people, machines and tools, playing a crucial role for sustainability. Digitalization is certainly a central element in this constantly and rapidly evolving context, because it offers the supply chain a strong opportunity for evolution in terms of speed, scalability, AI, cloud, connectivity and interconnection. In recent years, a real ecosystem has been forming in which – precisely through innovative IT and technological tools – each player in the process is connected to the other in an integrated, flexible and dynamic way. Thanks to digital technologies, we are witnessing greater integration between the systems in suppliers' and in clients' companies, leading to improvements in processes and products to better respond to new needs expressed by the market. Also in terms of sustainability: today's supply chain considers attention to sustainability – both environmental and economic – as one of its key factors. It is also (if not above all) by optimizing the management of these processes that we can win the challenges posed by the current competitive scenario.


THE SUPPLY CHAIN IN THE CURRENT CONTEXT

Today, the supply chain is a complex and articulated system that differs substantially from the supply chain model that could be observed only a decade ago. Although the new paradigm is based on greater sustainability, as well as flexibility and agility of the actors involved, we are far from striking out the risk that the mechanism will suffer major setbacks. In the past two years, first with the pandemic and then with the war casting its shadow over the whole world, we have exposed the vulnerability and the delicate balance in which manufacturing industries and the production sector in general operate today. Current conditions are bringing out, in some cases with dramatic clarity, the importance of developing strategic and technological solutions that allow today's and tomorrow's industries to overcome obstacles in an increasingly effective, rapid and sustainable way. For businesses, any interruption or slowdown in the production flow represents a major critical issue: the scarcity and cost of raw materials, logistical problems, and the absence of systems capable of connecting suppliers and customers in a fluid and efficient way are only some of the most critical factors to be addressed now and probably also in the coming years. By taking on an even more general perspective, we can see how the climate crisis, cyber threats and geopolitical tensions are creating a context in which it is extremely important to design solutions capable of ensuring that companies have the greatest possible solidity.

**THANKS TO DIGITAL TECHNOLOGIES, WE ARE WITNESSING
GREATER INTEGRATION BETWEEN SYSTEMS, LEADING TO
IMPROVEMENTS IN PROCESSES AND PRODUCTS TO BETTER
RESPOND TO NEW NEEDS. ALSO IN TERMS OF SUSTAINABILITY.**



FROM CHAIN TO NETWORK: A SHIFT IN PERSPECTIVE



Looking at the current scenario, it is clear that the term “supply chain” – introduced by British manager Keith Oliver more than 40 years ago – has given way to a new paradigm. While the supply chain made linearity its conceptual cornerstone, today we are witnessing a more complex system in which individual players are connected in a branched and widespread network. In this sense, it would be more correct to speak of a “supply network”: a dynamic and flexible system that requires a profound rethinking of the logic underlying its correct functioning. In this new model, software plays perhaps the most decisive role. It is through advanced and constantly evolving software that it is possible to efficiently manage the huge amount of data that allows the entire network to function and meet the needs of an increasingly demanding market in terms of speed, efficiency and safety. In this context, sustainability represents one of the key factors of the modern supply chain. To meet this need, companies must equip themselves with specific tools to establish their presence within the new competitive scenario, also through the adoption of more sustainable practices and technologies that help make the entire supply chain lighter and more environmentally aware.

PREDICTIVITY AND RESILIENCE

The first step in limiting the risk factors that undermine the correct flow of new supply chains is to implement tools capable of predicting the risks themselves. Obviously, greater predictive capacity offers businesses the opportunity of avoiding dangerous and costly interruptions, starting from the production phase. Given the number of factors that come into play during this phase and the complexity of the overall context, it is essential to invest in cutting-edge software that is able not only to foresee any problems, but also to provide for their resolution. There is a lot of room for improvement in this field and it is generally accepted that predictivity is one of the issues on which all industrial organizations that strive to lead the near future will focus their efforts. Companies will increasingly need to create management infrastructures capable of guiding a proactive response to these risks. These responses could include structural changes to the supply chain, as well as the development of detailed contingency plans for exceptional high-risk events. The introduction of resilience metrics among the supply chain’s KPIs, for example, will help industries ensure the proper functioning of their supply chains by increasing efficiency and decreasing vulnerabilities. In this sense, resilience will be one of the core values for the industry of the future. The ability to adapt quickly and effectively to critical issues is a key to success for any productive business. In summary, the more companies will be able to predict risks, the more they will also be capable of designing solutions to overcome them.

THE CLOUD

Digitalization and the strengthening of IT tools play a leading role within the smart factory model. In particular, the cloud represents a crucial element to strategically manage the production and logistics chain and integrate all the steps necessary for process optimization. In recent years and at increasing speed, the cloud is becoming the ideal tool to meet the challenges of the industry of the future. While a significant share of services continues to be located in traditional data processing centers, more and more companies rely on cloud technology to manage most of their services. There are many advantages that make the cloud a tool destined to play a decisive role for the industries of the future, and the search for increasingly advanced solutions for its development is constant. The cloud favors speed, agility and scalability, and helps reduce production times and costs, also with a view to reducing waste during processing. The cloud makes companies more connected both internally and towards their suppliers and clients, and is a key ally to designing, manufacturing, and providing customized products and services, thus helping to increase customer loyalty.

AUTOMATION AND FLEXIBILITY

Automation continues to play a central role for the industry of the future: it is thanks to automation that companies can operate minimizing errors, optimizing time and improving the quality of work for the people involved in the production process. Automation also

allows for the identification and consequent resolution of critical issues, avoiding “bottlenecks”, delays and interruptions that undermine overall efficiency. While traditional supply chains aimed at achieving stability, reliability and cost reduction, today’s model will have to be much more dynamic, agile and integrated. The ability to predict, process and respond to new market needs will play a large part in the success of any company in the ever-evolving manufacturing industry.

GRADUAL, NOT RADICAL CHANGE

It takes time to accomplish any great transformation. And only a strategic and integrated approach can truly change a process as complex as the one underlying the supply chain. Resilience, agility, flexibility are the cornerstones of a paradigm shift that is bound to affect the entire manufacturing industry sector and beyond in the coming years. Digitalization will increasingly be at the center of this transformation, but the vision of the people called to decide on the strategies to be adopted will be the factor playing the most important role. Targeted investments, careful business planning and the implementation of software solutions that can also be adapted to pre-existing management systems will allow companies to establish themselves in an increasingly global and challenging scenario. The answer for them will not be in drastic and radical changes in the supply chain, but rather in a gradual journey that, step by step, aims to achieve important goals for the future, without jeopardizing present productivity.

WHILE TRADITIONAL SUPPLY CHAINS AIMED AT ACHIEVING STABILITY, RELIABILITY AND COST REDUCTION, TODAY’S MODEL WILL HAVE TO BE MUCH MORE DYNAMIC, AGILE AND INTEGRATED.

A COMPACT SOLUTION FOR CUSTOMER SUCCESS

AUTOMATED FABRICATING LINE PROVIDES INCREASED CAPACITY AND QUALITY FOR ALBERTA MANUFACTURER

**SCOTT SPRINGFIELD MFG, INC. IN CALGARY, CANADA,
IS A LEADING SUPPLIER OF CUSTOM AIR HANDLING
SYSTEMS, UTILIZING THE LATEST TECHNOLOGIES TO
PROVIDE ITS CUSTOMERS WITH A FLEXIBLE SOLUTION
TO THEIR AIR HANDLER NEEDS.**

Material flow can be arranged in flexible ways to transfer parts directly to automatic bending, to balance the different time requirements of bending and punching/shearing, to exit material from the system and to bring new material into it.



Scott Springfield Mfg. works closely with sales representatives, building owners, facility managers, engineers, and contractors to design reliable, safe, and energy-efficient air handling packages. Always following the same philosophy upon which the company was founded: *Develop market partnerships, optimize equipment design, maximize performance, control final cost, and deliver a product you can be proud of.*

According to Nathan Smith, director of sales & business development, the company was founded in 1978, primarily for HVAC products for the hospital and oil industries in Alberta and British Columbia. *"Today, we have greatly expanded our market and our client list includes high-profile medical facilities, laboratories, institutional facilities, government agencies, data centers, as well as industrial organizations in oil and gas, mining, aerospace, and anywhere special materials or special requirements are needed on the air handling side."*

MANUFACTURING

The HVAC products are manufactured in one of the two facilities in Calgary. One is 120,000 square feet and the other, the main fabrication area, is 145,000 square feet. A total of 250 employees work in the two facilities. Over the years, the fabrication equipment has included manual shears, presses, notching machines, press brakes, and a panel bender. However, when expanding the second facility in 2021, management decided to automate the sheet metal fabrication area and chose the PSBB: a compact, flexible manufacturing system from Prima Power that combines punching, shearing, buffering, and bending to process blank sheets into ready-bent, high-quality components automatically. The combo storage allows processing of components from a variety of materials, which can be changed, as programmed, automatically. The sheets are transferred into a Shear Genius SGe servo-electric punch/shear cell. After shearing, the components are sent to buffering and subsequent bending in an Express Bender automatic servo-electric bending cell.

With the buffering function material flow can be arranged in flexible ways to transfer parts directly to automatic bending, to balance the different time requirements of bending and punching/shearing, to exit material from the system and to bring new material into it.

SERVO-ELECTRIC SHEAR GENIUS

The SGe is able to perform the most demanding jobs with minimal set-up times and lights-out unmanned operations. Shear Genius increases material productivity through efficient and versatile nesting programs. Automating loading, punching, forming and upforming, unloading, sorting, and stacking results in a dramatic reduction in material scrap and manual labor while increasing productivity. The picking and stacking robot (PSR) provides high flexibility. Parts are always placed directly to the stack and never dropped. The PSR with buffering functions allows reorganization and optimization of production flow from the Shear Genius to the EBe.

The SGe eliminates wasteful skeletons and costly secondary operations such as deburring. Nibble edges on the part exteriors are eliminated through the use of the integrated right-angle shear. In the SGe, the sheet is loaded and squared automatically, without manual operations, ensuring very accurate parts.

"We need excellent accuracy and speed on punching multiple panels with many holes," says Javier Vazquez, manufacturing director. *"On one panel it used to take us 40 minutes to drill the holes. On the Shear Genius it takes two minutes. Any part that we can automate and still have a consistent and reliable dimension with the same quality, we immediately put on the PSBB."*

/// The SGe is able to perform the most demanding jobs with minimal set-up times and lights-out unmanned operations.

SERVO-ELECTRIC BENDING

The EBe servo electric Express Bender is a bending solution designed specifically for each fabricator's production requirements to achieve maximum productivity, quality, and repeatability. The bending operation is fully automated, from the loading of flat punched parts to unloading of the finished product. Prima Power EBe provides the high bending quality required in demanding applications. *"The efficiency of the EBe allows us to take a job that would require 10 hours on a manual press brake and complete it in one,"* says Vazquez. *"We expect this 10 to 1 ratio to rise much higher with additional experience on the machine."*

"We produce hundreds of panels on the EBe and they all come out with the same quality," adds Byron Paegel, production supervisor.

Scott Springfield also purchased a Prima Power eP servo-electric press brake. The eP-Brake features the advantages of high acceleration, deceleration, and fast response times of the servo-electric drive system. Compared to conventional brakes, it can considerably increase productivity and reduce cycle times by 30% and more. *"We fabricate some parts that just get punched and sheared and then manually bent on the press brake due to the size of the components,"* explains Vazquez.

/// The efficiency of the EBe allows us to take a job that takes 10 hours on a manual press brake and complete it in one.

NEW MARKET CHALLENGE

"The opportunity to enter new markets required much more capacity than we had prior to our purchase of the PSBB," explains Vazquez. "The automated Prima Power line allowed us to increase our production to meet this challenge and still have additional capacity with just one line."

"Floor space was another critical decision we had," adds Smith. "Every product we manufacture is custom and varies in layout and size - up to 150' x 44'. All those separate processes take up a lot of floor space. The PSBB's compact footprint really helped us shrink that down and gave us the area to build more units."

/// The training and service from Prima Power has been great. The technicians are skilled people and they are available. ///

TRAINING & SERVICE

"The training and service from Prima Power have been great," concludes Paegel. "The technicians are skilled people and they are available. When you call the support line, they pick up and transfer you to the right person. You get the problem solved and are back up and running quickly."

THE BOTTOM LINE

"The PSBB automation has allowed us to at least double our capacity and will eventually triple our output," concludes Vazquez. "It will also allow us to capture more market share and be able to better service our customers today and in the future."

/// The PSBB automation has allowed us to at least double our capacity and will eventually triple our output. ///





From left to right:
Kevin Whittaker, designer;
Byron Paegel, production
supervisor;
Nathan Smith, director
of sales & business
development;
and Javier Vazquez, director,
manufacturing.

"Automation is really the way of the future in manufacturing," emphasizes Kevin Whittaker, designer. "Our operators can improve their careers by learning to utilize machines like the Shear Genius and EBe."

"The PSBB has supported our growth and improved our bottom line," says Smith. "It has affected not only the panel creation but removed additional cutting and layout requirements that we were completing down the line."

"The PSBB has become a focal point at Scott Springfield," notes Paegel. "When one of our customers views the PSBB, there are smiles on their faces when they see how a part is transformed from a flat sheet of material to a beautifully-bent part at the end of the line."

*Automation is really
the way of the future in
manufacturing.*

The bending operation is fully automated, from the loading of flat punched parts to unloading of the finished product. Prima Power EBe provides the high bending quality required in demanding applications.

The Prima Power PSBB is a compact Flexible Manufacturing System that allows a direct flow from punching/shearing to the bending cell.



ALWAYS READY TO EVOLVE

MODULAR TECHNOLOGY AND AUTOMATION TO STAY ONE STEP AHEAD

RIZZATO SPA, AN ITALIAN LEADER IN SUBCONTRACTING FOR THE PROCESSING OF STAINLESS STEEL AND OTHER MATERIALS FOR SEMI-FINISHED AND FINISHED PRODUCTS, IS IN CONSTANT EVOLUTION FOR EXCELLENCE. AT THE BASE OF ITS GROWTH, A STRONG ENTREPRENEURIAL SPIRIT AND A CONTINUOUS COMMITMENT TO ALWAYS BE AT THE FOREFRONT OF PRODUCTION TECHNOLOGIES AND AUTOMATION. THE FARSIGHTED CHOICE OF A MODULAR AUTOMATIC STORAGE SOLUTION HAS KEPT THE COMPANY ONE STEP AHEAD FOR OVER 20 YEARS, ADAPTING TO GROWING PRODUCTION NEEDS.

Rizzato SpA was founded in 2002 and has established itself in the subcontracting sector of sheet metal processing, working especially with stainless steel. The company's core business is the processing of aesthetic details and components for a variety of sectors including hospitality, household appliances, wellness, hospitals and industrial applications.

At its headquarters in Camposampiero, near Padua, 89 employees work in a production area of 14,000 square meters; 30% of its turnover – a total 23.5 million euro in 2021 – is generated by exports.

/// We stand apart for high technological standards and the incessant search for the best technology on the market.



From left to right:
Simone Zanchin, product quality manager at Rizzato;
Sergio Rizzato, founder of the company;
Edoardo Rizzato, head of production planning.



"We stand apart in our field for high technological standards and the incessant search for the best technology on the market," explains Edoardo Rizzato, son of founder Sergio Rizzato and head of production planning. "This continuous updating allows us to keep up with the evolution of our reference sectors. We stay ahead of the competition because all our collaborators apply their experience and knowledge in synergy, knowing they are part of a broader reality with a common goal. Respect and enhancement of everyone's skills have allowed us to grow."

The company has always identified process automation as a key benefit leading to superior productivity, efficiency and quality. "Prima Power's technology was vital to automate our production

processes," explains Rizzato, who currently has nine Prima Power systems at work. The cutting department is made up of six Prima Power systems. Four 2D laser machines and one combined punching + laser cutting are connected to the Night Train automatic storage with 530 drawers for a length of about 70 meters, which can store up to about 1,590 tons of steel. In operation at the same department, but not connected to the Night Train, also is a combined punching + shear SG6.

Two Prima Power servo-electric panel benders are installed in the bending department. "Everything is perfectly connected and remotely controlled by the Technical Office, thanks to software packages that allow us to manage the entire production process." says Rizzato.



The pursuit of excellence for customer satisfaction is a daily goal for Rizzato. "We use the Prima Power machine fleet to manufacture all quality aesthetic products. This has allowed us to increase product reliability and therefore boost the trust customers have in us," explains Simone Zanchin, product quality manager for Rizzato. "Precision, quality and repeatability are essential in the fields we serve: no defects are allowed."

"Sheet metal cutting and bending technologies are constantly evolving," continues Zanchin. "We see a constant search for shorter production times. Thanks to our high level of automation, we are able to satisfy even the most challenging requests, producing more complex pieces in less time and with higher quality. Sustainability is also becoming increasingly important, and the high energy efficiency of Prima Power systems allows us to save resources with a twofold benefit, for the environment and for the company's bottom line." And Rizzato aims to further improve quality standards, also by achieving new environmental and energy certifications, and to grow by consolidating partnerships both in Italy and abroad.

"Our company has chosen to invest in Prima Power technologies because it has been the only supplier able to meet all our technological needs in every work phase," adds Rizzato.

"We were looking for reliable automation to work 24/7, and Prima Power allowed us to achieve our goal. For a company like ours, which is constantly evolving, modularity is another crucial factor in investment decisions: we embraced the Night Train automatic storage concept as far back as 2003, with different connected machines. We updated and extended the storage system over the years, always keeping up with our production needs."

/// For a company like ours, which is constantly evolving, modularity is another crucial factor in investment decisions.



Rizzato's automatic storage system has been updated and extended twice in 20 years and is currently connected to five Prima Power cutting machines.



Above:
Decorative door for domestic refrigerator produced by Rizzato SpA
Bottom:
Consumer oven front panel, manufactured in the Rizzato factory.





"Our 20-year collaboration with Rizzato is based on mutual trust and a spirit of partnership," says Cristiano Porrati, Vice-President South SEMEA Sales for Prima Power. "We have always been proud to work with a company that believed in the most innovative technologies and automation from the very beginning, making bold choices that later proved successful and are still up to date. To give one example: their Night Train automatic storage was extended twice over the years, connecting to an increasing number of machines. This is proof of how our modular solutions can grow with our customers, and adapt as their needs change."

Over time, the company has added machines or replaced those connected to the storage – the beating heart of the cutting department – with increasingly advanced models. Lately, it has also automated the picking and sorting of finished parts with Prima Power's LST system. And Rizzato is planning to expand its fleet. *"We are considering the purchase of the Laser Genius+ machine, which would allow us to increase our performance in the cutting process, and also want to invest in press brakes,"* explains Rizzato.

The partnership approach is a value Rizzato and Prima Power share: *"With plants like ours, effective technical support and a collaborative and proactive attitude from the supplier is crucial,"* concludes Rizzato. *"In all these years, Prima Power's support has always been clear and reliable, from pre-installation to after-sales."*

In all these years, Prima Power's support has always been clear and reliable, from pre-installation to after-sales.



Scan the QR code to watch the video interview. The full article appeared on Lamiera magazine (December 2022).



All Prima Power laser cutting machines installed in the Rizzato plant are equipped with automatic solutions for material handling and are connected to the automatic storage.

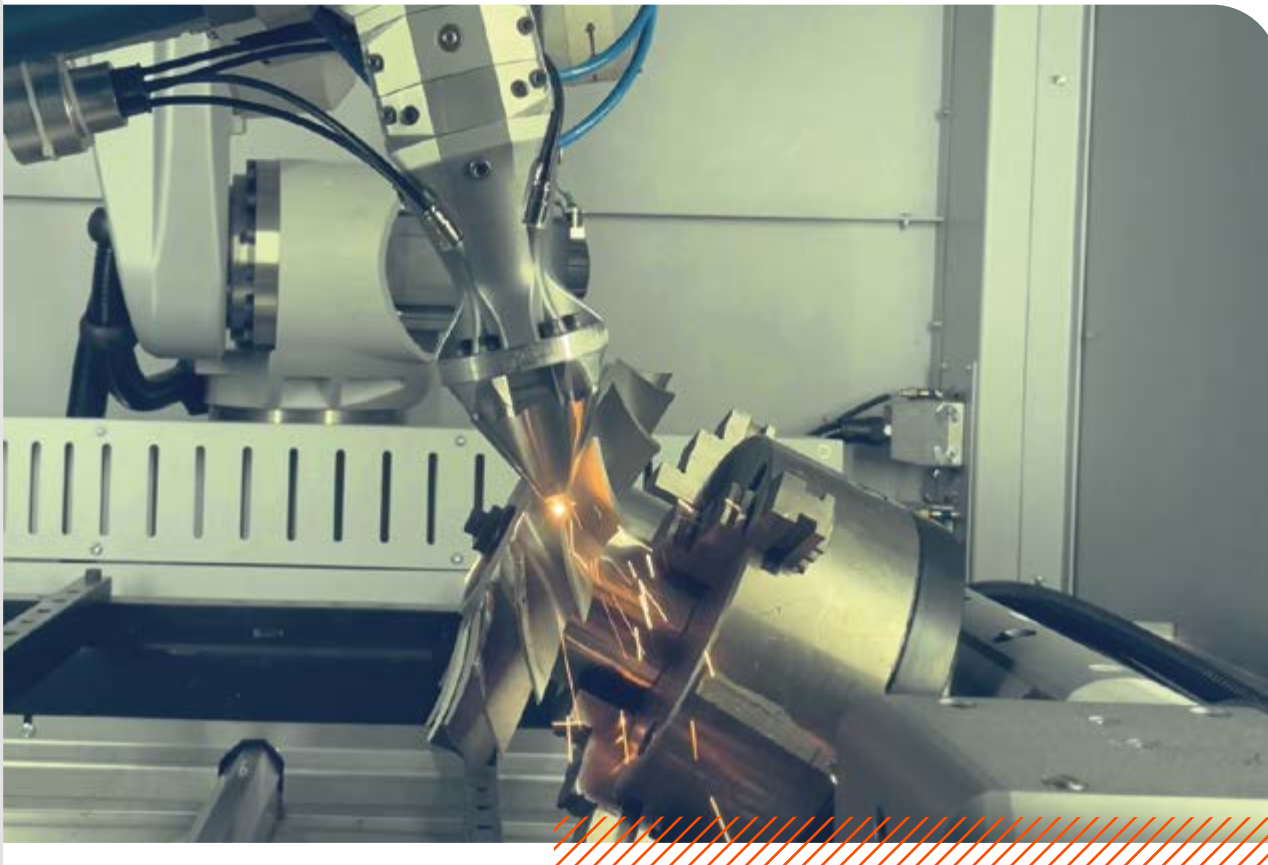


SERVICES THAT ADD VALUE

A NEW PLATFORM TO MAKE ADDITIVE MANUFACTURING MORE FLEXIBLE, DIGITAL AND ACCESSIBLE THAN EVER

Services in the supply chain are taking on an increasingly crucial role in the manufacturing sector. It is more important than ever for suppliers to deliver services and solutions that integrate the traditional product offering, providing customers with greater added value and strengthening the partnership relationship with them. A concrete example of this approach is the new marketplace launched by Prima Additive, to facilitate and simplify access to additive manufacturing technologies. The platform was developed in collaboration with Morphica, one of the leading 3D printing services in Southern Italy.

/// *Prima Additive Marketplace facilitates and simplifies access to additive manufacturing technologies, including the latest addition to the Prima Additive range of DED products, IANUS.*



The IANUS robotic cell can be also configured to perform two different processes (Powder-based DED, Wire-based DED, Laser. Welding, Laser Hardening) in the same machine.

Through the “Prima Additive Marketplace” it will therefore be possible to request the manufacturing of components or a dedicated consultancy for an application study to explore the potential of additive technology on specific customer cases, analyzing components’ re-engineering opportunities and identifying the main advantages and possible complications.

THE NEW IANUS ROBOTIC CELL

Through the marketplace, it is possible to request the printing of components utilizing metal additive technologies, Powder Bed Fusion and Direct Energy Deposition, including the latest addition to the Prima Additive range of DED products, IANUS.

Like the iconic two-faced Latin deity from which it takes its name, the IANUS robotic cell can be configured to perform one or two different processes (Powder-based DED, Wire-based DED, Laser Welding, Laser Hardening) in the same machine, using one or more laser sources on the same robotic arm. Thanks to the possibility of installing two dedicated warehouses, it is possible to switch from one application to another simply by changing the head installed on the robotic arm inside the machine itself.

This system presents a series of functional solutions for its inclusion in the factory of the future. In fact, it was developed by Prima Additive in collaboration with Siemens, a leading company in automation and digitalization with specific skills in the field of robotics and additive manufacturing. One of the results of this collaboration is the integration of the robotic arm and CNC through the Sinumerik Run MyRobot / Direct Control function, to



IANUS is the latest addition to the Prima Additive range of Direct Energy Deposition products.

allow the machine user to interface with the robotic cell using a single control console and the typical instructions of a machine tool, without having to learn an additional programming language specific for robots.



Visit the Prima Additive Marketplace



Through the “Prima Additive Marketplace” it is possible to request the manufacturing of components with Prima Additive machines.

THE FUTURE IN GROWTH AND PARTNERSHIPS

**STREMET OY GROWS SUSTAINABLY,
THANKS TO THE COOPERATION
OF VALUABLE PARTNERS LIKE PRIMA POWER.**

**STREMET OY IS A FINNISH
SUB-CONTRACTING COMPANY BASED
IN SALO, SOUTH-WESTERN FINLAND,
WITH OVER 25 YEARS OF SOLID
EXPERIENCE IN ITS FIELD.**

Stremet's customers include manufacturers of ventilation machines, metal furniture and sauna stoves, but the company also has a lot of seasonal custom productions for numerous and diversified clients. Such versatility is made possible by a wide range of machines, allowing Stremet to make a variety of sheet metal products with sheet thickness up to 20 mm. With the help of professional and skilled staff, the company is able to design and manufacture even more challenging objects. The goal is continuous development and growth, in keeping with corporate values: short delivery time, high reliability and good customer experience.

The factory of Stremet Oy in Salo (Finland).





Mikko Fiskaali
the CEO and partner of Stremet Oy.

THE BENEFITS OF A LONG PARTNERSHIP

The cooperation with Prima Power began in 1995 when Stremet was founded, and the company bought its first Finn-Power turret punch press. Since then, the company has already purchased about ten more, with six F5 and A5 punching machines still in active operation. The machinery fleet has also been complemented by a Prima Power Shear Brilliance punching and shearing combi machine and BCe Smart automatic panel bender. Since there was a lot of demand among customers for thicker parts as well, the company decided to also invest in a laser machine with automation. The new technology further increased demand, so much that the company made another similar investment shortly after the first one. Thus, the Platino laser machine with automatic storage was soon followed by a Laser Genius, also equipped with automatic storage. In addition, two eP1336 press brakes for the edging of thicker and longer cuts were purchased.

In the autumn of 2021, the company invested again in Prima Power's technology with the purchase of a second semi-automatic BCe Smart bending machine and a Combi Genius machine, which combines punching and laser cutting, as well as two eP press brakes now with a bending width of 2 m. Now the company is able to better meet the demand for diverse parts where manual steps were previously needed. Press brakes were acquired to patch up the bottleneck that had been observed in bending.

Prima Power has been a good and reliable partner for Stremet.

"We are fully satisfied with the service received. We have always been offered a solution that is the most suitable for our needs out of many options. Often going above and beyond the technology we had first thought of ourselves," says Mikko Fiskaali, the CEO and partner of the company.

"Over the years, Prima Power has actively suggested to us the best solutions with which we could meet the needs of our customers and develop our production," confirms Janne Männistö, business director and partner at Stremet Oy.

/// We have always been offered a solution that is the most suitable for our needs out of many options. Often going above and beyond the technology we had first thought of ourselves.



THE FACTORY OF THE FUTURE

Fiskaali sees the operation of a future factory as a straightforward process in which work stages have been refined into an optimal supply chain using an ERP system. The process starts with the incoming order and ends with invoicing. In the office, digitizing and automating order and image processing as far as possible is an advantage. When physical placement and internal logistics are efficient, the waste of time in production is also minimized by limiting the precious minutes spent on moving parts or searching for tools at the workstation, for example. Workstations should be as close to each other as possible and preferably so that the goods come from one end of the factory and leave from the other end. This way the factory can achieve a good flow efficiency, operations run smoothly and cost efficiency increases. In addition, automating operations such as loading, unloading, sorting and stacking makes things infinitely easier. At Stremet, automation is used in all work steps as much as possible, within the limits allowed by the batch size.

/// *Eliminating waste increases sustainability, workflow and safety at work: features that all customers value more and more.*



"I see the factory of the future as a streamlined process with as little time and material waste as possible. Furthermore, eliminating waste using LEAN methods increases sustainability, workflow and safety at work. These three factors are features that all customers value more and more. When production waste is minimal, flow efficiency high, work smooth, operation sustainable and occupational safety at high level, the subcontracting company that controls these processes will likely place orders with high delivery reliability, good customer satisfaction and a strong overall result. This is a process we develop at Stremet with improvements every day," says Fiskaali.

/// *In the future, more and more versatility will be required from subcontractors.*



Today, customers want the strongest possible capabilities under one roof. In the future, more and more versatility will be required from subcontractors. Stremet's goal is therefore to develop the 22,000-m² property to be as diversified as possible. "We are already thinking about moving the paint shop to the same property, as well as finding a tube laser company, a welding company and a design agency as tenants. The goal is to have a so-called smart hub in Salo: a subcontracting factory that provides everything that can be manufactured and processed from metal," Fiskaali adds.



Janne Männistö, business director and partner at Stremet (right) while checking the parts bent with the Prima Power BCe Smart bending center.



The Combi Genius CG 1540 combines punching and laser cutting.

THE FUTURE IS SUSTAINABLE

Sustainable development is an important value that is growing in relevance all the time. It is not only a crucial issue in and of itself, but also an argument with measurable economic impacts. On top of this, people are becoming more aware of sustainability and are demanding companies make an effort in this direction.

Stremet wants to be involved in areas that tackle climate change and invest in environmentally friendly energy production as well as in low-carbon construction. These are the megatrends of the moment, and the lifeblood of the future.

Furthermore, the company is well aware that impact must be assessed in financial and environmental as well as in social terms. After all, the factory's most valuable asset are its employees and, in a context of intense competition to hire the most skilled workers, Stremet wants to hold on to competent people.

"We strive to make Stremet a nice company where work is enjoyable. We invest in our corporate image and hope that it will also influence people. We want to make tasks as pleasant as possible, for example by eliminating heavy work stages through automation and robotics, as well as implementing work rotation and training staff. Every employee is genuinely valuable and that is reflected in our corporate culture," Fiskaali says.

It this framework of sustainability, the company is able to set for itself strong and strategic goals for development and growth: the revenue growth target is 20% for next year, with a long-term aim to double the current turnover of around €12 M.

"Our goal is to increase the company's recognition: in the long term, we want to be Finland's most sought-after subcontracting partner in the sheet metal industry," concludes Fiskaali.

Sustainable development is an important value that is growing in relevance all the time. It is not only a crucial issue in and of itself, but also an argument with measurable economic impacts.



Watch the success story video



The panel bender installed at Stremet is equipped with a robot to handle loading and unloading.



CNC Punch-Shear Combo POWERS VERTICAL INTEGRATION

**BECAUSE HAVING THE RIGHT
EQUIPMENT TO SAY 'YES' TO CLIENTS
EVERY TIME IS PRICELESS.**

TRADITIONALLY A MANUFACTURER OF TRANSFORMERS, JST POWER EQUIPMENT HAS RECENTLY CHARGED UP A NEW MANUFACTURING LOCATION IN LAKE MARY, FL, TO PRODUCE A NEW PRODUCT LINE: AIR-INSULATED SWITCHGEAR. A CHALLENGE MET WITH SUCCESS, THANKS TO AN AUTOMATED PUNCH-SHEAR COMBINATION MACHINE.

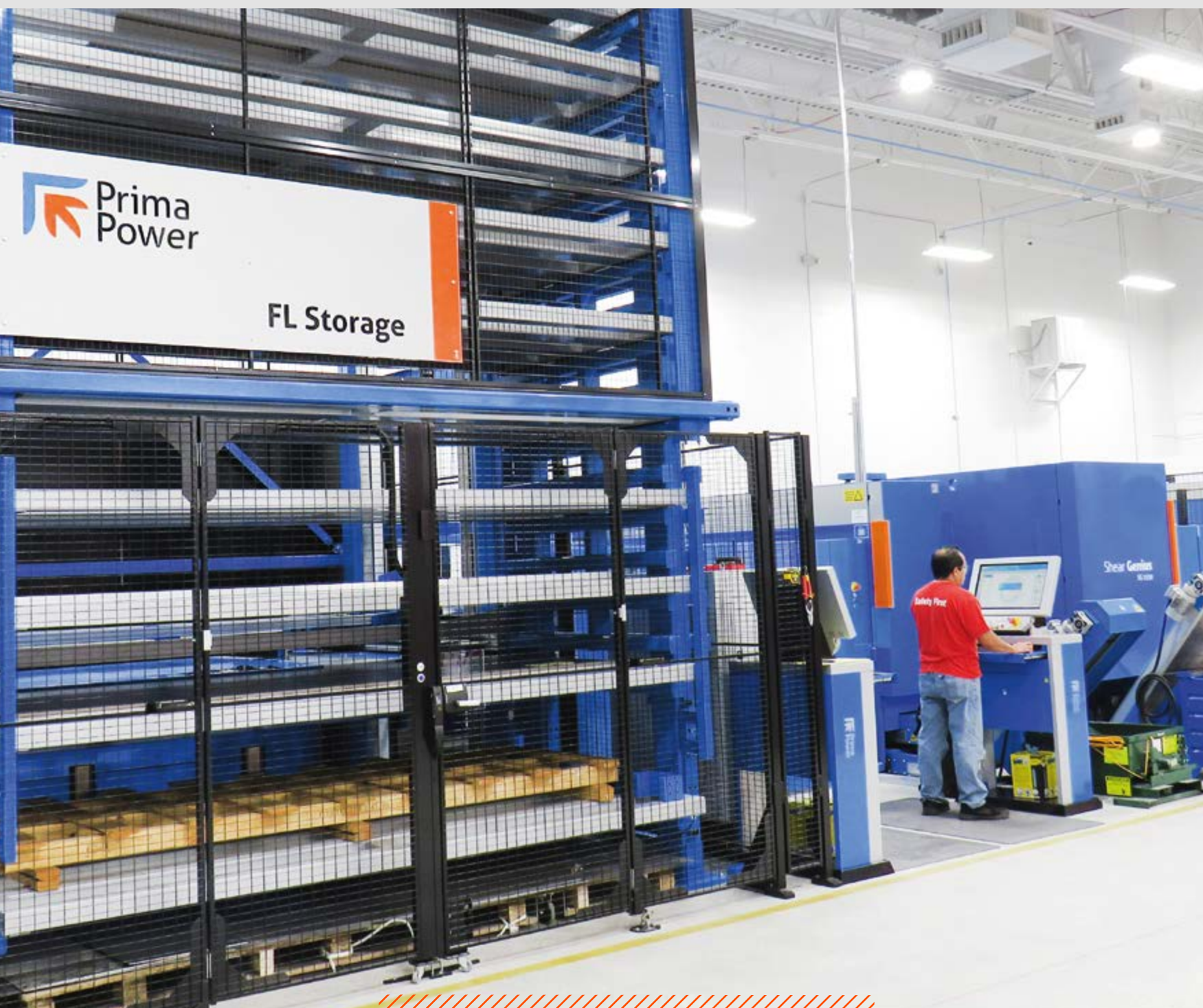
JST Power Equipment, originally located in New Jersey and with operating facilities in Mexico and China, sought to make the Florida plant as vertically integrated as possible. That project landed squarely in the hands of Mark Smith, vice president of operations.

"Part of my scope in 2020 was to decide how big the expansion needed to be," recalls Smith. "Today, our facility in Florida is completely vertically integrated, ensuring product quality while reducing lead times. Our sheet metal capabilities include punching, shearing, forming, bending and powder coating."



/// Our new sheet metal fabrication equipment allows us to excel at taking the low-volume and rapid-prototyping work away from our sub-suppliers, so that we don't disrupt their operations.





The Shear Genius punch-shear combination provides a machine capable of transforming a full-size sheet into finished parts. The 10-station Combo Tower allows JST to store several gauges of galvanized cold-rolled steel, stainless steel, and aluminum.

ON THE FLOOR: CNC PUNCH-SHEAR COMBO, AND ELECTRIC PRESS BRAKE

Smith began by conducting weeks of research and hosting several meetings with equipment manufacturers for the plant's sheet metal fabrication shop – a new 6,000-square-foot addition to the existing 57,000 acquired in 2019. Soon after, he led the JST management team's efforts to purchase a Shear Genius from Prima Power equipped with a Prima Power Combo Tower for metal-sheet storage. Also on the docket: a Prima Power model eP servo-electric press brake. "Prior to building up our fabrication department, we outsourced sheet metal work overseas," Smith says. "The development cycle back

then for bringing a new product to market – as significant as our new switchgear project – lasted 5 to 8 years."

"In this case, leveraging the new fabrication department," Smith continues, "we were able to roll out the new product line in just 14 months. Switchgear are engineered-to-order products; there's a lot of variation from job to job, and that variation normally affects just a handful of fabricated-steel components, which doesn't interest too many contract fabricators. The same holds true for rapid-prototyping work. Our new sheet metal fabrication equipment allows us to excel at taking the low-volume and rapid-prototyping work away from our sub-suppliers, so we don't disrupt their operations."

PUNCH-SHEAR COMBO MAKES QUICK WORK OF FULL SHEETS

With the Shear Genius concept, the objective is to provide equipment capable of transforming a full-sized sheet into finished parts. These parts can be moved to the final production stages for immediate integration directly with the final switchgear assembly. At the heart of the Shear Genius SGe: an updated servo-electric 30-metric-ton punching machine with 1000-hits/min stroke speed, 250-rpm index speed and 150 m/min sheet-positioning speed. The right-angle shear features a servo-electric actuation system, which delivers quick, fully CNC-controlled shear movement. The machine can shear mild steel sheet to 4 mm thick, aluminum to 5 mm, and stainless steel to 3 mm. Automatic loading has been integrated, along with programmable and automatic part removal and part sorting.

"We also appreciate the ability to take SolidWorks CAD files straight to the machine," Smith adds, "and not have to always program offline. This dramatically improves our flexibility to get us out of binds. While we of course can program the machine offline – for nesting and to optimize sheet utilization – we don't have to. If we need a part immediately, we can take the SolidWorks drawing to the machine and make the part. We like that a lot. Speed to market and the ability to say 'yes' to our customers even when they need something special is priceless. That's why we invested in the combination machine rather than purchase separate machines."

As loading, punching, forming and upforming on the punch-shear combo become automated, as well as unloading, sorting and stacking, the result is finished parts with little to no scrap, minimal manual labor and optimum productivity. *"A really nice feature is the upforming capability, for forming louvers and other features,"* adds machine operator Milton Fuentes. *"We have specialty tooling for those operations. Another big plus for me is that we don't have to shake the parts out or deal with a skeleton."*

PERFECT COMPLEMENTS: COMBO TOWER, SERVO-ELECTRIC PRESS BRAKE

The 10-station Combo Tower allows JST to store several gauges of galvanized cold-rolled steel, stainless steel and aluminum. *"It's a great space savings and ideal for material tracking. It paid for itself very quickly,"* Smith says.

Overall, the SGe and Combo Tower *"have shortened dramatically our lead time to market,"* continues Smith. *"Having this in-house capability has allowed us to stay on schedule for a number of deadlines."*

"We also appreciate the ability to take SolidWorks CAD files straight to the machine and not have to always program offline."

"A really nice feature is the upforming capability, for forming louvers and other features."

Meanwhile, downstream from the automated punch-shear machine, virtually every piece the highly productive cell fabricates makes its way to the Prima Power eP-series press brake eP 1336. Smith credits the brake for being able to keep up with the constant flow of parts, due to the high acceleration, deceleration and fast response times from its servo-electric drive system.

"Compared to the conventional hydraulic press brakes I'm used to," Smith says, *"the quick setup, operating speed and quality from the electric press brake results in considerably greater productivity with reduced cycle times."*

The press brake, an eP 1336 model, features backgauge upgrades to optimize system rigidity, including a steel frame (rather than aluminum), a double-hardened linear guide for the Z axis and a double guide on the X axis.



/// It's a great space savings and ideal for material tracking. It paid for itself very quickly. ///

"Our new sheet metal fabrication equipment allows us to handle the low-volume production, the one-piece parts and all of the late engineering changes common to the switch-gear industry," concludes Smith. "We designed our fab shop to handle the custom and quick-demand prototyping portion of our business. Every job we build is custom. We knew going in that we were not looking for high utilization and a quick return on investment. We wanted the capabilities."



The switch gears assembled at the new JST facility in Florida are engineered-to-order products with a lot of variation from job to job.

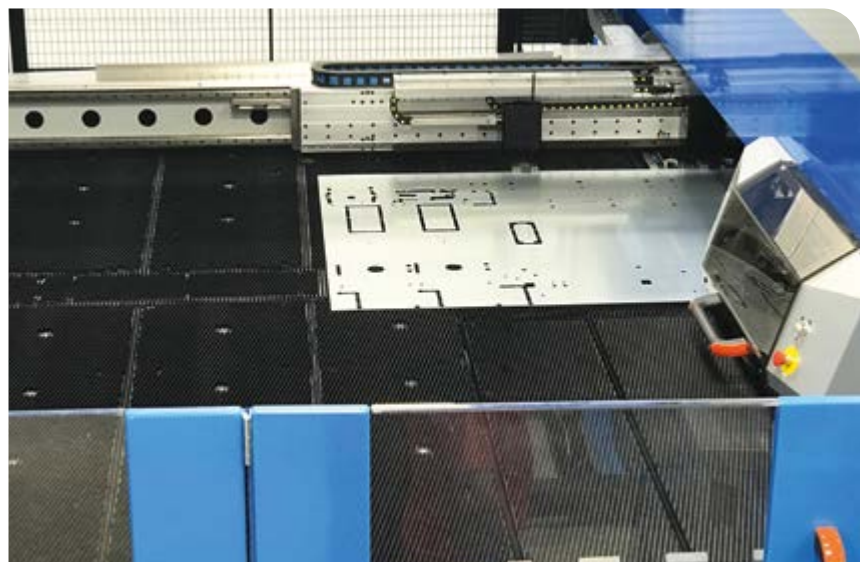
From left to right: Mark Smith, vice president operations; Swaniket Trivedi, programmer; Milton Fuente, operator; and Todd Newell, facilities manager.



/// The quick setup, operating speed and quality from the electric press brake results in considerably greater productivity with reduced cycle times. ///

By Brad F. Kuvin, editorial director, MetalForming magazine. This article originally appeared in the August 2022 issue of MetalForming magazine, published by PMA Services Inc., for the Precision Metalforming Association.

The Shear Genius allows automated loading, punching, forming, shearing, and unloading - all in one operation.



THE SMART WAY TO INDUSTRIAL AUTOMATION

**PRIMA ELECTRO IS THE ONE-STOP-SHOP
FOR HARDWARE/SOFTWARE SOLUTIONS
THAT ENABLE INDUSTRY 4.0 CAPABILITIES.**



**AS A FUNDAMENTAL
ELEMENT FOR THE
INDUSTRY 4.0 TRANSITION,
IIOT TECHNOLOGIES NOW
GOVERN INTERNATIONAL
MANUFACTURING,
IMPROVING MACHINE-
MACHINE COMMUNICATION
AND PROVIDING
MANAGERS WITH A CLEAR
OVERVIEW OF HOW THEIR
PLANT IS OPERATING.**

Smart factories can integrate IIoT technologies into a wide range of systems, and leverage them to improve efficiency, employee safety and productivity. In this new industrial era, more and more frequent and precise requests are emerging from users, who demand flexible and performing products able to satisfy the main needs of the market: to improve production efficiency and energy management, reducing downtime thanks to predictive maintenance and remote control.

Process control and data analysis for production statistics and preventive diagnostics represent two of the main technological challenges of the new industrial scenario. In this context, Prima Electro, thanks to its many years of experience in designing and manufacturing industrial electronic devices, offers a hardware/software architecture able to integrate in a single product a multi-core processor dedicated to local data analysis and M2M (Machine to Machine) and M2C (Machine to Cloud) communications, as well as a second processor dedicated to real-

time control of the process (PLC) and communications with other devices in the plant via the various most popular industrial fieldbuses.

Developed by integrating all the hardware/software modules necessary to implement cybersecurity protections, this highly flexible and modular platform allows for easy customizations in order to adapt to specific application requirements, optimizing the price/performance ratio of the product and guaranteeing its support over time – to always be at the forefront of technologies available on the market.

BETTER BUDGETS PRODUCTIVITY STARTS WITH INSTANT QUOTES



Ivana Montelli

Prima Power SW
product manager

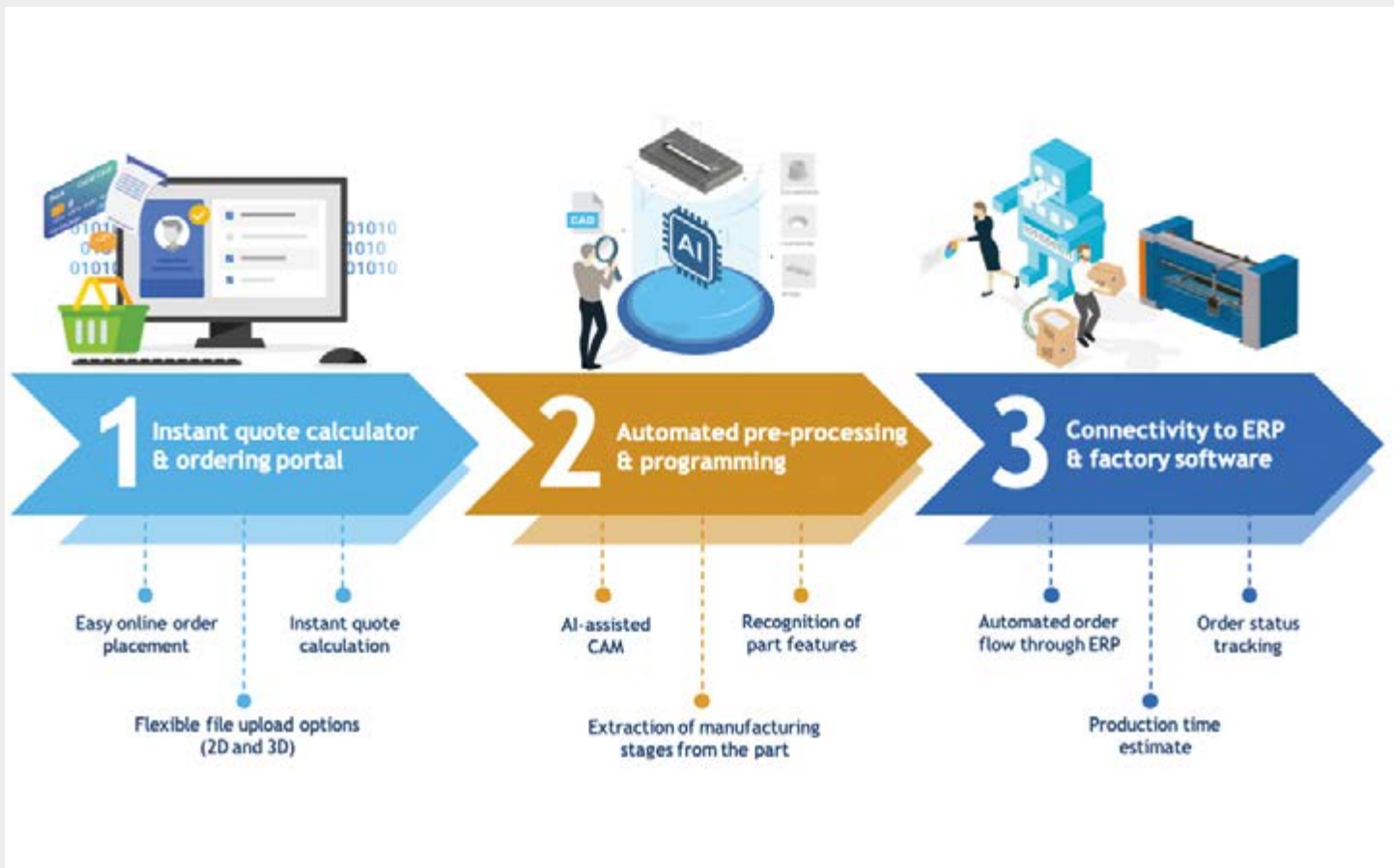
TODAY, BEING ABLE TO PROVIDE EXTREMELY FAST AND ACCURATE PRODUCTION COST AND TIME ESTIMATES AND RESPOND QUICKLY TO CUSTOMERS DURING THE NEGOTIATION PHASE IS A KEY SUCCESS FACTOR AND HELPS IMPROVE SUPPLY CHAIN EFFICIENCY. THE PRIMA POWER SOFTWARE PRODUCT TULUS CLOUD MANUFACTURING IS A NEW INSTANT QUOTE CALCULATOR AND ORDERING PORTAL, DESIGNED WITH MODERN MANUFACTURERS' NEEDS IN MIND.

All the manufacturer has to do is upload the part design - in .STP (3D) or .DXF (2D) format - to the web application, and the rest is automatically performed by Tulus Cloud Manufacturing:

- Recognition of part features (number of holes, cuts, bends, etc.)
- Selection of the most suitable machine and tooling available at the manufacturer's factory and relevant parameters
- Calculation of the production time and cost of the part

Thanks to this new budgeting software, Prima Power's customers can enjoy important benefits:

- Less manual work with a fully automated and digitalized tool
- Shorter lead response time and faster order handling
- Accurate and reliable budgets including all factors involved
- Improved traceability of the information



REMOTE DATA BRINGS US CLOSER



Massimiliano Tarable

Prima Power
after sales trade &
marketing manager

TRESTON IS ONE OF THE WORLD'S LEADING MANUFACTURERS AND SUPPLIERS OF ERGONOMIC WORKSTATION SOLUTIONS SUITABLE FOR DEMANDING INDUSTRIAL AND TECHNICAL ENVIRONMENTS. MINIMISING DOWNTIMES THROUGH ADVANCED DIAGNOSTICS IS KEY TO THEIR SUCCESS.

Treston's clients are small and large players in a range of sectors from electronics to heavy industry, and also include public sector organizations such as educational institutions, museums and fire departments. The cooperation between the Treston plant in Jyväskylä, Finland, and Prima Power began back in 1996 with the purchase of a first punch and shear machine. In 2013, Treston invested in a new model (SGe6) and its maintenance activities were fully centralized to Prima Power as an extended warranty service. Remote support was later

included, also on the newer machines, namely the Shear Genius 1530 combi machine and two press brakes.

"We have received help from Prima Power through remote support several times over the years. Either the problem was resolved or at least the machine was restarted until the maintenance man could arrive to fix the actual fault," sums up Antero Hakala, maintenance manager at Treston.

Thanks to advanced sensors and remote connection, Prima Power service centers, if authorized by the customer, have access to different kinds of data (excluding sensitive production information), which can be used to troubleshoot and monitor machines remotely, respecting the most stringent security protocols. Being able to analyze machine execution and performance data drastically reduces the need for technicians' on-site interventions, and allows for advanced machine monitoring and diagnostics.

"It is important for us to get help quickly in case of failure, as the machines are fully loaded, and even short downtimes create pressure to catch up on the weekend. Thanks to remote services, we get practically immediate assistance and can minimize the machine's downtime," concludes Hakala.

Antero Hakala, maintenance manager at Treston

By remotely collecting execution and performance data from the machines, Prima Power service centers are able to perform advanced monitoring and diagnostics.



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