



## Best choice.

Niederörsz, November 4, 2020

### **New products for even more efficient sheet metal processing**

**Product innovations from Bystronic: Within the framework of regional Competence Days and the "Euroblech Digital Innovation Summit" online event, Bystronic presented its latest products and solutions for the fields of laser cutting, bending, automation, and software. Among other things, the sheet metal processing specialist demonstrated how manufacturing environments can be intelligently networked to achieve even higher efficiency.**

In the age of Industry 4.0 the world is changing and with it the business environment in the sheet metal processing sector. Bystronic has formulated its vision of a fully automated and integrated **Smart Factory** to help its customers to master these challenges and consolidate their competitiveness over the long term: intelligent, highly networked, and extremely flexible. From the high-speed fiber laser cutting system to the loading, unloading and sorting system, and right through to the bending cell, the autonomous AGVs (automated guided vehicles), and the welding cell: An automated material flow and a seamless data flow enable end-to-end process automation, including the integration of third-party components. The intelligent Bystronic software allows the network of intelligent components to be controlled in a centralized and convenient way. This is complemented by a wide range of new products and valuable features that enable sheet metal processing companies to further boost their productivity.

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Bystronic Smart Factory: The vision of fully automated production.

## Bystronic's product innovations in the field of laser cutting:

**15 kW ByStar Fiber:** In order to offer sheet metal processing companies even better support in an increasingly competitive environment, Bystronic is now advancing into a new dimension of fiber laser cutting: the 15 kilowatt ByStar Fiber. The high-end fiber laser stands for high-precision Bystronic technology, a reliable cutting process even with the highest laser outputs, and a wide range of applications. The technological leap from conventional 3 to 12 kilowatt systems to the new 15 kilowatt level is tremendous: On average, thanks to the 15 kilowatt laser, the cutting speed of the ByStar Fiber increases by up to 50 percent compared to a 10 kilowatt laser source. This means that sheet metal processing companies can benefit from higher productivity at low unit costs, because thanks to its 15 kilowatts, the new ByStar Fiber cuts steel, aluminum, and stainless steel precisely and reliably in thicknesses between 1 and 30 millimeters, and brass and copper in thicknesses up to 20 millimeters. The 15-kilowatt laser output now enables extended applications in steel and aluminum of up to 50 millimeters and thus offers maximum flexibility both for large series and urgent customer orders. Regardless of whether cutting aluminum, non-ferrous metals, or steel, the high-performance Bystronic cutting head excels with maximum precision in both thin and thick sheets and profiles.

The new power level is available for the ByStar Fiber 3015 and the ByStar Fiber 4020.

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Even more power for even more precise results – the ByStar Fiber with 15 kilowatts laser output.

Find out more on our website: [bystarfiber.bystronic.com](http://bystarfiber.bystronic.com)

**10 kW ByStar Fiber:** Bystronic now also offers the BySmart Fiber laser cutting system with more powerful laser outputs of 8 or 10 kilowatts. Thanks to the increased power, sheet metal processing companies can now cut sheet metal even faster and with even higher precision. Depending on the production spectrum and customer requirements, the BySmart Fiber is now available with laser outputs of 3, 4, 6, 8, and 10 kilowatts (in addition, the BySmart Fiber 3015 is also available with 2 kilowatts). The 8 kilowatt output level enables users to achieve a significant increase in cutting speed. For example, by up to 60 percent compared to a fiber laser with 6 kilowatts when cutting 3 millimeter stainless steel. The performance boost is even more significant with the 10 kilowatt laser. Here, the BySmart Fiber is up to 2.5 times faster when cutting 10 millimeter stainless steel. Across all stainless steel sheet thicknesses, the 8 kW laser increases the parts output by up to a factor of 2, the 10 kW by up to a factor of 2.5.

This enables users to achieve particularly high quality cuts in material thicknesses up to 30 millimeters. And it opens up new possibilities for cutting jobs in thick materials, where the finish of the cut parts plays an important role. This higher laser output is available for both the BySmart Fiber 3015 and the BySmart Fiber 4020.

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High-speed cutting with the BySmart Fiber, now with 8 or 10 kilowatts laser output.

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**ByTube 130:** The ByTube 130 is the optimal solution for sheet metal processing companies that want to expand their portfolio. Tube laser cutting is the future-oriented alternative to sawing and drilling. The fiber laser performs both in one go – and considerably faster. The automatic weld seam detection eliminates the need for manual alignment of the raw material. Its consistent cutting quality is another compelling argument in favor of fiber laser technology. Thanks to clean cutting edges, deburring is a thing of the past.

The ByTube 130 is perfectly equipped for the processing tubes with diameters of 10 to 130 millimeters and can process raw tubes with a length of up to 8.5 meters. Available in two performance levels – 2 or 3 kilowatts – the fiber laser aggregate also boasts excellent energy efficiency. Optional features (“Laserscan” for higher precision in all cutting conditions and “Quick Cut” for increased speed and parts output) allow the additional and customized configuration of operator convenience and production quality.

Entry-level users do not require extensive experience to be able to start producing with the ByTube 130. The specially developed ByVision Tube user interface makes controlling all the functions relating to the laser cutting of tubes simple and intuitive via a touch screen. The interface is clear and straightforward, and setting up cutting jobs is completed in next

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to no time. The automated system reduces the need for manual interventions to a minimum and thus makes your entry into the tube processing business particularly easy.



Efficiency and cutting accuracy thanks to fiber laser technology: The ByTube 130 for efficient tube processing.

Find out more on our website: [bytube130.bystronic.com](http://bytube130.bystronic.com)

**ByTrans Modular:** For many sheet metal processing companies, automated laser cutting is a decisive success factor. Here, automation solutions for fiber laser cutting offer another key advantage: The utilization of the laser cutting system is maximized, and the operator no longer has to deal with time-consuming material handling.

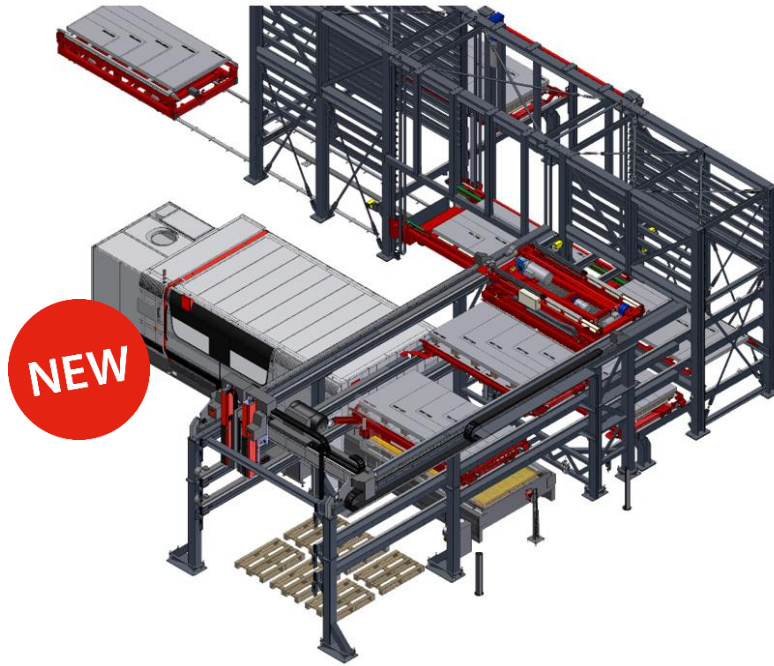
In combination with a laser cutting system, the new ByTrans Modular loading and unloading automation solution offers customers a whole range of options and layouts to more effectively meet their automation needs for both large series and small batches. Among other things, this includes the handling of the unloading of large parts or the possibility to recover the residual sheet.

Tailored precisely to the customers' needs, the highly configurable automation solution makes it possible to achieve short cycle times, thus increasing productivity and significantly reducing the operators' workload. The next step towards perfecting lightly manned or even unmanned sheet metal processing is the connection to BySort, the fully automated parts sorting system. Depending on the order situation, the Bystronic systems organize the material flow fully and semi-automatically while also offering

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sufficient space at the laser cutting system to process smaller orders manually whenever required.



Scalable system with a compact footprint: the new ByTrans Modular.

**ByTower Compact:** Not every sheet metal processing company has the space required to install new systems or expand existing ones. With the new ByTower Compact, Bystronic offers its customers the ideal solution: Thanks to its automated cassette changing and small footprint, it opens up lightly manned or even unmanned production for any business size. It automates the laser cutting system's workflow and allows significantly more parts to be cut per unit of time.

Thanks to its smart design, the ByTower Compact allows sheet metal processing companies to increase the productivity of their Bystronic laser cutting system without requiring much space. The storage tower height can be tailored to every requirement to make optimum use of the available space. The system supports two different configurations allowing metal sheets to be stored directly at the machine, regardless of whether they are delivered with or without a wooden pallet. This means that the raw material is available immediately.

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In spite of its extremely compact footprint, the ByTower Compact enables a substantial productivity boost.

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## Bystronic's product innovations in the field of bending:

**Xpert Pro with LAMS 4.1:** Not just a dream but a reality at Bystronic: Perfection from the very first bend. This is made possible by the next-generation LAMS angle measuring system's unique springback compensation.

High tensile strength materials are used, for example, for automation projects in the agricultural sector, and in the trailers and automotive industry. During processing, such materials can spring back by up to 20° and more. The Xpert Pro's unique springback compensation prevents this and thus guarantees optimal results from the very first bend.

The LAMS angle measuring system is key to ensuring process reliability. It compensates for any deviations in the sheet thickness. In addition to sheet thickness fluctuations, the reliable angle measuring system also automatically compensates for springback and rolling direction variations. In addition, corrections related to the sheet metal that is being processed can be stored and transferred to other machines – even to those that are not equipped with LAMS. This means that all other Bystronic press brakes in operation within the company also benefit from this function.



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Thus, the Xpert Pro reduces the need for tedious manual corrections. The Xpert Pro also reduces the operators' workload during the programming of bending processes: The ByVision Bending software solution determines the ideal bending process for every material thickness and bending angle. Convenient offline programming enables data to be imported without interrupting running production processes. Thus, the high-end press brake leaves nothing to be desired in terms of convenience. Bending has never been faster and more precise than with Bystronic's new Xpert Pro.



The next-generation Laser Angle Measuring System (LAMS) ensures perfect results from the very first bend.

Find out more on our website: [xpertpro.bystronic.com](http://xpertpro.bystronic.com)

**Xpert 40 with Optical Tool Detection:** The Xpert 40 from Bystronic is the compact speed machine for cost-effective small parts production and exceptionally simple operation: "Plug and bend" means that you simply set up the machine and start bending. Its compact dimensions are ideal wherever space is at a premium and capacities fluctuate: The machine can be set up and put into operation in less than 5 minutes.

A new feature helps sheet metal processing companies to achieve even higher precision and thus become even more productive: the Optical Tool



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Detection. How it works: Cameras recognize the data matrix codes on the tools and sound an alarm if any deviations are detected. After all, it is not uncommon for tools to be set up in the wrong position. The benefit: Reduced set-up time and improved process quality simply because the right tool is always in the right position.



The Optical Tool Detector checks whether the tools have been set up correctly.

Find out more on our website: [xpert40.bystronic.com](http://xpert40.bystronic.com)

**Xpress:** The Xpress from Bystronic combines leading bending technology with an attractive price-performance ratio. Be it versatile air bending or precise embossing, the intuitive ByVision Bending user interface enables new users to achieve a fast entry into the bending business and supports you in every process step. This makes manufacturing bent parts easier than ever before. The Xpress from Bystronic, which is now also available in Europe, combines leading bending technology with an attractive price-performance ratio.

The Xpress is available as the 50, 80, 100, and 160 models with the respective press forces ranging from 50 to 160 metric tons and bending lengths from 1050 to 3100 millimeters.

Precision is the most important benchmark of a press brake. Hence, the ByMotion drive control, a Bystronic in-house development, ensures that the upper beam and backgauges of the Xpress are accelerated with high precision. A selection of tool clamping and backgauge systems allows customized adaptation to the production environment. Options such as a

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mechanical crowning system that automatically compensates for deformations of the material and lower beam, can be easily configured if required.



Compact size – huge functionality: the Xpress 80.

Find out more on our website: [xpress.bystronic.com](http://xpress.bystronic.com)

**Modular Tool Changer:** Operating a press brake is hard work. Not only the sheet metal is heavy, but also the tools. Operators have to first retrieve the bending tools from the magazine and then heave them onto the machine. Particularly on the upper beam, setting up the machine takes a great deal of strength: Here the tool must be hooked into the clamping system at chest height.

In addition to strength, changing the tools also requires time. Setting up can take up to 70 percent of the bending process. And setting up tools is a task that has to be performed more and more frequently, because the trend is moving towards small batch sizes. Nowadays, an operator often equips the machine with completely new tools after just a few units in order to produce a completely different part – and then another part shortly afterwards. In particular for job shops, the setup time is thus becoming an increasingly critical factor in the bending process.

Automatic tool changers significantly accelerate setup times while reducing the operators' workload. Bystronic recognized this potential at a very early stage and launched its first automation solution as early as

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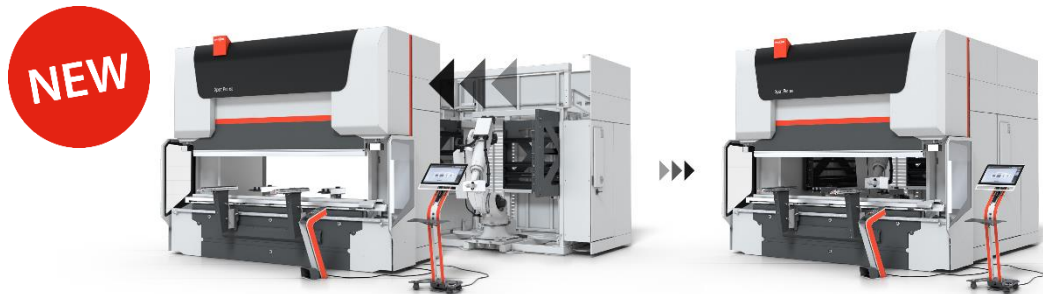
2016. With the Modular Tool Changer, there is now also a state-of-the-art automation solution for the Xpert Pro press brake. It increases the productivity of the bending process by up to 30 percent. And thanks to next-generation sensor technology, it also ensures higher precision. At the end of a long shift, operators sometimes position tools with less precision than required. This can certainly not happen to the six-axis robot. For each bending job, it automatically retrieves the correct tool set from the integrated magazine and inserts it into the clamping system of the upper and lower beam with millimeter precision.



Shorter setup times thanks to the Modular Tool Changer.

The add-on module can be easily retrofitted to all versions of the high-end press brake series.

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The retrofittable solution for all Xpert Pro series machines.

Find out more on our website: [modulartoolchanger.bystronic.com](https://www.bystronic.com/modulartoolchanger.bystronic.com)

Images can be downloaded from the Media Center on the Bystronic website: <https://www.bystronic.com/en/press/>

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### **About Bystronic**

Bystronic is a leading global provider of high-quality solutions for the sheet metal processing industry. The focus is on the automation of the complete material and data flow of the cutting and bending process chain. Bystronic's portfolio includes laser cutting systems, press brakes, and associated automation and software solutions. Comprehensive customer services round off the portfolio.

The company headquarters are located in Niederönz (Switzerland). Additional development and production locations are located in Switzerland (Sulgen), Germany (Gotha), Italy (Cazzago San Martino and San Giuliano Milanese), China (Tianjin and Shenzhen) and USA (Hoffman Estates/IL). Bystronic is actively represented by its sales and service subsidiaries in more than 30 countries and has agents in numerous other countries.

As a reliable partner, Bystronic stands for high-performance innovations, local competence, and service excellence. Since 1994 Bystronic has been a part of the Swiss industrial holding company Conzeta.

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