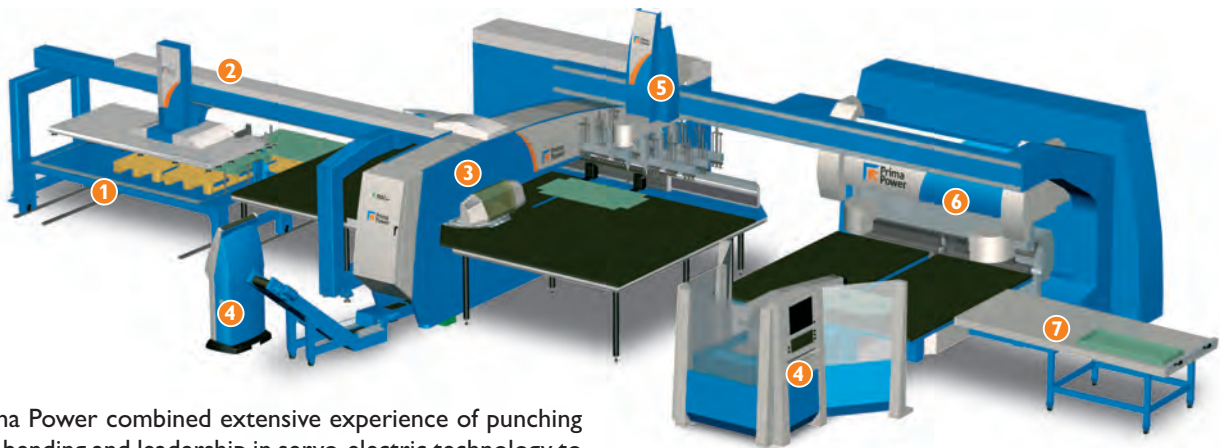




The Bend
The Combi
The Laser
The Punch
The System
The Software

Prima Power PunchBend – a new fabrication solution for cut to size material

Prima Power PunchBend – a new fabrication solution for cut to size material



Prima Power combined extensive experience of punching and bending and leadership in servo-electric technology to create a new compact and economical fabrication solution for pre-cut materials.

Very often the fabrication process when manufacturing steel furniture, lighting equipment, domestic appliances, heating equipment, boilers, steel doors, etc. enables the use of cut to size material for improved production economy. This is provided by the new Prima Power PunchBend, which fabricates high-quality, ready-bent components from cut to size material.

The essential characteristic of PunchBend is tight integration of everything that is needed: software, work stages and material handling. High productivity is achieved with fast loading and tool changes

Excellence in servo-electric punching...

The high-end Prima Power punching technology has properties such as automatic tool length measurement, optimization of stroke length and easy adjustment of the punching stroke. These combine with others, adding up to faster set-ups, more ease of operation and higher capacity.

The punching stroke is NC-controlled and thus, in addition to high-performance punching, outstandingly accurate forming capacity is available. High repeatability facilitates forming, roll forming, marking etc. and shortens set-up times.

The Programmable Clamp Setting function automatically positions sheet clamps according to numerical program, minimizing clamp dead zones. When changing production from full size to small sheets, clamp settings can be made automatically without wasting operator time.

A major factor in versatility is tooling capacity; with Multi-Tool® technology there can be up to 346 tools simultaneously available in the turret.

... and servo-electric bending

Prima Power's automatic servo-electric bending technology offers outstanding benefits through excellent bending accuracy and quality as required by e.g. design products, low overall operation cost due to low energy consumption (-64%), low oil maintenance cost and very fast operation.

- 1 Two wagons for cut to size sheet material
- 2 Loading device of punching unit
- 3 Servo-electric punching & forming unit
- 4 Tulus® graphical interface
- 5 Loading device of bending unit
- 6 Servo-electric bending unit
- 7 Free roll table for removal of ready components

The construction features actuation of the bending blade movements (vertical and horizontal) by servo NC axes. The upper tool movements are made also by another NC servo axis not only to hold the material firmly but to allow hammering flanges or calibrate tubular panel edge etc. High bending quality 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. Tool set up times can be minimized with automatic tool change option.

Two operating modes

There are two operating modes for optimum bending quality. When the "rolling mode" is used, there is a wider contact surface between the blade and the sheet but no relative friction. Alternatively, when using a standard "circular mode", the contact point remains constant whereas the contacting point of the blade changes during the bending movement.

Features of servo-electric PunchBend

- Sophisticated software, including graphic parametric programming and simulation at operator interface as well as offline programming
 - High component quality
 - Short set up times
 - High performance values
 - Low energy consumption
 - Faster and smoother operation
 - Low maintenance costs
 - Wide range of options
 - Very low noise level
 - Compact footprint
- = High productivity in most varied applications**

PunchBend in action

The PunchBend process is fully automatic:

- Cut to size material is loaded to punching unit, automatic clamp settings is simultaneous
- Cut to size material is processed (punching and forming) with punching unit
- Processed part is picked up to bending unit and prepared for bending process, new cut to size material is loaded to punching unit
- Part is processed by bending unit; the next sheet is punched simultaneously
- Removal of ready-bent component

For a variety of applications

Applications vary, and the solution to meet the requirements can be found using special tooling and flexible bending technologies.

Productivity of the process is optimized according to the time needed for punching and bending. The application can be studied with a simulation program.

Green Means®

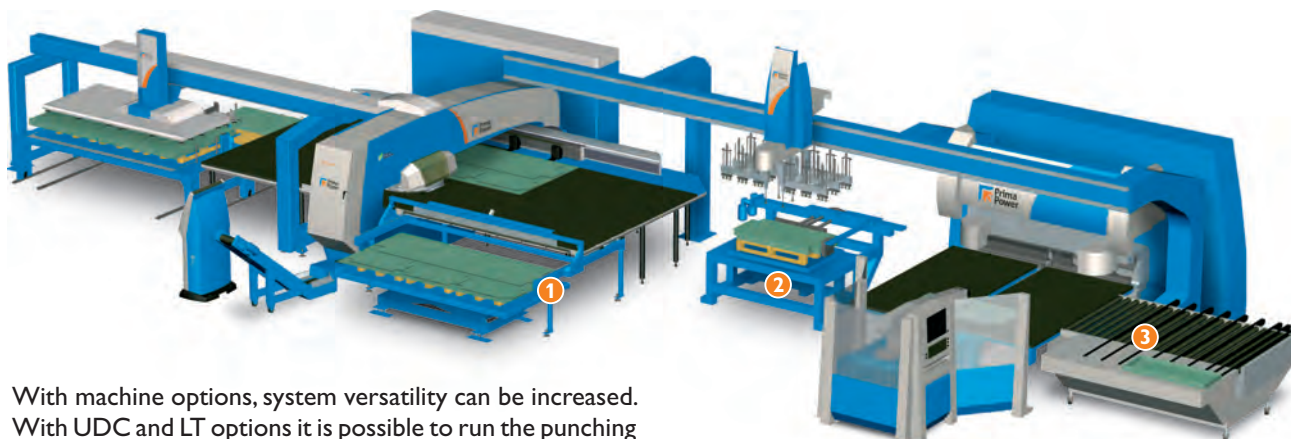
Over the years, the Prima Power product range has been developed towards greater flexibility and operating economy through versatility, high automation level and low energy and maintenance costs.

Also for a long time, the ecological aspects have been included among design criteria. This translates into technology and knowhow which meet requirements of both productivity and more sustainable manufacturing.

We provide Green Means®.



More possibilities with options



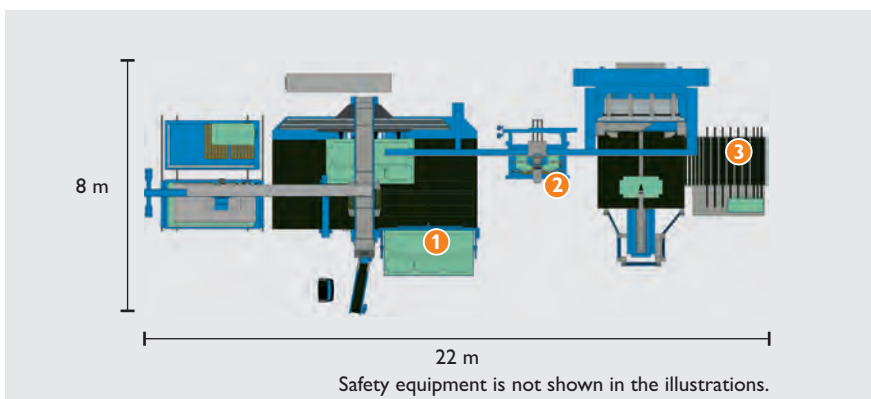
With machine options, system versatility can be increased. With UDC and LT options it is possible to run the punching and bending unit separately allowing nest sheet production with the punching unit and the possibility of running external parts with the bending unit.

Further, more material addresses can be added using different types of storage connections, and unmanned process time extended with automatic unloading and stacking systems.

- 1 Compact Unloading Device, UDC allows normal nest runs with punching unit
- 2 Additional Loading Table, LT allows external production runs with bending unit
- 3 Unloading system with Tilting Unloading Table, TUT

Available options

- Sheet storages
- Indexable forming system
- Compact Unloading Device, UDC
- Automatic Tool Change, ATC
- Additional Short Blades, ASP
- Additional Upper Tool, AUT
- Last Negative Bend, LBN
- Tilting Unloading Table, TUT
- Unloading and Stacking Device, USS
- Loading Table, LT
- Part turning device



Safety equipment is not shown in the illustrations.

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