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## Prima Power at the Euroblech – Choose your perfect combination with our Tangram 4.0

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Prima Power's presence at the Euroblech 2018 is perfectly in line with the official motto of the exhibition: "Step into the digital reality". All Prima Power innovations showcased on the 1400 m<sup>2</sup> stand in Hannover (Hall 12, Stand B146) are designed for digital manufacturing and are the perfect combination of technologies and software for the automated production.

Prima Power products can be combined in many ways to create the best solution for the specific needs of each customer. For this reason, to symbolize the great combinability and modularity of its product range the Group has chosen the Tangram, the ancient Chinese game consisting of seven pieces generating infinite combinations of forms, from the simplest to the most complex. As in the Tangram, Prima Power standard product modules generate an infinite combination of highly specialized solutions. The connectivity between product modules and the perfect operation of the different combinations is made possible by the software. Industry 4.0 software solutions allow the communication among the parts and the efficient integration of each combination with the factory where it is inserted, in a Tangram 4.0 where the wisdom of the ancient game comes together with the most advanced digital technologies.

Digital reality plays a leading role on Prima Power stand, which has been designed to let visitors live a new and engaging experience thanks to a unique mix of real and digital worlds. Highly realistic VR simulations complete the real demonstrations on exhibited products, allowing visitors to live an immersive journey to discover all capabilities and benefits of the most advanced laser and sheet metal technologies.



Many innovations are showcased by Prima Power in Hannover. The new integrated robotic bending system with BCe Smart panel bender and eP-0520 press brake, is presented as world premiere. Also the solutions of The Laser line are new products exhibited for the first time at a trade show: the new 3D fiber laser system Laser Next 2141, with its wide working envelope and its different configurations, and the 2D fiber laser cutting machine Laser Genius 1530, with the automatic stacking robot LST and the Combo Tower storage. The punching / fiber laser cutting system Combi Genius 1530 is presented with a new solution which simplifies the installation and the maintenance of the machine and with the loading/unloading system Compact Express. The flexible manufacturing line PSBB – Punching, Shearing, Buffering, Bending – with the PCD (Picking & Centering Device) system processes blank sheets from an automatic storage into ready-bent, high-quality components automatically.

The perfect combination of technologies that is at the base of Prima Power solutions is made possible thanks to the smart software family which connects machines, monitors the entire production flow, and generates automatic processes from the order to the delivery. All products are Industry 4.0 Inside and set new industrial standards for efficiency and process reliability.

### **New Integrated Robotic Bending System**

Prima Power presents its new Integrated Robotic Bending System as world premiere at the Euroblech. The high effectiveness of this solution derives from the simple and fast offline programmability of machines and robot included in the cell.

The new integrated system is composed of a BCe Smart panel bender, a 7-axes anthropomorphic robot, and an eP-0520 press brake. The configuration is completed by a sheet separator unit for raw sheet stacks, a centering table, and a reverser for the sheet to be bent or the bent components to be stacked.

In order to allow the highest efficiency of the investment, the system offers several operation modes:

1. Integrated processing with BCe Smart and eP, in which the robot performs continuous handling activities between the two machines;



2. Automatic operation of the BCe Smart with part loading/unloading performed by the robot, and eP in stand-by mode;
3. BCe Smart manually loaded while the eP operates as a robotic cell;
4. BCe Smart and eP in manual mode, and robot in stand-by mode.

The operation modes of the Integrated Robotic Bending System represent an outstanding breakthrough. They allow Customers to reach the maximum benefits from the investment, as the system efficiency is granted for both small and large batch production. In fact, during the manned shift on the panel bender, the versatility of the manual mode is combined with the high productivity of the bending cell by operating in automatic mode.

Within the integrated bending system, the press brake is able to complete some components with dimensional or geometric features, which are unsuitable for the panel bender and could be only partially processed by this machine. The system is therefore incredibly versatile, suitable for a wide range of components and special applications, such as bends in internal windows, or partial bends of outer edges that cannot be easily reached by the panel bender tools.

Also in case of small batches, where the BCe Smart is commonly used in manual mode, the availability of the robot allows the loading and the unloading of sheets with a maximum length of 2850 mm, thickness of 2.5 mm and weight about 85 kg, replacing one or more operators in this heavy and repetitive task.

### **Laser Next 2141 – the fastest machine in the world gets flexible**

At the international exhibition in Hannover Prima Power showcases its new 3D fiber laser machine Laser Next 2141. Successfully launched in April during a dedicated international event at the Group's Headquarters and Tech Center in Turin, the machine makes now its debut at a trade show.

The product is designed and developed to be as universal and multipurpose as possible and to satisfy the needs of stamped-metal-parts manufacturers in diversified industrial sectors, such as job shops, press shops, aerospace, agricultural, and automotive.



The working volume of this machine is the largest on the market in its segment (4140 x 2100 x 1020 mm) with a very compact footprint, and it is suitable to virtually all 3D stamped and flat sheet metal part sizes. Its technological features allow it to process both three-dimensional and two-dimensional parts, and to easily switch from cutting to welding applications.

Laser Next 2141, equipped with Prima Power fiber laser from 3 to 4 kW laser, is the perfect balance of speed, accuracy, and reliability. The linear motors on the main axes, the direct drive on the focusing head, and advanced control systems, provide the highest dynamics in its market segment, with single axis speed of 120 m/min and trajectory speed of 208 m/min. This is combined with maximum accuracy (Pa and Ps= 0.03 mm) in a very large working envelope and with the best Overall Equipment Efficiency (OEE).

Laser Next 2141 is available in several configurations and the Customer can always find his perfect combination: Fixed Tables, exploiting the entire working envelope to process large parts and featuring great accessibility; Split Cabin, in which the working volume is separated into two halves, where the parts are alternatively processed or loaded/unloaded in total safety; Turn-Table, for the fastest part handling operations without machine stops (cover time operation); Shuttle Tables, allowing large and heavy parts to be handled outside the working area and in case of complex set-up.

### **Laser Genius with Combo Tower Laser and LST – laser parts production gets automatic and efficient**

Prima Power presents for the first time at an exhibition its automatic solution for fiber laser cutting: the high end 2D fiber laser cutting machine Laser Genius 1530, served by the flexible storage system Combo Tower and the automatic stacking system LST.

Laser Genius answers the most challenging expectations and combines flexibility with excellent dynamic performance and high levels of efficiency and accuracy, thanks to the innovative use of materials such as carbon fiber and synthetic granite. Its efficiency is further enhanced by the high-dynamics linear motors, allowing an increased productivity up to +15% with respect to



traditional systems. The new cutting head and the dedicated optional suites (SMART Cut, MAX Cut and NIGHT Cut) optimize the laser cutting process for each application.

The top performances of Laser Genius make it the ideal machine for high productivity needs. At the Euroblech the machine is in fact showcased with Prima Power modules to automate the material flow.

Combo Tower Laser is a flexible storage system with integrated loading and unloading features for 2D lasers. It makes different materials available whenever needed automatically and without delays. There can be one or two shelving units in the Combo storage and the height can be chosen by needs. When two shelving units are included in the Combo storage a second machine cell can be integrated as part of the system; depending on the required work stages and techniques, these can be selected from the wide range of Prima Power solutions for punching, laser cutting, integrated punching / shearing and punching / laser cutting.

To increase the level of automation, the LST system for automatic sheet sorting is also available. The LST automatically picks the finished parts and sorts them, sending them to the programmed location. This eliminates manual separation of cut parts from the skeleton, reducing low added-value human operations and increasing the finished quality of products and the possibility of unmanned production.

LST is a highly reliable system and features three different procedures for part picking: RALC (Robot Assisted Last Cut), aimed to avoid part jamming into skeleton and assuring a precise and reliable picking operation; Pre-sorting, aimed to fasten picking operations; Sorting, in which the part is cut off before being picked with the gripper paused outside the working area.

### **Combi Genius – a combination of productivity and flexibility**

Combi Genius combines the benefits of punching performance with the latest in fiber laser cutting, raising the productivity of the highly versatile integrated manufacturing concept to a new level. The machine allows “four in one” processing: punching, forming, marking, laser cutting.



Combi Genius is available in two different performance categories: Pure, to meet all the objectives of an efficient production with a lower level of investment, and Dynamic, displayed at the exhibition, for maximum productivity and efficiency.

The turret of the Combi Genius can be customized and optimized for any requirement. Simultaneously, a record-breaking number of 384 tools can be inserted in the turret. The maximum number of index tools has also been raised to 128.

Combi Genius features the Intelligent ram, a rotating ram head which shortens tool change time and increases the number of tools in turret, especially index tools, and allows shorter setup time. Up to 300 kN servo-electric punching force can be selected for the ram. The turret can be equipped with Multi-Tool® stations to further increase the number of tools.

At the Euroblech Combi Genius is presented for the first time with a new eye safety protection around the cutting head, which makes the safety walls around the machine unnecessary. The benefit of this solution is increased system accessibility and visibility and shorter and simpler installation.

The machine is equipped with CF series 4 kW fiber laser, developed and manufactured by Prima Power, and the latest generation automatic loading/unloading system Compact Express. This automation system can be integrated as part of the machine, so no additional floor space is required. It also allows machine operation during loading and unloading functions.

### **PSBB – highest combinability to offer the best solution for any production need**

The PSBB line, which processes blank sheets into ready-bent, high-quality components automatically, is **based** on decades of experience of Prima Power in modular Flexible Manufacturing Systems. PSBB stands for punching – shearing – buffering – bending. The productivity offered by this concept derives from the combination of versatile servo-electric punching, integrated servo-electric shearing, servo-electric bending, automatic and flexible material flow and sophisticated software.



The PSBB line showcased at the EuroBlech integrates the Shear Genius SG1530 with Loading Device, and the EBe2720 series 4.20 with Picking & Centering Device (PCD) and Bend Turning Device (BTD).

The Shear Genius includes a new servo-operated Loading Device allowing a faster sheet loading cycle, a punching unit with intelligent ram, which shortens tool change time and increases the number of tools in turret, and a new shear unit in a more compact layout.

The main improvements on EBe2720 series 4.20 are the new servo-electric Additional Upper Tool (AUT), the Additional Short Blades (ASP) belts-driven and the electric central tool: all these elements lead to better performances with reduced oil consumption and less maintenance. In addition, the Master BendCam Parametric enables the capability to manage parametric production with a smart programming.

Systems are customized using the wide Prima Power range of high performance machine tools, integrated cells, automatic material handling solutions and software. Thanks to the wide range and modularity, the best solution can be found for every application and all system sizes, e.g. for doors, elevators, HVAC, and steel furniture manufacturing.

### **The Software: the intelligence behind all technology combinations**

Software plays a leading role in Prima Power product range, since it efficiently manages all the combinations between technologies, allowing connectivity and data exchange that are at the base of the digital transformation of manufacturing.

In the large area dedicated to software on Prima Power stand at the Euroblech visitors can participate to innovative and interactive presentations and demonstrations of many world premieres such as the parametric functions on MasterBend, the new design UI for Tulus Performance Reporting and Tulus Production Reporting with new Analytics, and the innovative Tulus Line App for Line View and Orders Status.



Tulus Analytics and Augmented Reality App will be presented for the first time at Euroblech 2018 in Hannover. Tulus Analytics is a cloud-based application offering customers a variety of machine data-driven analytics. Targeting at the efficiency at the factory floor and hands free tech support, Augmented Reality App with Microsoft HoloLens allows customers to explore the latest mixed reality solution.

**Prima Power, Hall 12, Stand B146, [www.primapower.com](http://www.primapower.com)**

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#### [Prima Power](#)

Prima Power is a world-class supplier in the high-tech field of laser and sheet metal working machinery. Its product portfolio is one of the most complete in the industry and includes: 2D and 3D laser machines for cutting, welding and drilling, punching machines, combined punching/laser and punching/shearing systems, press brakes, panel benders, bending centres and Flexible Manufacturing Systems (FMS).

Prima Power is the Prima Industrie Machinery Division, a group with more than 1,700 employees worldwide, manufacturing facilities in Italy, Finland, USA and China and a sales and service network in over 80 countries.