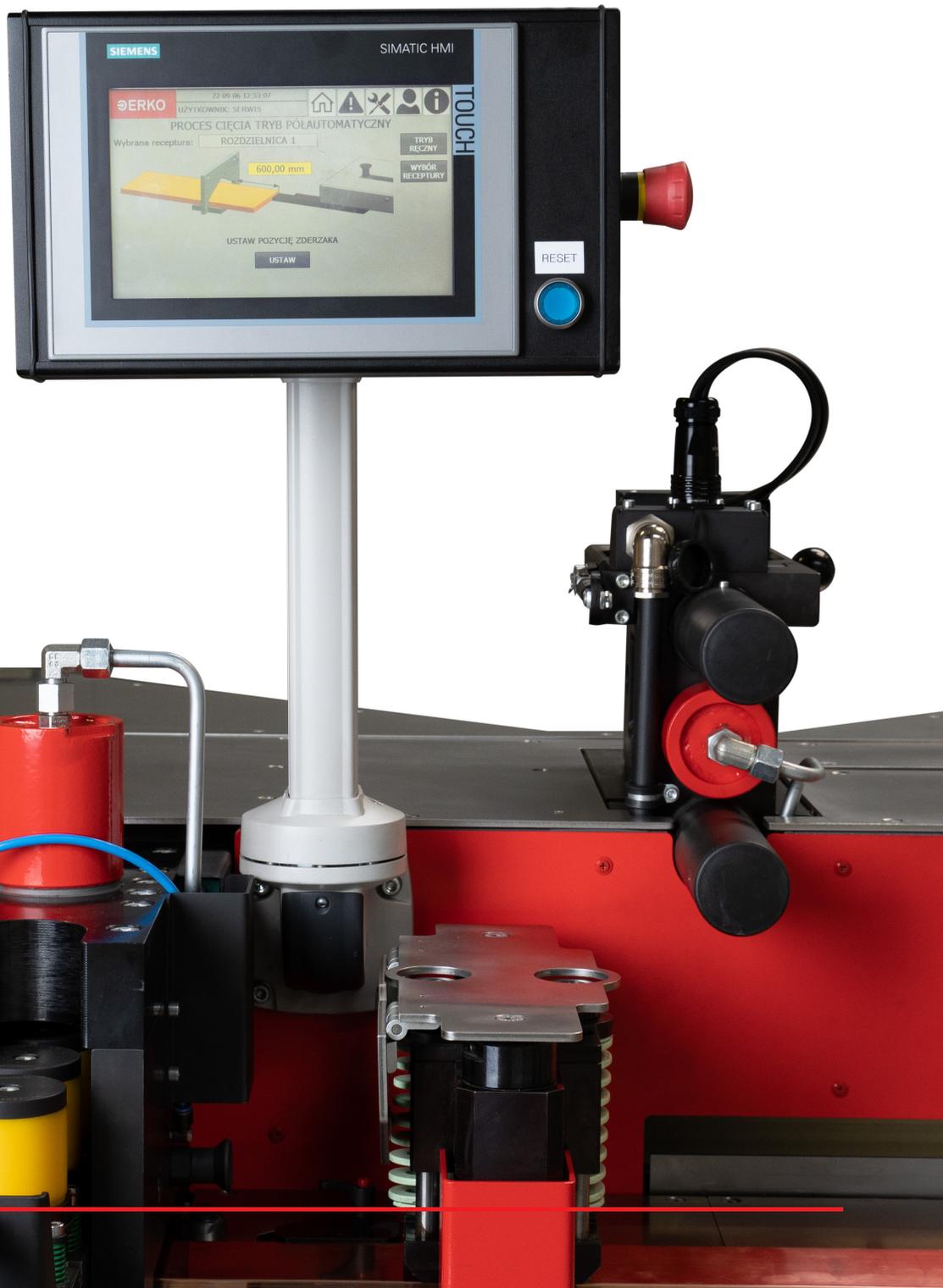


 **ERKO[®]**

**BPS
Intelligent
Line**



BPS Intelligent Line



BPS is a group of intelligent busbar processing machines, designed to multi-stage and high-performance shaping of copper, aluminium, and bimetallic busbars.

Our response to the needs of the modern market

The constant strive for improved efficiency of modern switchboards sets higher and higher quality requirements for the busbars used in them. In response to the demand of the market, the company ERKO has designed a new group of intelligent machines for multi-stage and high-performance shaping of busbars. The variety of machines offered in the BPS line allows us to offer the machine which is suitable in terms of production volume, technological advancement, and complexity of implemented projects of any individual company.

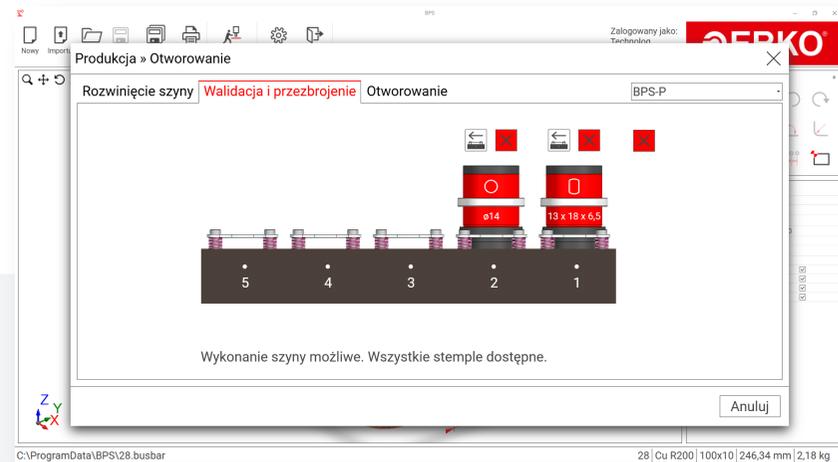


Innovative computational algorithm

The group of machines in the BPS product line received an innovative computational algorithm developed specially to enable precise and repeatable processing of busbars. Designing a busbar requiring punching many holes and multi-stage bending comes down to designing that busbar and then having it processed by one of machines from the BPS group. The applied computational algorithms guarantee the compliance of the final product with its initial design.

The applied intelligent algorithm protects the operator against incorrect design and construction of the busbar at every stage of work. The software informs, among others, about incorrect position of any particular hole from the edge of the busbar and its bends; about spacing between hole; the need to adjust the bend radius to the material properties; or the possibility to make a long oval hole.

With these intelligent functionalities, we can be certain that the busbar meets the requirements of modern switchboards. This solution puts the BPS product line among European machine innovations implemented in the Industry 4.0 system.

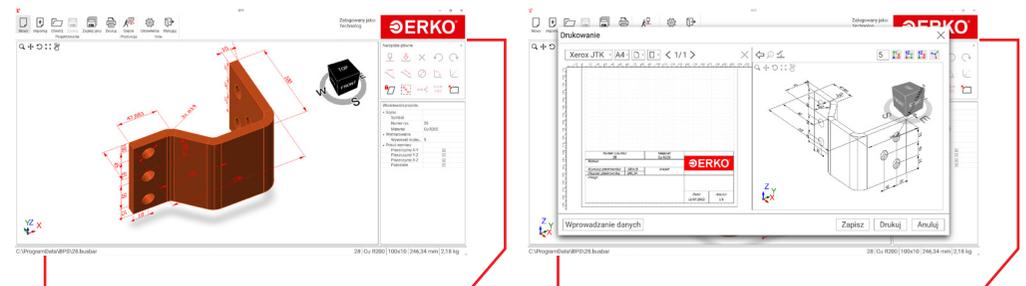


Innovative assistance system of the operator

The intelligent solutions applied in the BPS group of machines support the operator during busbar processing. They supplement the operator's knowledge with construction-, technological-, and material-related aspect and protect the operator against making a non-compliant busbar.

Main features of the family of BPS machines

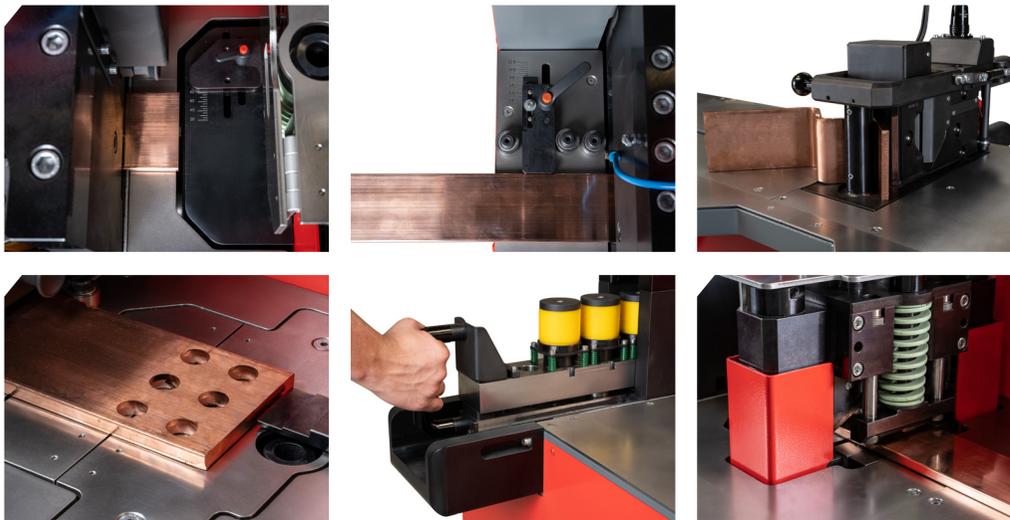
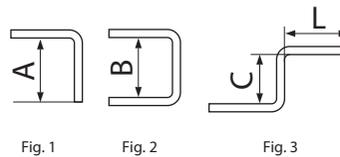
- the algorithm for shaping the busbars allows for identification of individual material constraints
- high tolerance and repeatability of the dimensions of manufactured busbars
- intuitive graphic interface supporting product programming, including the competences and preferences of the operators
- providing access to manufacturing-related information (real-time access to performance and process data)
- flexible configuration of the machining socket



BPS 1200 busbar processing station

Station for precise cutting, bending, and punching of Al, Cu, and Al-Cu busbars

busbar width: (20-125) mm
busbar thickness: (5-12) mm
bending angle: (5-90) °



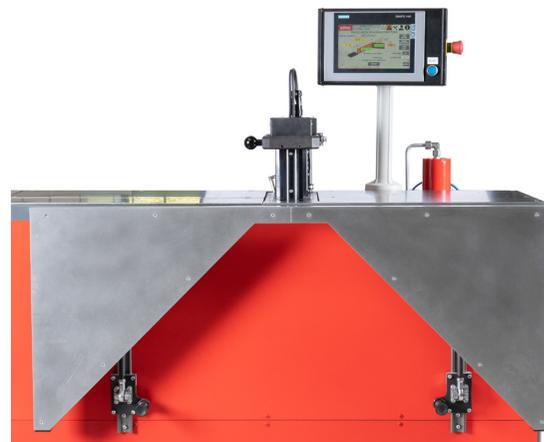
Total dimensions:	2000 mm x 3800 mm x 1700 mm	Electric power:	2kW
Total dimensions:	650 kg	Working pressure:	630 bar
Power supply:	3x400/230V AC		

Special features

- increasing the speed of processing of the complete busbar part compared to previous generation by 30%
- work with innovative software for designing busbars
- possibility to use the innovative computational algorithm
- automatic positioning of the measuring ruler during punching, bending, and cutting operations (based on procedures or previously entered data)
- measuring ruler position accuracy 0.1 mm for processed busbars up to 2 000 mm long for cutting and punching (up to 1 600 mm long for bending)
- possibility of bending in an "L" shape for busbars up to 10 mm thick at a distance of 40 mm from the edge (fig. 1)
- possibility of bending in a "C" shape for busbars up to 10 mm thick at a distance of 45 mm from the edge (fig. 2)
- possibility of bending in a "Z" shape for busbars up to 10 mm thick at a distance 40 mm from the edge and between the bends (fig. 3)
- bending angle accuracy $\pm 0.2^\circ$ with adjustment for busbar elasticity
- the guillotine which can be hidden under the worktop surface
- automatic controlled press of the cut busbar
- minimum length of cut busbar: 30 mm
- burr-free no surface deformation busbar cutting
- the movable cassette which allows installing of four punches and eliminates the need for retooling
- burr-free round and oval holes punching
- possibility of saving and recalling busbar processing procedures
- a built-in reliable and efficient hydraulic drive
- additional connections for other tools offered by ERKO (hydraulic hose with PM quick coupler)
- maintained mobility of the machine
- possibility of remote diagnostics



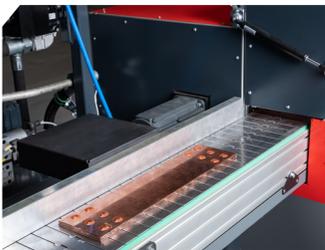
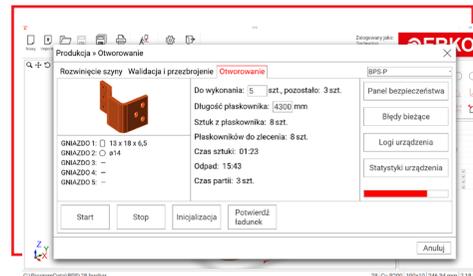
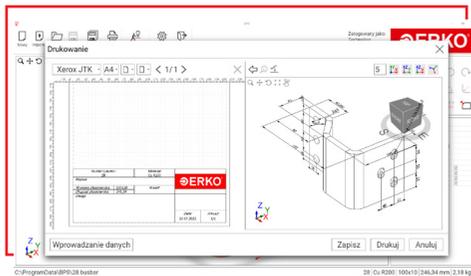
BPS 1200



BPS-P busbar processing station

Station for precise cutting, bending, and punching of Al, Cu, and Al-Cu busbars

busbar width: (20-160) mm
busbar thickness: (3-15) mm
maximum length of the cut busbar: 4 metres



Total dimensions: 7253 mm x 3639 mm x 2000 mm

Total dimensions: 3200 kg with the hydraulic power pack

Power supply: 3x400/230V AC

Electric power: 21kW

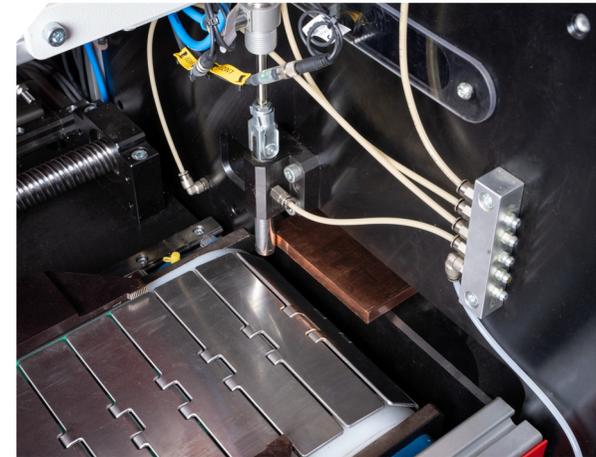
Working pressure: 300 bar

Special features

- direct work of the machine with the innovative algorithm for designing busbars
- operator support covers designing, technology, and processed material
- application providing possibility to print the designed busbar in 2D and 3D views
- possibility of adaptation to work in the production line
- control system performing CNC functions
- designing busbars directly on the machine with a 3D visualisation and generating the developed length of a bent busbar
- equipped with a 22-inch operator's touchscreen with multi-touch
- dedicated to high-performance and precise serial production
- busbar feeding ruler accuracy of the position: 0.1 mm
- a movable cassette which allows installing of five punches and eliminates the need for retooling
- burr-free round, oval, and custom-designed holes punching
- minimum length of cut busbar: 25 mm
- burr-free no surface deformation busbar cutting in a single operation
- possibility of saving designs on a network drive
- possibility of using design developed on desktop software
- possibility of extending the machine with additional machining tools (e.g., custom-made punches)
- remote software update, including material base
- it facilitates use for people with disabilities
- stable, stationary structure
- force of pressure: 300 kN



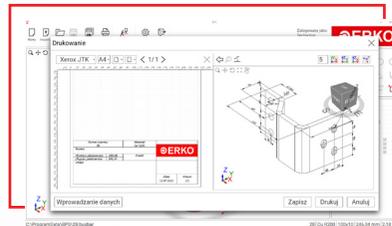
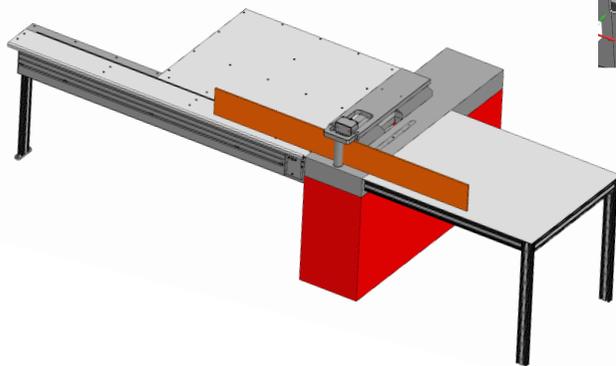
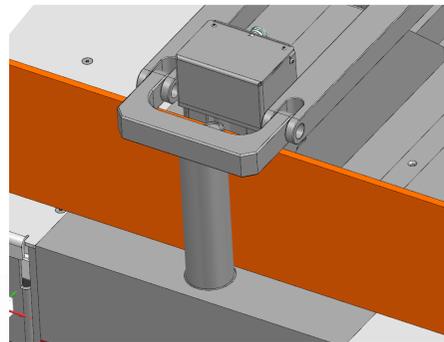
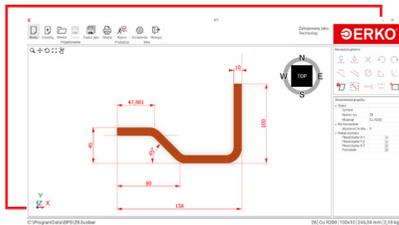
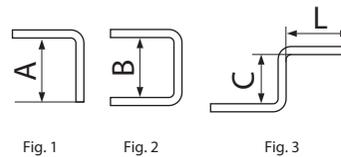
BPS-P



BPS-B busbar processing station

Station for precise bending of Al, Cu, and Al-Cu busbars (in the design phase)

busbar width: (20-200) mm
busbar thickness: (3-15) mm
bending angle: (5-90) °



Special features

- operator support covers designing, technology, and processed material
- application providing possibility to print the designed busbar in 2D and 3D views
- possibility of adaptation to work in the production line
- control system performing CNC functions
- visualisation of the bending process
- direct work of the machine with the innovative algorithm for designing busbars
- designing busbars directly on the machine with a 3D visualisation and generating the developed length of a bent busbar
- equipped with a 22-inch operator's touchscreen with multi-touch
- dedicated to high-performance and precise serial production
- busbar feeding ruler accuracy of the position: 0.1 mm
- possibility of bending in an "L" shape for busbars up to 10 mm thick at a distance of 40 mm from the edge (fig. 1)
- possibility of bending in a "C" shape for busbars up to 10 mm thick at a distance of 45 mm from the edge (fig. 2)
- possibility of bending in a "Z" shape for busbars up to 10 mm thick at a distance of 40 mm from the edge and between the bends (fig. 3)
- bending angle adjustment to busbar elasticity
- possibility of remote diagnostics
- possibility of saving designs on a network drive
- possibility of using design developed on desktop software
- possibility of extending the machine with additional machining tools (e.g., custom-made inserts)
- remote software update, including material base
- it facilitates use for people with disabilities
- stable, stationary structure

BPS Intelligent Line — Why is it worth it?



It covers every stage of production,
that is self-sufficiency and
comprehensiveness.



High performance,
that is, speed of action and savings
in time and money.



Technological advancement,
that is, a chance to implement complex
designs.



Cutting edge technology and flexibility,
that is an intuitive way of designing
and intelligent operator support.



Precision and repeatability,
that is, the compliance of the design
with the final product and compliance
with current requirements.



Supplier with 40 years of experience,
that is, a trusted and reliable business
partner who operates in the industry
the ERKO company has learnt inside out.

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