The Bend
Servo-electric Panel Benders

Prima Power

The Bend
The Combi
The Laser
The Press
The Punch
The Shear
The System
The Software
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Today’s volatile market demands that companies be competitive, accurate and reactive. Prima Power products continue to evolve, bringing efficiency to a whole new level. More productive machines, new automation solutions, and easy-to-use option suites are designed to meet the customer’s real needs. To provide the best Prima Power technology, our team of experts will always be available to listen, assist and advise because we are “Next to You!”

What can be found in this brochure

Innovative machines for bending thin sheet metal components.

Recommended options and accessories to get the best performance based on your needs.

An extensive range of automation modules for the management of the entire production cycle.
Choosing an innovation leader

Prima Power is a leading specialist in machines and systems for sheet metal working. Our offering in this field is one of the widest and covers all applications: laser processing, punching, shearing, bending and automation. The Group employs over 1,600 people and has manufacturing sites in Italy, Finland, China and the US, as well as a worldwide commercial and after-sales presence.

**EXPERIENCE**
40 years of experience and more than 13,000 installed machines.

**INNOVATION**
An expert R&D team committed to research the most competitive technology for our customers.

**MODULARITY**
Our machines can also be combined with our automation modules to create a complete system for the whole working process.

**GREEN MEANS**
Sustainability and social responsibility are characteristics of modern companies and add to competitiveness.

Next to you. Beyond slogans

Committing our efforts to meet our customers’ needs.
Designing, developing and customizing products with our customers’ success in mind.
Creating long-term and valuable collaboration supporting customers across product life cycle.
Using modern online communication technology to be with our customers, every time they need us.
Deleting distances, investing in the opening of new subsidiaries or sales and service centres to be where our customers are.
Prima Power product range

Thanks to the modularity of our products, we are able to offer manufacturing solutions ranging from single stand-alone machines up to the complete system for the management of work phases, flow of information and material handling. The integration with other technologies of sheet metal processing included in our product range, allows us to offer our customers the most complete production solutions possible.

**THE BEND** | Wide range of solutions for bending, including panel benders, bending centres and cells.

**THE COMBI** | Punching – laser cutting cell with servo-electric punching technology.

**THE LASER** | Laser machines and systems for 2D and 3D cutting, welding and drilling.

**THE PRESS** | Fast, accurate and efficient servo-electric and servo-hydraulic press brakes.

**THE PUNCH** | State-of-the art, versatile solutions for servo-electric punching.

**THE SHEAR** | Integrated systems for punching & shearing; highly productive with optimal sheet utilization.

**THE SYSTEM** | Full and modular range of solutions for the management of the whole working process.

**THE SOFTWARE** | Prima Power software solutions to maximize throughput.

The Prima Power range has a long tradition of continuous development, greater flexibility and operating economy through versatility, high automation level and low energy and maintenance cost. Also for a long time, the ecological aspects have been included among design criteria. Green Means® translates into technology and expertise which meet the requirements of both productivity and more sustainable manufacturing.

**What does Green Means?**

Green means a win-win for you and sustainable development.

Sustainability adds to manufacturing efficiency and productivity.

Your customers, your employees and the community you operate in demand it more and more.

Sustainability & social responsibility are characteristics of a modern company and add to competitiveness.

They make a difference between the best and the rest. And you make better sheet metal components at lower cost.
Operating principle of Prima Power panel bender

When we think of traditional bending machines, we usually think of those where the force is impressed by the downward movement of a punch against the fixed part of the press, known as the die.

However, in panel benders, the bending work is performed by the blades, while the blank holder holds the sheet still during bending. The blades are thus able to perform different types of folds, upwards or downwards, beginning with the outermost bends of one side, before then automatically performing the bend sequence towards the innermost bend. All of these movements are controlled by electric servo drives that guarantee maximum positioning accuracy in the bending trajectory, thus ensuring an optimal result.

Example of positive bend (upwards)

Example of negative bend (downwards)
Prima Power has a long standing experience in the field of sheet bending with the production of the first patented panel bender in 1990. Thanks to the combination of experience and expertise gained over the years, Prima Power is now considered the pioneering company in servo-electric technology applied to automatic bending, having already produced the first example of a servo-electric panel bender as far back as 2004: a fast and precise non-hydraulic bending solution, which guarantees productivity, precision, repeatability and reliability.

This evolution has always been accompanied by close attention and respect for the environment, and this concept has been translated into the slogan “Green Means®”: lower energy consumption and less maintenance thanks to the reduced use of hydraulics. Moreover, the programming simplicity and the high precision of the machine eliminate waste, allowing you to obtain better products at lower costs.

**EFFICIENCY**
Less energy required and a lower environmental impact.

**PRODUCTIVITY**
High productivity thanks to reduced cycle time and high process reliability.

**REPEATABILITY**
Consistent performance over time thanks to servo-electric technology.

**SCALABILITY**
Ability to meet every production need, thanks to the wide range of models and technical configurations available.

**SIMPLICITY**
Intuitive operator interface, 3D CAM with integrated simulation.

Evolutionary Line of Panel Benders. Over 30 years of continuous development
The Bend | Panel bender range
Semi-automatic or fully automatic machines at your service

Prima Power’s panel bender range meets all the different production requirements by offering extremely flexible solutions, with semi-automatic or fully automatic machines configured as stand alone cells or multi-technology lines.

**Fast Bend FBe**
*The answer to multiple applications*
A semi-automatic bending solution, compact but highly adaptable to any size of production batch.

**BCe Smart 2220**
*Ergonomics and intelligence available to the operator*
Compact solution with an intermediate level of automation, but at affordable prices for efficient and safe semi-automatic production.

**Bending Centre BCe**
*Flexibility at your service*
Semi-automatic bending centre for medium/small batch production with LUT loading and unloading device for higher productivity.

**Express Bender EBe**
*Productivity pushed to the maximum*
High efficiency fully automatic panel bender for better bending quality and reduced cost of the finished product.

**Express Bender EBe FM**
*The non plus ultra of automation*
Fully automatic panel bender connected in line with other Prima Power technologies offering an extremely high automation level. The Prima Power line allows the automatic production of a finished bent component, without interruptions and without the need for human intervention.
### Machine sizes available

<table>
<thead>
<tr>
<th>Machine</th>
<th>BEND HEIGHT 2250 mm</th>
<th>BEND HEIGHT 2750 mm</th>
<th>BEND HEIGHT 3350 mm</th>
<th>BEND HEIGHT 3800 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBe</td>
<td>204 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCe Smart</td>
<td>204 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCe</td>
<td>204 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EBe</td>
<td>204 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EBe FM</td>
<td>204 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Different levels of automation

<table>
<thead>
<tr>
<th>Machine</th>
<th>LOADING</th>
<th>CENTRING</th>
<th>POSITIONING</th>
<th>BENDING</th>
<th>ROTATION</th>
<th>UNLOADING</th>
</tr>
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<tbody>
<tr>
<td>FBe</td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Automatic" /></td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Automatic" /></td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Manual" /></td>
</tr>
<tr>
<td>BCe Smart</td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Automatic" /></td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Automatic" /></td>
<td><img src="image" alt="Manual" /></td>
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<tr>
<td>BCe</td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Automatic" /></td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Automatic" /></td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Manual" /></td>
</tr>
<tr>
<td>EBe</td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Automatic" /></td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Automatic" /></td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Manual" /></td>
</tr>
<tr>
<td>EBe FM</td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Automatic" /></td>
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<td><img src="image" alt="Automatic" /></td>
<td><img src="image" alt="Manual" /></td>
<td><img src="image" alt="Manual" /></td>
</tr>
</tbody>
</table>
Prima Power’s Fast Bend is an intermediate product between the traditional press brake machine and the automatic panel bender. It allows the automatic creation of multiple bends for each side, including positive / negative inversion, flattened and radius bends; only the loading, rotation and unloading operations are manual. The traditional concept of panel bender manipulators is replaced here with a suction cup feeder to expand the range of bending products. Fast Bend offers a quick and efficient response to an ever-increasing demand for the reduction in the quantity of pieces of the production batch, combining the simplicity of use of a compact model with a limited expense.

**PRECISE**
Excellent bending quality thanks to the corner correction database and servo-electric technology.

**FLEXIBLE**
Suitable for bending various types of pieces.

**ACCESSIBLE**
The additional monitor and barcode or QR reader all support the operator in machine interaction.

**EASY**
3D programming with integrated simulation of the bending cycle.

**AFFORDABLE**
Reduced operating costs thanks to energy efficiency and reduced maintenance.

**APPLICATIONS**
- Production of small parts
- Kit production
- Narrow parts (e.g. door profiles)
- Parts that cannot be handled with clamp
## Technical specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>FBe4</th>
<th>FBe5</th>
<th>FBe6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAXIMUM BENDING LENGTH</strong></td>
<td>2,250 mm</td>
<td>2,750 mm</td>
<td>3,350 mm</td>
</tr>
<tr>
<td><strong>SHEET LENGTH (MIN. ÷ MAX.)</strong></td>
<td>150 ÷ 2,850 mm</td>
<td>150 ÷ 3,000 mm</td>
<td>150 ÷ 3,800 mm</td>
</tr>
<tr>
<td><strong>SHEET WIDTH (MIN. ÷ MAX.)</strong></td>
<td></td>
<td></td>
<td>100 ÷ 1,700 mm</td>
</tr>
<tr>
<td><strong>MINIMUM BENDING LENGTH</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- with re-entering bends</td>
<td></td>
<td></td>
<td>350 mm</td>
</tr>
<tr>
<td>- without re-entering bends</td>
<td></td>
<td></td>
<td>150 mm</td>
</tr>
<tr>
<td><strong>MINIMUM WIDTH BETWEEN THE BENDS</strong></td>
<td></td>
<td></td>
<td>140 mm with standard tools</td>
</tr>
<tr>
<td>- with re-entering bends</td>
<td></td>
<td></td>
<td>45 mm with AUT T7</td>
</tr>
<tr>
<td><strong>MINIMUM HEIGHT OF THE 1ST BEND</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MAXIMUM RE-ENTERING BEND</strong></td>
<td></td>
<td></td>
<td>55 mm</td>
</tr>
<tr>
<td><strong>MAXIMUM BENDING HEIGHT</strong></td>
<td></td>
<td></td>
<td>204 mm</td>
</tr>
<tr>
<td><strong>VERTICAL DISTANCE BETWEEN THE BLADES</strong></td>
<td></td>
<td></td>
<td>210 mm</td>
</tr>
<tr>
<td><strong>MINIMUM EXTERNAL RADIUS</strong></td>
<td></td>
<td></td>
<td>1.5 ÷ 2 times the thickness of the sheet</td>
</tr>
<tr>
<td><strong>BENDING ANGLE</strong></td>
<td></td>
<td></td>
<td>±130°</td>
</tr>
<tr>
<td><strong>MAXIMUM ACCEPTABLE PLANARITY OF THE BLANK</strong></td>
<td></td>
<td></td>
<td>10 mm</td>
</tr>
<tr>
<td><strong>BENDING FORCE</strong></td>
<td>32 t (320 kN)</td>
<td>41 t (410 kN)</td>
<td>41 t (410 kN)</td>
</tr>
<tr>
<td><strong>SHEET CLAMPING FORCE</strong></td>
<td>52 t (510 kN)</td>
<td>90 t (890 kN)</td>
<td>100 t (980 kN)</td>
</tr>
<tr>
<td><strong>MAXIMUM THICKNESS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Steel UTS 410 N/mm²</td>
<td>3.0 mm</td>
<td>3.2 mm</td>
<td>3.0 mm* - 3.2 mm**</td>
</tr>
<tr>
<td>- Stainless steel UTS 680 N/mm²</td>
<td>2.0 mm</td>
<td>2.2 mm</td>
<td>2.0 mm* - 2.2 mm**</td>
</tr>
<tr>
<td>- Aluminium UTS 265 N/mm²</td>
<td>4.0 mm</td>
<td>4.0 mm</td>
<td>3.5 mm* - 4.0 mm**</td>
</tr>
<tr>
<td><strong>MINIMUM THICKNESS</strong></td>
<td></td>
<td></td>
<td>0.5 mm</td>
</tr>
<tr>
<td><strong>AVERAGE ABSORBED POWER</strong></td>
<td>6.0 kWh</td>
<td>7.0 kWh</td>
<td>7.5 kWh</td>
</tr>
<tr>
<td><strong>NUMERICAL CONTROL</strong></td>
<td>OPEN by Prima Electro</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The values shown refer to a standard machine. Prima Power reserves the right to change data without notice.

* Full length - ** Max. 3,000 mm
SEMI AUTOMATIC AND INNOVATIVE PANEL BENDER FOR EFFICIENT, INTUITIVE AND AFFORADABLE PRODUCTION

The BCe Smart bending cell is a revolutionary bending solution thanks to the “safety integrated” concept that allows the operator to focus only on value-added operations, aided by visual devices and sound signals. Its compact layout and combined loading and unloading sequence guarantee high productivity, constituting a very important investment for anyone looking for a flexible and semi-automatic panel bender.

PRECISE
Excellent bending quality thanks to the angle correction database and servo-electric technology.

ERGONOMIC
Maximum comfort for the operator thanks to the lack of physical barriers and work surfaces that can be lowered to facilitate the loading of small or medium-sized parts.

SAFETY
Equipped with two laser scanners that monitor the loading and unloading area, ensuring operations are performed in absolute safety.

PRODUCTIVE
The operator loads the sheet to be bent on the brushed working table and moves away with the bent component, all in a single sequence.

EASY
3D programming with integrated simulation of the bending cycle.

AFFORDABLE
Excellent cost / performance ratio.
## Technical specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bending specifications</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MAXIMUM BENDING LENGTH</strong></td>
<td>2,250 mm</td>
</tr>
<tr>
<td><strong>SHEET LENGTH (MIN. ÷ MAX.)</strong></td>
<td>215 ÷ 2,850 mm</td>
</tr>
<tr>
<td><strong>SHEET WIDTH (MIN. ÷ MAX.)</strong></td>
<td>180 ÷ 1,500 mm</td>
</tr>
<tr>
<td><strong>MINIMUM BENDING LENGTH</strong></td>
<td></td>
</tr>
<tr>
<td>- with re-entering bends</td>
<td>350 mm</td>
</tr>
<tr>
<td>- without re-entering bends</td>
<td>215 mm</td>
</tr>
<tr>
<td><strong>MINIMUM WIDTH BETWEEN THE BENDS</strong></td>
<td>160 mm / 120 mm with UBC option</td>
</tr>
<tr>
<td><strong>MINIMUM HEIGHT OF THE 1st BEND</strong></td>
<td>5 times the thickness of the sheet</td>
</tr>
<tr>
<td><strong>MAXIMUM RE-ENTERING BEND</strong></td>
<td>55 mm</td>
</tr>
<tr>
<td><strong>MAXIMUM BENDING HEIGHT</strong></td>
<td>204 mm</td>
</tr>
<tr>
<td><strong>VERTICAL DISTANCE BETWEEN THE BLADES</strong></td>
<td>210 mm</td>
</tr>
<tr>
<td><strong>MINIMUM EXTERNAL RADIUS</strong></td>
<td>1.5 ÷ 2 times the thickness of the sheet</td>
</tr>
<tr>
<td><strong>BENDING ANGLE</strong></td>
<td>±130°</td>
</tr>
<tr>
<td><strong>MAXIMUM ACCEPTABLE PLANARITY OF THE BLANK</strong></td>
<td>10 mm</td>
</tr>
<tr>
<td><strong>BENDING FORCE</strong></td>
<td>32 t (320 kN)</td>
</tr>
<tr>
<td><strong>SHEET CLAMPING FORCE</strong></td>
<td>52 t (510 kN)</td>
</tr>
<tr>
<td><strong>MAXIMUM THICKNESS</strong></td>
<td></td>
</tr>
<tr>
<td>- Steel UTS 410 N/mm²</td>
<td>2.5 mm (full length) - 3.0 mm (max. 1900 mm)</td>
</tr>
<tr>
<td>- Stainless steel UTS 680 N/mm²</td>
<td>1.8 mm (full length) - 2.0 mm (max. 1900 mm)</td>
</tr>
<tr>
<td>- Aluminium UTS 265 N/mm²</td>
<td>3.5 mm (full length) - 4.0 mm (max. 1900 mm)</td>
</tr>
<tr>
<td><strong>MINIMUM THICKNESS</strong></td>
<td>0.5 mm</td>
</tr>
<tr>
<td><strong>AVERAGE ABSORBED POWER</strong></td>
<td>4 kWh</td>
</tr>
<tr>
<td><strong>NUMERICAL CONTROL</strong></td>
<td>OPEN by Prima Electro</td>
</tr>
</tbody>
</table>

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SEMI AUTOMATIC PANEL BENDER COMBINING FLEXIBILITY AND PRODUCTIVITY

The BCe bending centre from Prima Power offers the ideal solution for those working with single parts, small batches or mass production. This panel bender combines the well-known benefits of the Express Bender - flexibility, precision and high quality - with a semi-automatic yet highly productive process, where the machine is always in production thanks to the LUT loading and unloading table that allows you to load and unload pieces in masked time.

PRECISE
Excellent bending quality thanks to the angle correction database and servo-electric technology.

PRODUCTIVE
The LUT table allows you to load the next part in masked time while the panel bender processes the current sheet to be machined.

FLEXIBLE
Easy manual loading allows you to process batches of any size, including kits and single parts.

EASY
3D programming with integrated simulation of the bending cycle.

AFFORDABLE
Excellent cost/performance ratio.

APPLICATIONS
Production of single parts
Kit production
Completely perforated material
Non-stackable sheets
## Technical specifications

<table>
<thead>
<tr>
<th></th>
<th>BCe4</th>
<th>BCe5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAXIMUM BENDING LENGTH</strong></td>
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<td>2,750 mm</td>
</tr>
<tr>
<td><strong>SHEET LENGTH (MIN. ÷ MAX.)</strong></td>
<td>280 ÷ 2,850 mm</td>
<td></td>
</tr>
<tr>
<td><strong>SHEET WIDTH (MIN. ÷ MAX.)</strong></td>
<td>180 ÷ 1,500 mm</td>
<td></td>
</tr>
<tr>
<td><strong>MINIMUM BENDING LENGTH</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- with re-entering bends</td>
<td>350 mm</td>
<td></td>
</tr>
<tr>
<td>- without re-entering bends</td>
<td>280 mm</td>
<td></td>
</tr>
<tr>
<td><strong>MINIMUM WIDTH BETWEEN THE BENDS</strong></td>
<td>160 mm / 120 mm with UBC option</td>
<td></td>
</tr>
<tr>
<td><strong>MINIMUM HEIGHT OF THE 1ST BEND</strong></td>
<td></td>
<td>5 times the thickness of the sheet</td>
</tr>
<tr>
<td><strong>MAXIMUM RE-ENTERING BEND</strong></td>
<td></td>
<td>55 mm</td>
</tr>
<tr>
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<td>204 mm</td>
</tr>
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<td></td>
<td>210 mm</td>
</tr>
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<td></td>
<td>1.5 ÷ 2 times the thickness of the sheet</td>
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<td><strong>BENDING ANGLE</strong></td>
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<td></td>
</tr>
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<td></td>
<td>10 mm</td>
</tr>
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<td>3.2 mm</td>
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<td>4.0 mm</td>
<td>4.0 mm</td>
</tr>
<tr>
<td><strong>MINIMUM THICKNESS</strong></td>
<td></td>
<td>0.5 mm</td>
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<tr>
<td><strong>AVERAGE ABSORBED POWER</strong></td>
<td>9.5 kWh</td>
<td>13.5 kWh</td>
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<tr>
<td><strong>NUMERICAL CONTROL</strong></td>
<td>OPEN by Prima Electro</td>
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</tr>
</tbody>
</table>

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COMPLETELY AUTOMATIC PANEL BENDER FOR HIGH PERFORMANCE AND MAXIMUM PRODUCTIVITY

Prima Power’s EBe Express Bender is the servo-electric panel bender which considerably increases the production capacity thanks to the automated loading and unloading process, thus maximising the efficiency of the bending process.

In the EBe stand alone version, there is a loading table for loading large quantities of the same part: this configuration is suitable for larger production volumes with limited variability.

The PCD device is an alternative with greater automation when loading several stacks of different pieces - with an optional turning device - which allows batch or kit production and prepares the panel bender for future connection with other Prima Power machines.

APPLICATIONS

Medium-large or medium-small production batches (depending on the loading device)
Unmanned machining with automatic stacking (with USS option)
Medium and large components

PRECISE
Excellent bending quality thanks to the angle correction database and servo-electric technology.

FAST
Reduction of cycle times with loading and unloading operations in masked time.

SCALABLE
Suitable for every production requirement thanks to the complete range of automation, loading and unloading solutions.

EASY
3D programming with integrated simulation of the bending cycle.

RELIABLE
Proven and reliable thanks to 20 years experience with the EBe platform.
### Technical specifications

<table>
<thead>
<tr>
<th></th>
<th>EBe4</th>
<th>EBe5</th>
<th>EBe6</th>
<th>EBe3820</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAXIMUM BENDING LENGTH</strong></td>
<td>2,250 mm</td>
<td>2,750 mm</td>
<td>3,350 mm</td>
<td>3,800 mm</td>
</tr>
<tr>
<td><strong>SHEET LENGTH (MIN. ÷ MAX.)</strong></td>
<td>350 ÷ 2,850 mm</td>
<td>350 ÷ 3,850 mm</td>
<td>350 ÷ 4,000 mm</td>
<td></td>
</tr>
<tr>
<td><strong>SHEET WIDTH (MIN. ÷ MAX.)</strong></td>
<td>180 ÷ 1,500 mm</td>
<td>180 ÷ 1,700 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MINIMUM BENDING LENGTH</strong></td>
<td></td>
<td>350 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MINIMUM WIDTH BETWEEN THE BENDS</strong></td>
<td></td>
<td>160 mm / 120 mm with UBC option</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MINIMUM HEIGHT OF THE 1ST BEND</strong></td>
<td></td>
<td>5 times the thickness of the sheet</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MAXIMUM RE-ENTERING BEND</strong></td>
<td></td>
<td>55 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MAXIMUM BENDING HEIGHT</strong></td>
<td></td>
<td>204 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VERTICAL DISTANCE BETWEEN THE BLADES</strong></td>
<td></td>
<td>210 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MINIMUM EXTERNAL RADIUS</strong></td>
<td></td>
<td>1.5 ÷ 2 times the thickness of the sheet</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BENDING ANGLE</strong></td>
<td></td>
<td>±130°</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MAXIMUM ACCEPTABLE PLANARITY OF THE BLANK</strong></td>
<td></td>
<td>10 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BENDING FORCE</strong></td>
<td>32 t (320 kN)</td>
<td>41 t (410 kN)</td>
<td>41 t (410 kN)</td>
<td></td>
</tr>
<tr>
<td><strong>SHEET CLAMPING FORCE</strong></td>
<td>52 t (510 kN)</td>
<td>90 t (890 kN)</td>
<td>100 t (980 kN)</td>
<td></td>
</tr>
<tr>
<td><strong>MAXIMUM THICKNESS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Steel UTS 410 N/mm²</td>
<td>3.0 mm</td>
<td>3.2 mm</td>
<td>3.0 mm*</td>
<td>2.0 mm*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3.2 mm**</td>
<td>3.2 mm**</td>
</tr>
<tr>
<td>- Stainless steel UTS 680 N/mm²</td>
<td>2.0 mm</td>
<td>2.2 mm</td>
<td>2.0 mm*</td>
<td>1.5 mm*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.2 mm**</td>
<td>2.2 mm**</td>
</tr>
<tr>
<td>- Aluminium UTS 265 N/mm²</td>
<td>4.0 mm</td>
<td>4.0 mm</td>
<td>3.5 mm*</td>
<td>3.0 mm*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4.0 mm**</td>
<td>4.0 mm**</td>
</tr>
<tr>
<td><strong>MINIMUM THICKNESS</strong></td>
<td></td>
<td></td>
<td></td>
<td>0.5 mm</td>
</tr>
<tr>
<td><strong>AVERAGE ABSORBED POWER</strong></td>
<td>9.5 kWh</td>
<td>13.5 kWh</td>
<td>13.5 kWh</td>
<td></td>
</tr>
<tr>
<td><strong>NUMERICAL CONTROL</strong></td>
<td>OPEN by Prima Electro</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The values shown refer to a standard machine. Prima Power reserves the right to change data without notice.

* Full length - ** Max. 3,000 mm
**EBe FM Express Bender**

The panel bender can be integrated into all Prima Power FM systems (Flexible Manufacturing Systems).

Do you want to drastically reduce operations handling raw and semi-finished materials between one processing and the next? Prima Power offers multiple configurations of “systems” that combine the panel bender with various cutting technologies, magazines and buffer systems. Several machines in one single integrated solution to meet your production needs.

**APPLICATIONS**
- Production of individual pieces
- Component kits
- Production of small, medium and large batches of components

**PSBB Line [Punching - Shearing - Buffering - Bending]**
Punching / Shearing / Buffering / Bending

**LPBB Line [Laser Cutting - Punching - Buffering - Bending]**
Laser Cutting / Punching / Buffering / Bending
**PunchBend Line**
Punching machine and Panel Bender connected directly by roller conveyor or PCD device for a dedicated and highly productive line.

**Night Train FMS®**
Unlimited flexibility and capacity for extended production without an operator.
High customisable with our options

**ASP**
- Additional blades for a further increase in the machine’s ability to complete all bends
- Automatic activation during the bending cycle
- Symmetrical or asymmetric positioning
- Suitable for partial bends, wings around the edge, internal bends, very narrow bends
- 5 different types of standard blades available, with customisation available to meet even the most varied needs

**AUT**
- Additional tool-holder bar to increase production capacity
- Increases panel bending flexibility of bends
- 7 different types of tools available in kits of different lengths, defined during the feasibility phase of client pieces with customisation available for dedicated solutions

**BCP**
- Used to bend narrow or small profiles which are not able to be managed as single panels
- Option of multiple profiles on the same sheet
- Does not need other options to achieve the finished and detached profile
- Automatic profile unloading system
- Collection wagon designed for easy manual emptying or with fork lift

**IEU**
Engraving device mounted on the ASP carriage, used to engrave the sheet before Bending.
The weakening of a specific point on the sheet increases the bending quality in case of applications such as:
- tubular profiles
- flattened bends on medium-high thicknesses
- reduction of the external bend radius

**BENDING CAPACITY**
- ASP (Additional Short Blades)
- AUT (Additional Upper Tool)
- BCP (Bend Cutting Profile)
- IEU (Integrated Engraving Unit)
MATERIAL HANDLING

PCD (Picking & Centring Device)
- Multifunctional device for positioning and centring multiple stacks or individual pieces
- Allows the flow of material from cutting machines connected in line or from Night Train magazines
- Can be configured with single and double wagon for adding panels from external cutting processes or stacking punched parts

BTD (Bend Turning Device)
- Device for turning the panels to be bent; guarantees their correct positioning in the machine
- Allows you to automatically carry out the overturning phase of the piece before bending in masked time

USS (Unloading & Stacking System)
System for stacking bent parts, available in two models that differ in terms of automation level and stacking autonomy:

USS1,
- Composed of motorised roller conveyors, adequately protected by light curtains. Allows you to load empty pallets and to unload full ones without interrupting machine operation.
- Loading and unloading in masked time
- Up to 8 eur pallets and 24 different programmable stacking positions
- Programmable positioning with component orientation at 0°, 10°, 90° and 180°
- Unmanned operations without production interruption
- Easily integrated with the layout of the factory and logistics

USS2, allows the stacking of a more limited number of bent components compared to the USS1 against a smaller cost and a smaller footprint.
The Software: Master BendCam and Tulus HMI

Programming plays a very important role in the bending world. Today more than ever, customers are increasingly demanding that the software is latest generation and cutting edge, but also quick to learn and easy for the operator to use. Prima Power software for programming and managing machine operations simplifies the process and reduces the number of steps required to create the finished piece.

GRAPHIC AND PROGRAMMING MASTER BENDCAM

Master BendCam is the programming system for all Prima Power panel benders and is part of the standard machine supply. It uses interactive graphic techniques to simulate the bending process in a realistic way, generating optimised and safe programs.

The main features of this CAM are:

- importing 3D modules such as IGES, STL, STEP, SAT and others
- different programming modes: automatic, semi-automatic and manual
- advanced assisted programming with graphical positioning of the machine axes
- tree structure of bending processes
- program optimisation thanks to integrated 3D simulation
- checking collisions between the piece to be bent and the machine components
- management and configuration of tools
- automatic calculation of cycle times
**TULUS BEND® GRAPHIC INTERFACE**

Tulus Bend® is the human-machine interface for all Prima Power panel benders. It is an integrated and scalable software tool for centralised production management.

Tulus Bend allows the user to check the piece geometry and bending parameters in 3D graphics both manually and automatically.

The tool library guarantees a precise combination between the tools in the machine and those configured. Tulus Bend also shows the machine status, alarms, axis coordinates, inputs and outputs of the machine and is equipped with a clear and complete diagnostic.
Precision and repeatability are our goal

The goal of many customers is more commonly becoming the need to reduce the number of attempts required to reach a bent piece “within tolerance”, with a view to maximising productivity by reducing waste. The dream is that the first piece of each batch is already a good enough panel, which becomes a real necessity when the punched sheet metal has a high unit value for the quality of the material or for the work carried out previously.

Prima Power responds to this need with DABA technology (Dynamic Adjustment of the Bending Angle), thanks to which corrective parameters are proposed in relation to the material variables which allows a considerable reduction in the time required to create a new panel.

DABA represents a unique technology in the field of automatic sheet bending thanks to the following elements:

- Servo-electric movements of the bending parts for high precision and absolute repeatability of the bending process
- Assembly, alignment and calibration procedures that guarantee repeatability of the machine’s behaviour and consequent repeatability of the results
- TMDB (Technological Material Data Base), a database with over 20,000 corrective bending data, which manages variables such as material, size, thickness, anisotropy and which the customer can integrate and adapt to his own production
- An advanced interpolation algorithm for the automatic generation of bending corrections for parts with dimensions or thicknesses that are not exactly matched in the database

DABA is an evolving project, in line with Prima Power principles and aimed at the continuous creation of innovation and advanced technologies at the customer’s service.

Example and details of a bent panel without corrections (left) and with corrections imported from the TMDB (right)
Applications

- Food service, white goods & domestic appliances
- Steel furniture, panels & warehousing
- Electric cabinets
- Steel doors & frames
- Elevators & escalators
- Generators
- Hospital & Lab equipment
- HVAC
- Lighting equipment
Prima Power Services: the key to better productivity

We believe in long-term relationship with our partners, and we think that the real product we deliver to our customer is not just the machine itself, but the production capacity that our customer can achieve with our products and technology. The heart of Prima Power service is the common goal we share with our customer: start, maintain and develop the plant’s production capacity and maximize it. Our Service covers the whole life cycle of the system and technology and contributes to reach one goal: maximize the productivity and the profit for our customers.

TELESERVICE
It is a service for the remote diagnostic and assistance. Skilled service engineers are available to operate remotely with the customer’s CNC.

FIELD SERVICE
In addition to preventive maintenance, we offer high-quality corrective maintenance to guarantee fast recovery when there is a problem. With more than 13,000 machines installed in more than 80 countries, we are able to give our customer the required assistance no matter where they are.

SERVICE AGREEMENTS
We continuously develop preventive maintenance plans for Prima Power machines. Maintenance visits are performed according to the task list specified for each machine type.

UPDATES E UPGRADES
The modularity of the product range often allows upgrading of a machine or manufacturing system even years after the original delivery.

SPARE PARTS
Original Prima Power spare parts to guarantee full performance and prolonged durability.

CONSULTATION
Wide range of consultation services on machine operation, programming and maintenance.

USED MACHINES
Possibility to purchase second hand machines with Prima Power quality.

TRAINING
Training programs and updates for using our machines and software to their best, maximizing manufacturing capacity and quality.
Contacts
Find your local Prima Power representative at primapower.com