
Prima Power introduces an upgraded solution for flexible manufacturing

Compact FMS upgraded with new Shear Genius

Prima Power PSBB (short for punching, right angle shearing, buffering and bending) is a fully automatic manufacturing line for processing sheet into ready-bent, high-quality components. The current offering includes many improvements and the new Shear Genius as the punching-shearing cell raises manufacturing speed and productivity to a new level.

Efficient production

Smaller batch sizes and faster reaction time give more requirements for today's manufacturing process. Prima Power PSBB offers a flexible platform to fulfill the production needs of today and of the future.

Extreme system flexibility derives from versatility of the work stages and the availability of different system configurations as required by the manufacturing process. By adding intelligent buffering and different operational modes, it is possible to find the best suitable solution for your needs.

In the configuration shown at EuroBLECH, the operation possibilities, which can be used simultaneously, are:

- Direct material flow from Shear Genius to bending cell EBe
- Use of conveyors and PCD (picking and centring device) for buffering in direct connection
- Simultaneous picking up of components from external wagon to bending cell



New FL storage

The new FL storage is an entry level solution for fast raw material changes due to production requirements. FL storage is based on Prima Power FLD (Fast Loading Device), with additional shelving units, Night Train cassettes and a safety solution. Shelving unit has three loading positions, where sheet bundles can be brought onto cassettes by a fork lift. Sheet material can be inserted onto cassettes also with wooden pallets.

FLD gripper can pick up sheet material directly from any cassette of loading position and deliver sheet material either directly to machine connection or to store materials to cassettes on fixed positions in the shelving unit.

There are different heights of storage solutions available with the capacity of different material positions from five up to twelve.

As FL storage is based on FLD, it is possible to extend the system later on and integrate it as part of a Night Train FMS solution.

“The PSBB line displayed at EuroBlech is connected to a budget-friendly FL storage, which enables fast availability of material to production. PSBB line is aimed especially at industrial segments, where production batches are small and material changes continuously, like door and steel furniture manufacturing”, says product manager of The System product line Janne Mäkelä.

Integrated punching and shearing - new Shear Genius

The vast majority of all fabricated sheet metal components are rectangular, so a highly economical method to produce them is to perform first punching and then shear the components loose in the same automatic process with an integrated right angle shear. Also, parts with two or three straight edges are perfect for fabrication with a right angle shear.



The new Shear Genius is the basis of a totally new PSBB generation. PSBB is now more compact and an even more productive manufacturing line.

The new, fully servo-electric Shear Genius features linear drive technology for fast sheet positioning and raises manufacturing speed and productivity up to a new level.

After shearing process the components are directed to either to sorting addresses or to the bending process.

(Please see a separate press release on the new Shear Genius punching-shearing cell.)

Flexibility with picking and centring device PCD

PCD picking and centring device with bend part turning device BTD is integrated as part of the PSBB configuration for flexible production. It enables the possibility to feed in external production to bending process and to handle multiple stacks. The device has a compact footprint so space requirement is low.

However, if more buffering capacity is needed for this part of the PSBB line, picking and stacking robot PSR is a recommended solution.

Automatic bending

The automatic Express Bender solution, featuring Prima Power's servo electric technology, offers outstanding benefits through very fast operation, flexibility for small series production, and low energy and low maintenance cost. Even the most intricate bends can be made.

Bending quality is excellent as required by e.g. design products. This is achieved through precise control of bending axes, fast and smooth bending, open programmability, and the fact that the construction is immune to variation in thermal conditions.



Options

All the versatile Prima Power punching, shearing and bending options can be included in a PSBB line. Similarly, several solutions are available for automatic handling of bent components. Most options can also be installed later as machine upgrades.

Sustainability - modularity that allows system growth

In line with Prima Power's Green Means® philosophy, the PSBB line is servo electric apart from one auxiliary function of the automatic bending cell. Energy consumption is low and maintenance cost far smaller than in hydraulic technology.

Investment in a Flexible Manufacturing System is a highly cost efficient solution when production targets are challenging. The investment is also easy to make since thanks to modularity the system can be flexibly built up in stages.

If, for example, technology currently used for bending gives satisfactory performance but the production of flat components needs to be improved, nothing prevents commissioning a punching-shearing cell now and upgrading it to FMS level with bending capacity later. Or vice versa, if the time to replace press brakes with an automatic bending cell is now, but blank fabrication capacity is sufficient, a punching-shearing cell can be integrated with Express Bender EBe years after it has been installed.

High-resolution illustrations are available in the Download section of the Prima Power website (<http://www.primapower.com/downloads>)

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About Prima Power

Prima Power is a world class supplier in the high technology field of laser and sheet metal fabrication machines. Its product portfolio is one of the most comprehensive in the field and includes: laser machines for cutting, welding and drilling, turret punch presses, combined punch/shear and punch/laser systems, press brakes, panel benders, bending centres, and flexible manufacturing systems (FMS).

Prima Power is the Machinery Division of Prima Industrie, a Group with over 1600 employees across the globe, manufacturing plants in Italy, Finland, USA and China and a highly specialized sales and service network in over 80 countries.