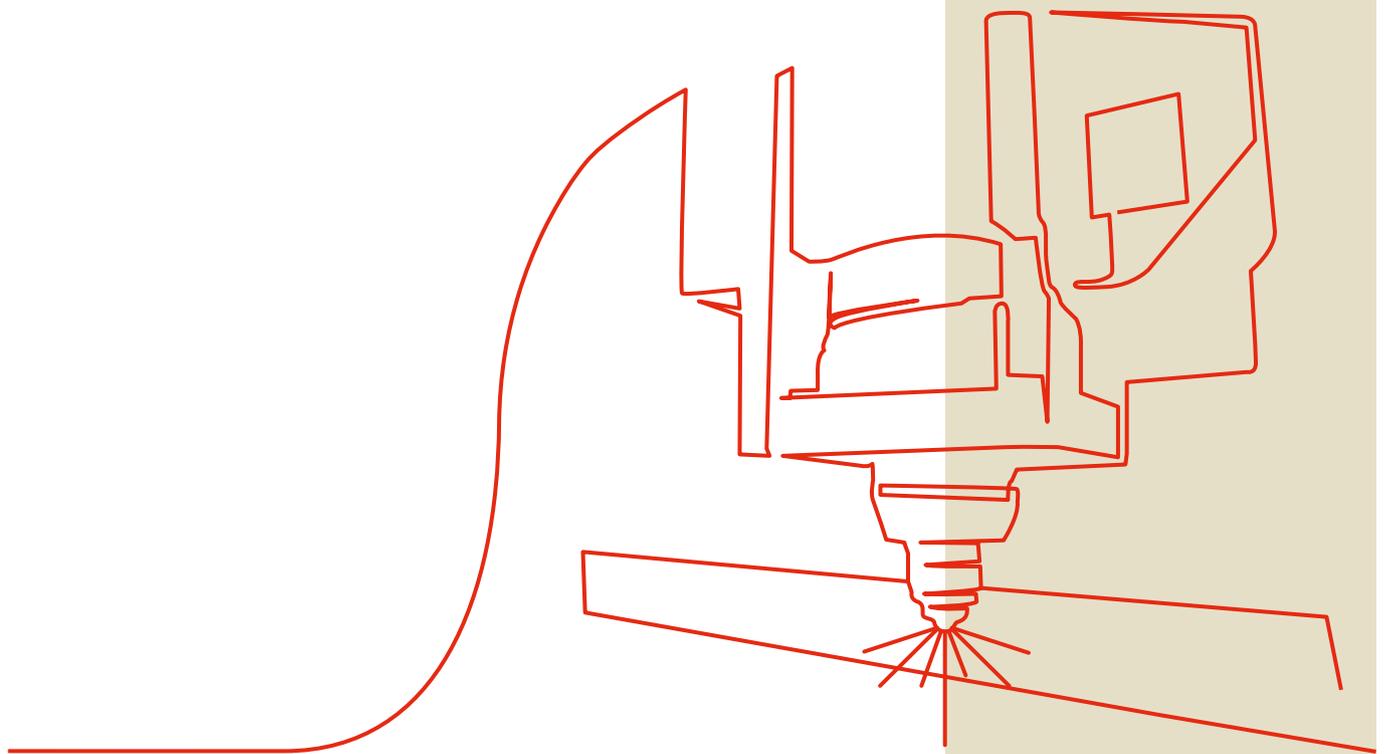


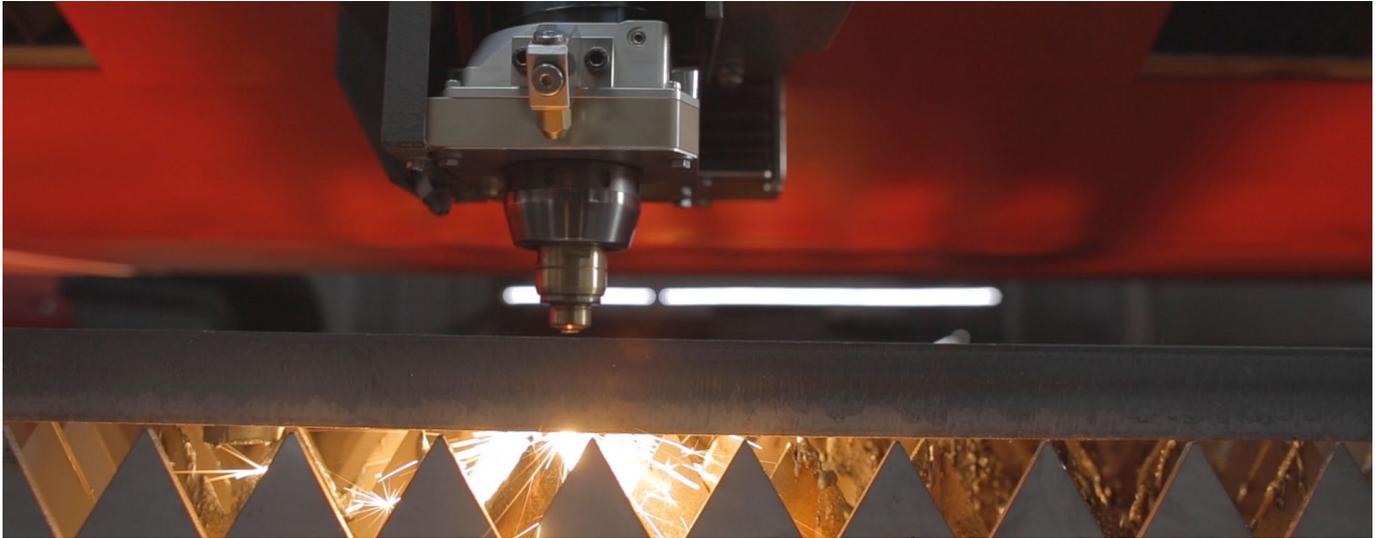
Bystronic



Laser Cutting

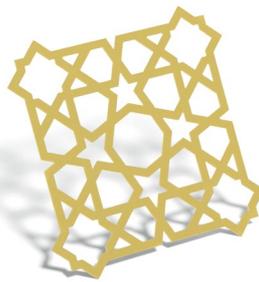
Your best choice.

bystronic.com



Laser cutting

Laser cutting is a thermal cutting process for processing sheet metal. The laser beam is created by the laser source (resonator), conducted by a transport fiber or mirrors in the machine cutting head where a lens focuses it at very high power on a very small diameter. This focused laser beam meets the sheet metal and melts it.



Versatile

Laser cutting is extremely versatile. In addition to flat materials, tubes and profiles can also be processed by laser cutting systems. Primarily steel, stainless steel, aluminum and also other nonferrous metals are cut. The thickness of the processed sheet metal ranges from 0.8 to 50 mm.





Fiber laser

Fiber lasers are the most efficient way in laser cutting. The laser beam is created by an active fiber and transmitted over a transport fiber to the machine cutting head. Fiber lasers are significantly smaller than CO₂ lasers and generate several times the power from the same amount of current. A fiber cutting system is primarily suited for processing thin to thick sheet metal from steel, stainless steel, aluminium and also other nonferrous metals (copper and brass).

Cutting techniques

Depending on the cutting technique employed, different process gases are used, and these are forced through the kerf at different pressures. The various techniques differ primarily in respect to cutting speed and the quality of the cutting edges.

Flame cutting

During flame cutting, the material is heated to ignition temperature by the laser beam, burnt by introducing oxygen, and blown out of the kerf using gas pressures of between 0.4 and 10 bar. Flame cutting permits the cutting of thick steel sheets up to 50 millimeters.

Fusion cutting

During fusion cutting, the material in the kerf is fused by the laser beam. The cutting gas used is nitrogen or argon. The cutting gas expels the fused metal from the kerf at pressures of up to 20 bar. Since the cutting gases do not react with the material, oxide-free cutting edges are produced that do not require reworking.

Cutting gas

The laser beam is focused by the lens in the cutting head and directed onto the workpiece by a nozzle. The cutting gas also flows through this nozzle. Depending on the application, oxygen, nitrogen or compressed air are used as the cutting gas.

Bystronic laser sources

A wide selection of various, powerful laser sources is one of Bystronic's trademarks.
All lasers are high-quality and highly energy efficient, not least because of their high efficiency.

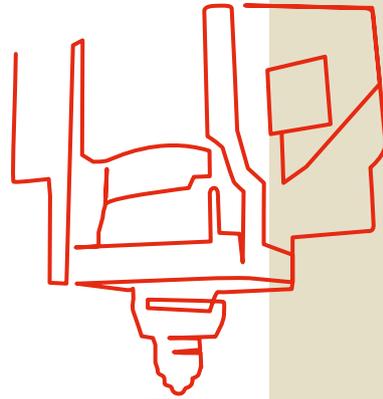
Type of machine	Laser sources									
	Fiber 2000	Fiber 3000	Fiber 4000	Fiber 6000	Fiber 8000	Fiber 10000	Fiber 12000	Fiber 15000	Fiber 20000	Fiber 30000
ByCut Star 3015		✓	✓	✓	✓	✓	✓	✓	✓	✓
ByCut Star 4020		✓	✓	✓	✓	✓	✓	✓	✓	✓
ByStar Fiber 3015		✓	✓	✓	✓	✓	✓	✓	✓	
ByStar Fiber 4020		✓	✓	✓	✓	✓	✓	✓	✓	
ByStar Fiber 6225		✓	✓	✓	✓	✓	✓	✓	✓	
ByStar Fiber 8025		✓	✓	✓	✓	✓	✓	✓	✓	
ByCut Smart 3015		✓	✓	✓	✓	✓	✓	✓		
ByCut Smart 6225		✓	✓	✓	✓	✓	✓	✓		
ByCut Smart 12025		✓	✓	✓	✓	✓	✓	✓		
BySmart Fiber 3015	✓	✓	✓	✓	✓	✓	✓			
BySmart Fiber 4020		✓	✓	✓	✓	✓	✓			
ByCut Eco 3015		✓	✓	✓						
ByCut Eco 4020		✓	✓	✓						

Material type	Cutting thicknesses									
	Fiber 2000	Fiber 3000	Fiber 4000	Fiber 6000	Fiber 8000	Fiber 10000	Fiber 12000	Fiber 15000	Fiber 20000	Fiber 30000
Steel (max. cutting sheet thickness)	12 mm	20 mm	20 mm	25 mm	25 mm	25 mm	25 mm	25 mm	25 mm	25 mm
Steel (with option BeamShaper)		20 mm	25 mm	30 mm	30 mm	30 mm	30 mm	30 mm		
Steel (advanced applications)								50 mm	50 mm	50 mm
Stainless steel (max. cutting sheet thickness)	6 mm	12 mm	15 mm	30 mm	30 mm	30 mm	30 mm	40 mm	40 mm	40 mm
Stainless steel (advanced applications)								50 mm	50 mm	50 mm
Aluminum (max. cutting sheet thickness)	8 mm	12 mm	20 mm	30 mm	30 mm	30 mm	30 mm	40 mm	40 mm	40 mm
Aluminum (advanced applications)								50 mm	50 mm	50 mm
Brass (max. sheet thickness)	4 mm	6 mm	8 mm	15 mm	15 mm	15 mm	15 mm	20 mm	20 mm	20 mm
Copper (max. sheet thickness)	3 mm	6 mm	8 mm	12 mm	12 mm	15 mm	15 mm	20 mm	20 mm	20 mm

Fiber Warranty Premium

The exclusive service for all fiber laser cutting systems. 5 years comprehensive protection for the replacement of parts of the fiber laser source. During the warranty period, the cutting hours are unlimited.





Tube Processing

Your best choice.

[bystronic.com](https://www.bystronic.com)



Limitless applications

The application of processed tubes and profiles is manifold. Whether in the automotive industry, furniture design, architecture, petrochemical industry or commercial vehicle construction. In many industries, the laser-assisted processing of tubes and profiles offers an almost unlimited manufacturing spectrum for components and unique design possibilities.



Make the right choice for a manufacturing solution that meets your requirements today and in the future. Our specialists will be pleased to provide you with advice about Bystronic's versatile portfolio in the field of tube and profile processing.



No matter whether you have decided to introduce a new production technology or whether you are expanding your existing production range in the field of tube and profile processing with an additional machine, we will develop the optimum solution together with you. Backed by our expertise in metalworking and laser cutting, we are your reliable technology and service partner.





Bystronic

Bystronic is a leading global provider of high-quality solutions for the sheet metal processing business. The focus lies on the automation of the complete material and data flow of the cutting and bending process chain. Bystronic's portfolio includes laser cutting systems, press brakes, and associated automation and software solutions. Comprehensive services round off the portfolio.

2D and 3D processing

The ability to choose between 2D and 3D laser cutting technology opens up the possibility of individually customized and precise cutting of parts in a very wide variety: tubes with round, square, and rectangular shapes as well as profiles with diverse open cross-sections (for example H, L, T, and U cross-sections). In addition to straight cutting edges, the 3D technology also enables bevel cuts up to 45 degrees. This versatility eliminates the need for costly milling, drilling, punching, or sawing processes.



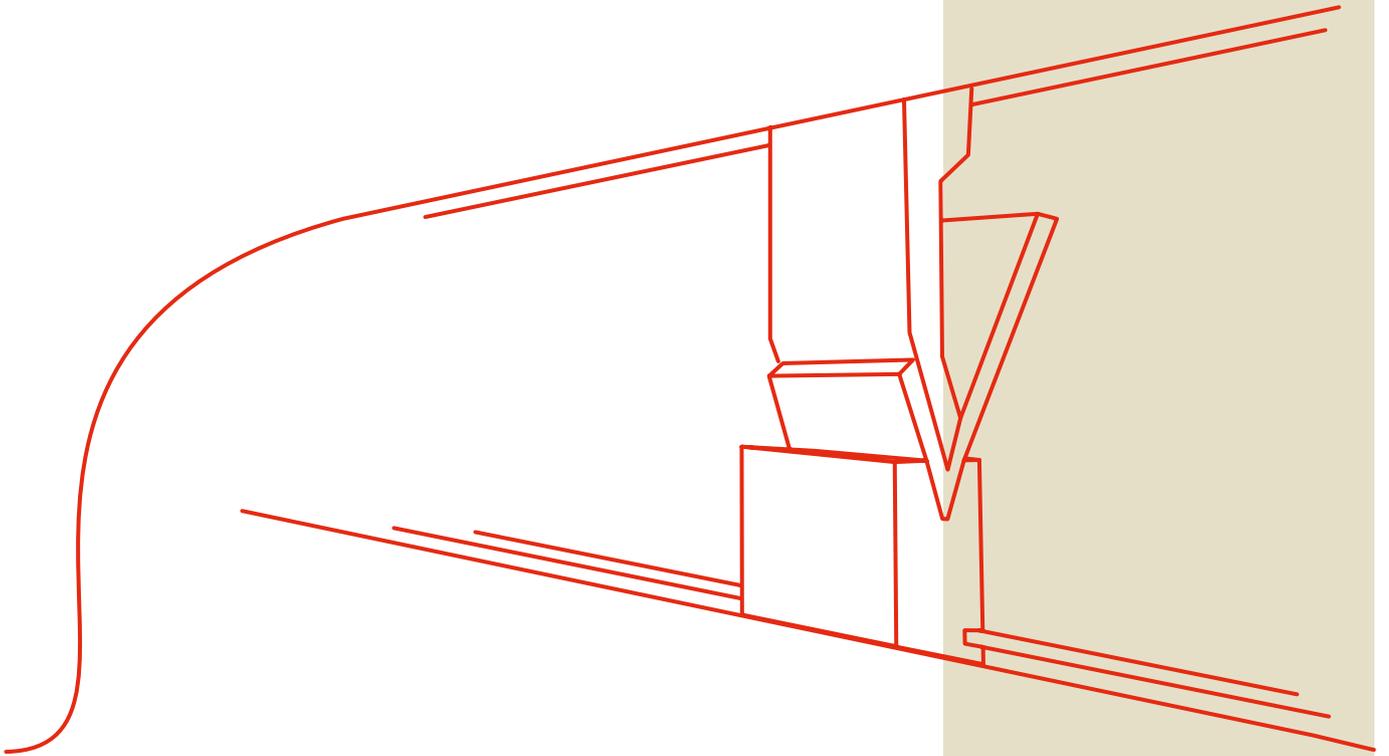
CO₂ laser and fiber laser technology

The right cutting technology for every requirement

Depending on the materials that are to be processed and the desired cutting quality and level of productivity, users have the choice between CO₂ laser cutting systems and fiber laser cutting systems. Fiber lasers achieve high cutting speeds in thin material thicknesses. Additionally they boast low power consumption while requiring little maintenance. The special properties of this laser cutting technology enable applications in steel, stainless steel, aluminum, and non-ferrous metals, such as copper and brass.

CO₂ lasers are characterized by their high cutting quality. Their primary area of application lies in the medium to high range of material thicknesses. The cutting edges achieved with the laser beam excel through burr-free cutting and low scoring. This means that the cut parts can be processed further without reworking.

Type of machine	Laser sources				
	Fiber Laser			CO ₂ Laser	
	Fiber 2000	Fiber 3000	Fiber 4000	Laser 3000	Laser 4000
ByTube Star 130	✓	✓	✓		
FL 170	✓	✓			
FL 300				✓	✓



Bending

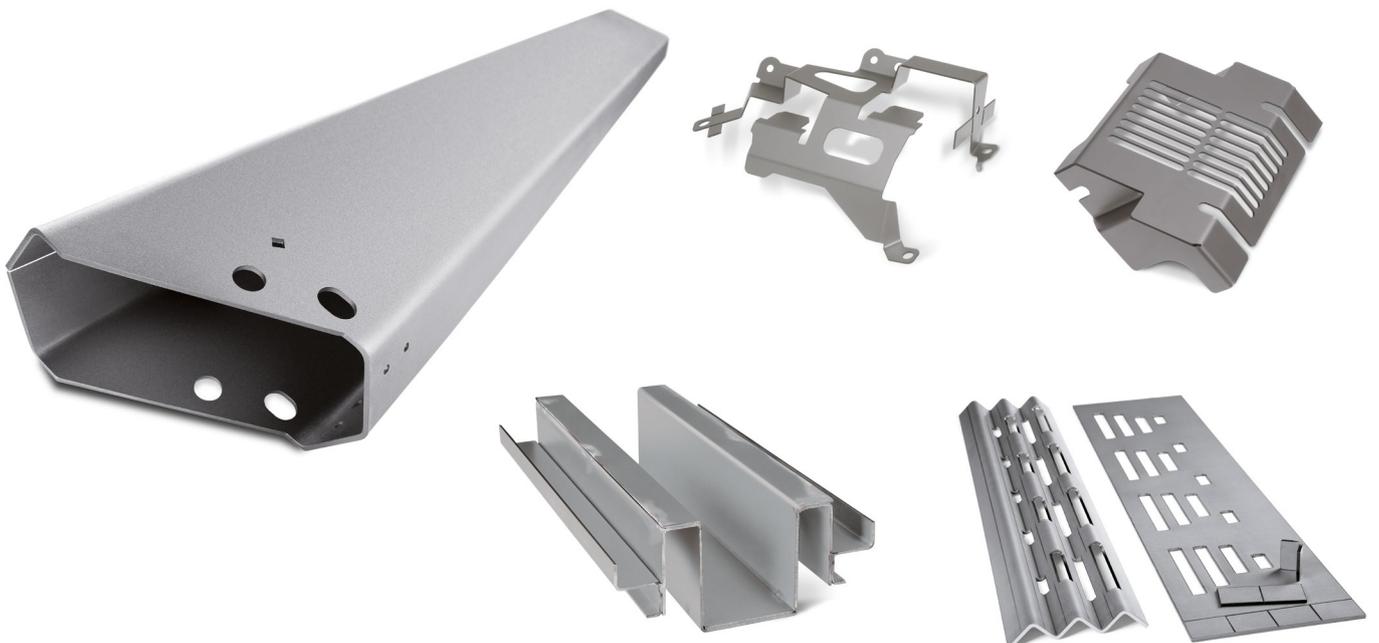
Your best choice.

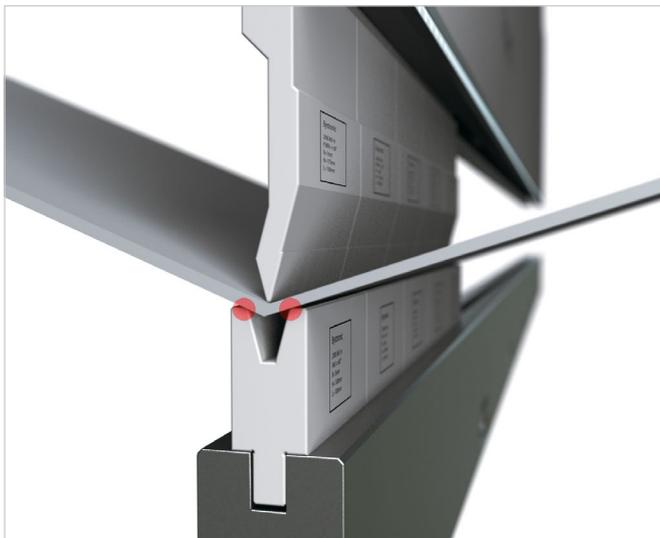
[bystronic.com](https://www.bystronic.com)



Bending

Bending is a procedure for forming a flat, sheet metal workpiece. It immediately follows cutting in the processing chain. The workpiece lies on a bottom tool with a v-shaped opening. A wedge-shaped tool (punch) presses the workpiece into the v-opening and thus bending it to the desired angle.





Air bending

During air bending, the upper tool presses the workpiece into the bottom tool opening, however without bottoming. The workpiece rests solely on the two edges of the bottom tool during the entire bending process. The bending angle is determined by how deep the top tool plunges into the bottom tool. Air bending permits bending at various angles without a tool change.

Coining

During coining, the punch presses the workpiece into the die with a pressure that is much greater than for air bending. Since the punch and die have the same angle, the workpiece is "coined". As a forming process, coining allows very high angle precision. Different sheet thicknesses and spring back of the material are eliminated out through pure force. The Bystronic press brakes generate an extremely precise pressure. This creates a coining process of the highest quality. In addition, smaller radii and flanges can be formed compared to air bending.

Dynamic crowning

Bystronic has long used dynamic crowning on the Xpert model range press brakes. This unique compensation system automatically adjusts the bow of the lower beam, during the bend. State-of-the-art dynamic crowning makes this correction in real time using the latest sensor technology. Users can therefore achieve exact, constant bending results and this even with bent parts which are longer than 3 meters.

Precision

Precision is the most important yardstick for press brakes. Slight deviations from the desired bending angle are physically unavoidable. The bending angle can either be basically inexact or can vary across the bending length. During air bending, compensation systems eliminate these errors. Bystronic uses the unique hydraulic dynamic crowning technique on its press brakes: The upper and lower beams are specifically bowed to eliminate the deformation caused by the bending process itself. Another decisive factor is the behavior of the workpiece during bending. For precise bending results, state-of-the-art sensors provide all required information to the press brake controller. This data is evaluated here and an intelligent bending process is implemented thanks to automatic corrections.



Requirements and solutions

Bystronic offers the most varied assortment of pressbrakes on the market.

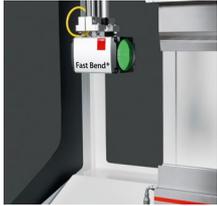
All models offer unique benefits:

- High to very high positioning and angle precision
- High to very high flexibility, which is especially relevant in production of individual parts, small series and complex jobs
- Large selection of bending tools
- Simple machine programming and state-of-the-art CAD/CAM software
- Machine operator support with bending aides, back gauge systems, and visual functions

Machine	Sheet thicknesses	Tonnage	Bending length
	Typical range of materials	Typical range of materials	Typical range of materials
ByBend Star 40/80	0.5–5 mm	400–800 kN	1,030–1,530 mm
Xpert Pro	1.5–8 mm	1,000–3,200 kN	3,100–4,300 mm
Xpert 250–1000	3–15 mm	2,500–10,000 kN	3,100–10,200 mm
Xpert Pro Tandem	1.5–8 mm	2,000–6,400 kN	6,600–8,600 mm
ByBend Smart	1.5–8 mm	1,000–3,000 kN	3,100–4,100 mm
Xpress	1.5–8 mm	500–1,600 kN	1,050–3,100 mm



Most important options



Fast Bend+

Saves 20 percent time in comparison to conventional safety systems



LAMS

Measures and corrects the angle during the bending process



Energy Saver

Reduces machine energy consumption by up to 60 percent. The machine creates less noise and less heat.



Optical bend guiding system

The worldwide fastest bending process control leads the user to the perfect part quickly and safely



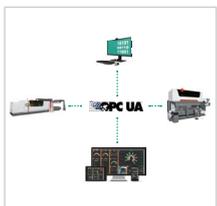
Detachable Bending line laser

Position bent parts quickly and easily



LED workspace lighting

Illuminates the workspace perfectly and uses a minimum amount of energy



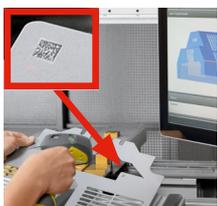
OPC Interface

Enables machine and operational data evaluation



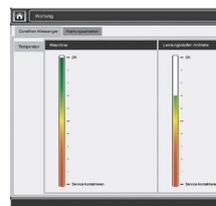
Tablet Control

Bend process corrections are easily made using the tablet



PartID (part identification)

Identifies manufactured parts



Condition Messenger

Preventive function check of the machine



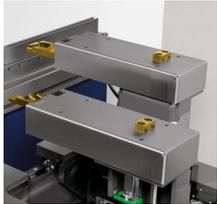
ByCockpit

Digital real-time information for sheet metal parts production. The ByCockpit keeps you up to date with selected key indicators on the machine performance, manufacturing efficiency, and material stock.



Optical Tool Detection System

Camera based tool set up verification system



Flexible back gauge systems
Double the axis speed compared to the standard backgauges possible



Hydraulic bending aids
Makes bending large, heavy, and long-sided parts easier. Material-friendly handling of sensitive materials such as stainless steel



Hydraulic quick-clamping
The automatic clamping of upper tools shortens set-up time by more than 20 percent



Optical stroke triggering
Triggers the stroke of the pressbrake with a simple foot movement



Tandem operation
Maximum flexibility for processing small to extra-long bend parts



Robot interface
Allows to connect robots from various manufacturers



	Customer benefits				Pressbrake				
	Increase efficiency	Reduce costs	Simplify processes	Be informed	Xpert 40 + 80	Xpert	Xpert Pro	Xact Smart	Xpress
Fast Bend+	■	■	■	■		▲	▲		
Fast Bend	■	■	■	■	■	■	■		
Fast Bend S	■	■	■	■				▲	▲
Fast Bend with angle measurement	■	■	■	■	▲				
LAMS	■	■	■	■		▲	▲		
Dynamic Crowing	■	■	■			■	■	▲	
Energy Saver		■			■	▲	■	▲	
Optical bend guiding system	■		■	■	▲	▲	▲		
Optical foot switch	■		■		▲				
Tablet Control	■		■		▲	▲	▲		
PartID (part identification)	■	■	■		▲	▲	▲	▲	▲
Bending line laser	■		■		▲	▲	▲	▲	▲
LED workspace lighting	■		■		▲	▲	▲	▲	
OPC Interface	■	■	■	■	■	■	■	▲	▲
Condition Messenger	■			■	■	■	■		
Observer	■	■	■	■	▲	▲	▲	▲	▲
Flexible back gauge systems	■		■		▲	▲	▲	▲	▲
Hydraulic bending aids	■	■	■			▲	▲	▲	
Hydraulic quick-clamping	■	■	■		▲	▲	▲	▲	
Tool opening on a control panel	■					▲	▲		
Tandem operation		■				▲	▲	▲	
Robot interface		■			▲	▲	▲	▲	
Increased open height, stroke, and throat	■		■			▲	▲	▲	
Bar code scanner	■				▲	▲	▲		▲
Remote diagnostics	■				▲	▲	▲	▲	▲
Optical Tool Detection System	■		■	■	▲				
Mechanical crowing system	■		■	■					▲

■ Standard

▲ Option

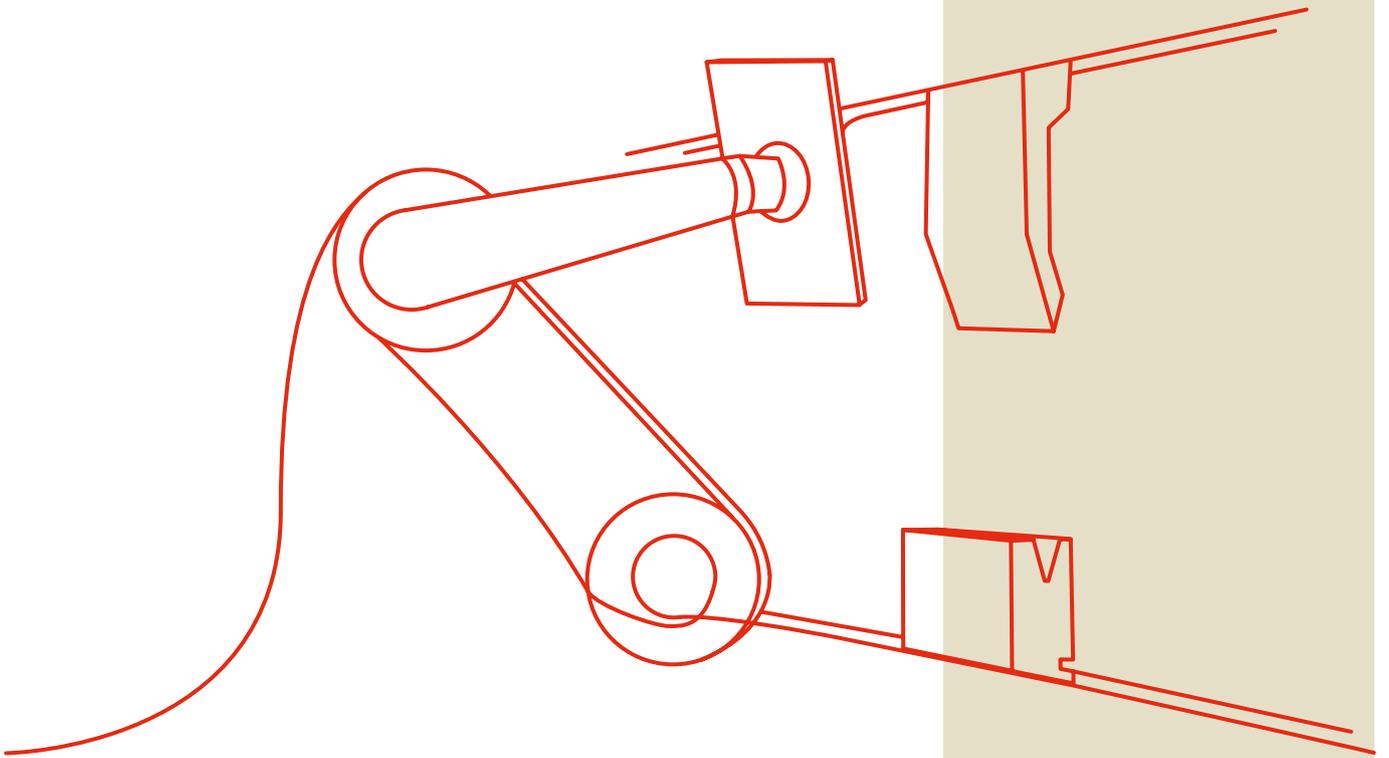


Bending tools

Use the right tools to achieve perfect bending results when air bending, embossing, and 3-point bending. Original tools from Bystronic are capable of unleashing the full potential of the machine's features, in order to ensure that your parts are always bent with utmost precision.

Customer benefits

- The quality of our tools is specifically designed and tested for Bystronic press brakes and your applications
- Bystronic bending tools (available with a variety of clamping types) are flexible and versatile, in order to cover your applications
- Original tool plus bending data: With every bending tool, you also receive the relevant import data for your press brake's software
- For particularly challenging applications, our tool specialists will be glad to advise and support you with the design of customized solutions
- The special production process and the high-strength quenched and tempered steel of our tools guarantee a long service life even under tough conditions
- The right tool for your product: You show us the product you want to manufacture, we recommend the suitable bending tool setup
- Bystronic bending tools can also be used with third-party press brakes. For this purpose, Bystronic offers its tools with various clamping styles



Bending Automation

Your best choice.

[bystronic.com](https://www.bystronic.com)



Modular Tool Changer

The most flexible automation for fast and precise tool changing

Customer benefits

- Save time and increase the bending quality thanks to the automated changing of upper and lower tools
- Precise and wear-free positioning of the tool sets in the clamping systems of the upper and lower beam
- Efficient set-up and removal of tool segments up to 515 millimeters in length
- Simple tool expansion at any time: An intelligent sensor system automatically detects new tools and integrates them into the tool magazine
- Automatic rotation of the upper tools increases the variety of bending applications
- Maximum application diversity in the thin and thick sheet metal range thanks to the possibility to use lower tools up to V120 and upper tools with a height of up to 350 millimeters
- Precise and gentle processing of bent parts thanks to automatic cleaning of the bending table
- Modular design enables Xpert Pro series press brakes to be upgraded



	Xpert Pro Extended 100/3100 + Modular Tool Changer	Xpert Pro Extended 150/3100 + Modular Tool Changer	Xpert Pro Extended 200/3100 + Modular Tool Changer
Tonnage	1,000 kN	1,500 kN	2,000 kN
Bending length	3,100 mm	3,100 mm	3,100 mm
Standard stroke	450 mm	450 mm	450 mm
Open height	840 mm	840 mm	840 mm
Max. tool capacity tool magazine *	52 m	52 m	52 m

	Xpert Pro Extended 200/4300 + Modular Tool Changer	Xpert Pro Extended 250/3100 + Modular Tool Changer	Xpert Pro Extended 250/4300 + Modular Tool Changer	Xpert Pro Extended 320/4300 + Modular Tool Changer
Tonnage	2,000 kN	2,500 kN	2,500 kN	3,200 kN
Bending length	4,300 mm	3,100 mm	4,300 mm	4,300 mm
Standard stroke	450 mm	450 mm	450 mm	450 mm
Open height	840 mm	840 mm	840 mm	840 mm
Max. tool capacity tool magazine *	52 m	52 m	52 m	52 m

* 4300 mm Bending length



Mobile Bending Cell

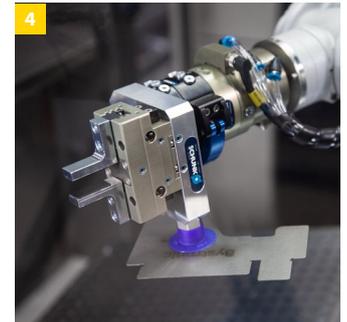
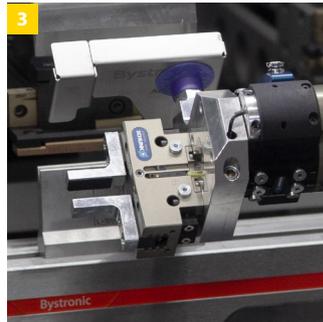
Mobile automation for high-speed bending

Customer benefits

- Ideal for varying order situations. You manually bend complex small series and use automatic bending for large series
- Intelligent automation enables lightly-manned multi-shift operation on the Xpert 40 with a high degree of process reliability
- Plug & Bend principle. The Mobile Bending Robot can be set up on the Xpert 40 in just a few minutes. In spite of automation, the overall system remains compact and mobile
- Convenient offline programming of bending jobs. Subsequently, BySoft Cell Control Bend allows the data to be imported in a simple process without interrupting the current bending job
- Simple upgradeability. The upgrade of the Xpert 40 with the Mobile Bending Robot can be carried out at any time



- 1 Mobile Bending Robot
- 2 Mobile Bending Robot
- 3 Precise bending sequences
- 4 Mounting for blank parts
- 5 Automation as required
- 6 Automation as required



Mobile Bending Cell

Max. load	10 kg
Maximum part size (approx.)	300 × 600 mm
Max. part weight (approx.)	7 kg
Air supply	5–7 bar
Weight	1,000 kg



Bending Cell

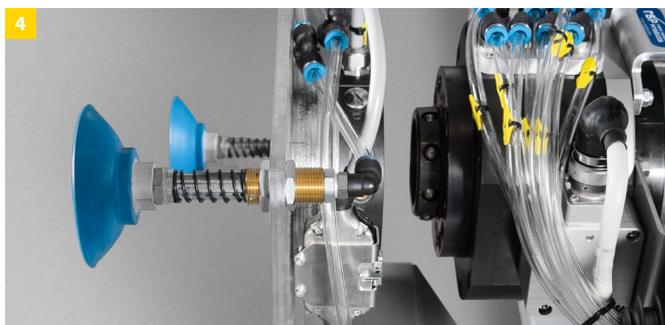
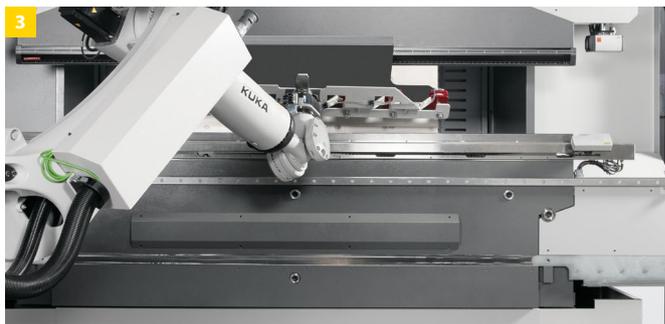
Bending center for fully automatic sheet metal processing

Customer benefits

- High degree of bending automation due to fully automated tool and gripper change. Ideal for the processing of job lists and for varying jobs, from small batch sizes right through to large series
- Save time and process bending parts unmanned with high precision. 7-axis robot with a high load capacity offers maximum flexibility and precision during the bending process. Even when bending heavy parts, this enables jobs to be processed fully automatically and without errors
- Flexibility through modular structure. The bending cell can be configured according to the customer's requirements. Press brakes with a bending length of 3 and 4 meter, robot payload of up to 300 kg, various materials' stocking locations and a big tool magazine
- Comprehensive automation concept from a single source. Bystronic provides the press brake, the automation system, customer service, and comprehensive guidance
- Convenient offline programming of bending jobs. Subsequently, the machine control allows the data to be imported in a simple process without interrupting the current bending job



- 1 Tool capacity 37 m, optionally expandable
- 2 Rotation of the tools
- 3 Linear axis 7 m, 10 m, or 13 m
- 4 Gripper stations 5, 7 or 10



Bending Cell

Tonnage pressbrake	100 t, 150 t, 200 t, 250 t, 320 t
Bending length	4,300 mm
Open height	840 mm
Standard stroke	450 mm
Max. part size	3,000 × 1,500 mm
Max. part weight (approx.)	165 kg
Max. Robot Payload	300 kg
Min. sheet thickness approx.	0.5 mm
Air supply	6–8 bar
Max. sheet metal stack height approx.	1,500 mm
Max. stack height, sheet table	2,000 mm
Max. tool capacity tool magazine	37 m
Number gripper stations	5, 7, 10



Modular Tool Changer Technical Data





	Xpert Pro Extended 100/3100 + Modular Tool Changer	Xpert Pro Extended 150/3100 + Modular Tool Changer	Xpert Pro Extended 200/3100 + Modular Tool Changer
Length	5,780 mm	5,780 mm	5,780 mm
Width	4,940 mm	4,940 mm	4,940 mm
Height	3,420 mm	3,420 mm	3,660 mm
Tonnage	1,000 kN	1,500 kN	2,000 kN
Bending length	3,100 mm	3,100 mm	3,100 mm
Standard stroke	450 mm	450 mm	450 mm
Open height	840 mm	840 mm	840 mm
Throat	400 mm	400 mm	400 mm
Table Width (T12)	74 mm	74 mm	74 mm
Table Width (T13)	110 mm	110 mm	110 mm
Max. tool capacity tool magazine *	52 m	52 m	52 m
Max. length upper tool **	515 mm	515 mm	515 mm
Max. height upper tool	350 mm	350 mm	350 mm
Max. length bottom tool **	515 mm	515 mm	515 mm
Max. bottom tool opening	120 mm	120 mm	120 mm

	Xpert Pro Extended 200/4300 + Modular Tool Changer	Xpert Pro Extended 250/3100 + Modular Tool Changer	Xpert Pro Extended 250/4300 + Modular Tool Changer	Xpert Pro Extended 320/4300 + Modular Tool Changer
Length	6,980 mm	5,780 mm	6,980 mm	6,980 mm
Width	4,940 mm	4,940 mm	4,940 mm	4,940 mm
Height	3,660 mm	3,660 mm	3,660 mm	3,750 mm
Tonnage	2,000 kN	2,500 kN	2,500 kN	3,200 kN
Bending length	4,300 mm	3,100 mm	4,300 mm	4,300 mm
Standard stroke	450 mm	450 mm	450 mm	450 mm
Open height	840 mm	840 mm	840 mm	840 mm
Throat	400 mm	400 mm	400 mm	400 mm
Table Width (T12)	74 mm	74 mm	74 mm	74 mm
Table Width (T13)	110 mm	110 mm	110 mm	110 mm
Max. tool capacity tool magazine *	52 m	52 m	52 m	52 m
Max. length upper tool **	515 mm	515 mm	515 mm	515 mm
Max. height upper tool	350 mm	350 mm	350 mm	350 mm
Max. length bottom tool **	515 mm	515 mm	515 mm	515 mm
Max. bottom tool opening	120 mm	120 mm	120 mm	120 mm

* 4300 mm Bending length

** 25 kg Tool Weight max.

The right to make changes to dimensions, construction, and equipment is reserved. ISO-9001-certified.

The technical data can vary in the different countries, according to local security rules and configuration of the machine.



Mobile Bending Cell Technical Data





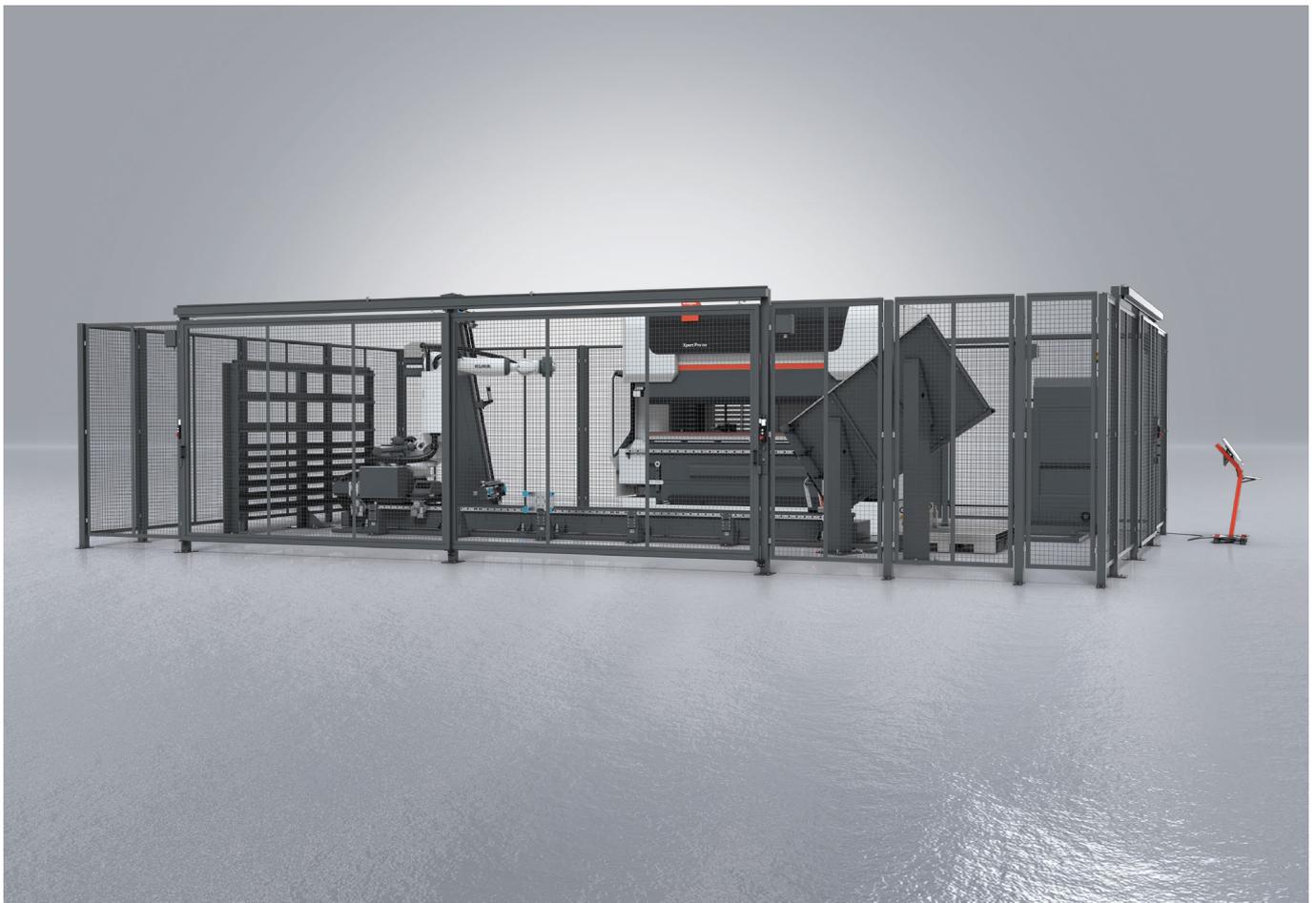
	Mobile Bending Cell
Length	1,520 mm
Width	1,200 mm
Height	2,090 mm
Max. length approx. incl. bend part slide	1,891 mm
Max. approx. width incl. door connection	2,823 mm
Air supply	5–7 bar
Air consumption	200 l/min
Energy consumption	16 Amp
Power supply	3 kW
Power supply	400 V
Type of compressed air	ISO8573-1:2010
Max. Load capacity of robot	10 kg
Maximum part size (approx.)	300 × 600 mm
Weight	1,000 kg
Max. load	10 kg

The right to make changes to dimensions, construction, and equipment is reserved. ISO-9001-certified.

The technical data can vary in the different countries, according to local security rules and configuration of the machine.



Bending Cell Technical Data





	Bending Cell
Length	8,300 mm
Width	12,000 mm
Max. part size *	3,000 × 1,500 mm
Payload robot	120 kg, 210 kg, 300 kg
Length linear rail	7 m, 10 m, 13 m
Min. sheet thickness approx.	0.5 mm
Max. sheet thickness	10 mm
Max. sheet metal stack height approx.	1,500 mm
Max. stack height, sheet table	2,000 mm
Air supply	6–8 bar
Tonnage pressbrake	100 t, 150 t, 200 t, 250 t, 320 t
Bending length **	4,300 mm
Standard stroke	450 mm
Open height	840 mm
Max. tool capacity tool magazine ***	37 m

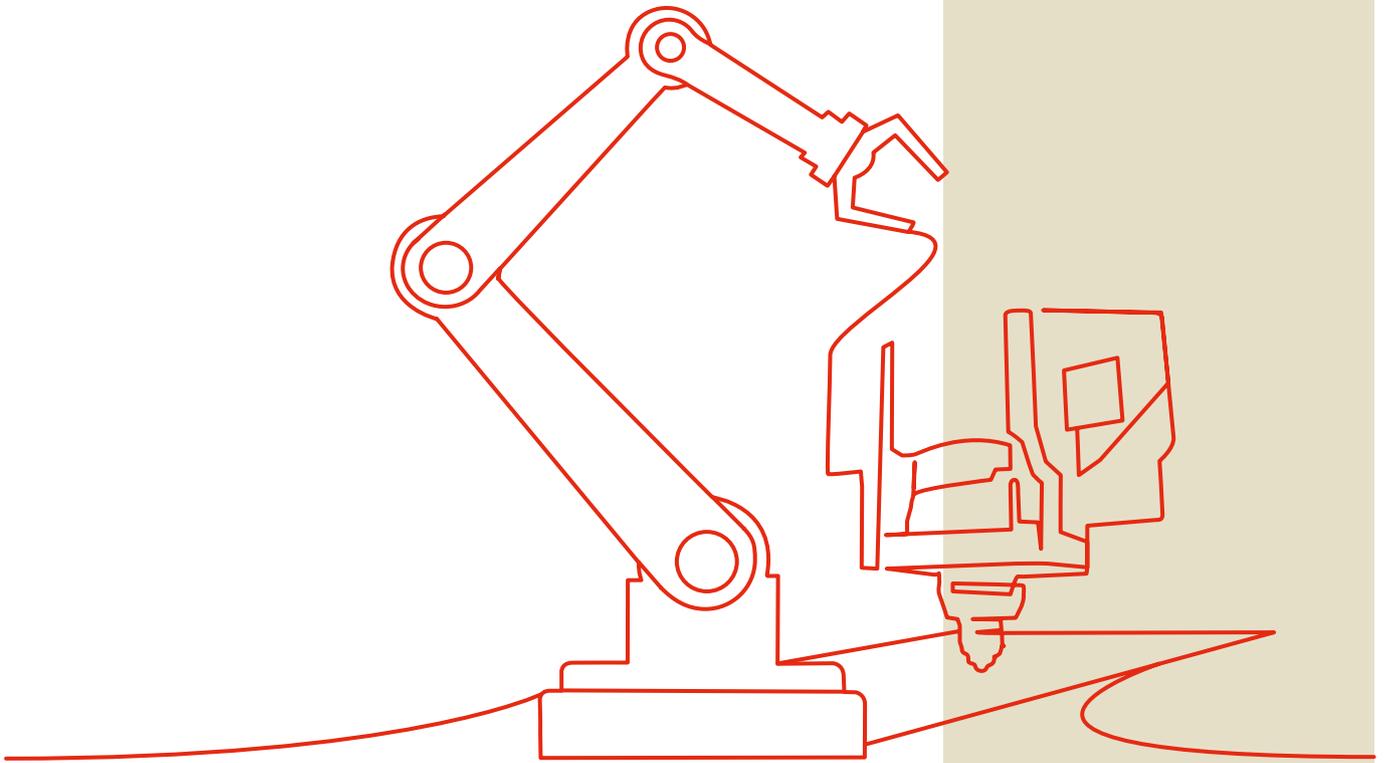
* Larger applications upon request

** Maximum bending length

*** Optionally expandable

The right to make changes to dimensions, construction, and equipment is reserved. ISO-9001-certified.

The technical data can vary in the different countries, according to local security rules and configuration of the machine.



Laser Automation

Your best choice.

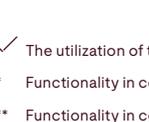
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Requirements and solutions

Automation solutions optimize material flow, improve machine use and increase work and process reliability. The building blocks are modular so that the degree of automation can be adapted at a later date. The solutions range from simple handling to fully automatic operation.

Automation requirement profile

Automation system	Functionality					
	Shuttle table	Loading	Unloading	Large parts removal	Sort	Storage
 <p>Laser cutting system without automation system</p>	✓					
 <p>Byloader</p>	✓	✓				
 <p>ByTrans</p>	✓	✓	✓			
 <p>ByTrans Extended</p>	✓	✓	✓	✓		
 <p>ByTrans Modular</p>	✓	✓	✓	✓		
 <p>BySort*</p>	✓	✓	✓	✓	✓	
 <p>ByTower Compact</p>	✓	✓	✓			✓
 <p>ByTower**</p>	✓	✓	✓	✓		✓

✓ The utilization of the laser cutting system increases with the degree of automation

* Functionality in combination with ByTrans Modular only. BySoft CAM is recommended.

** Functionality in combination with ByTrans/ByTrans Extended only



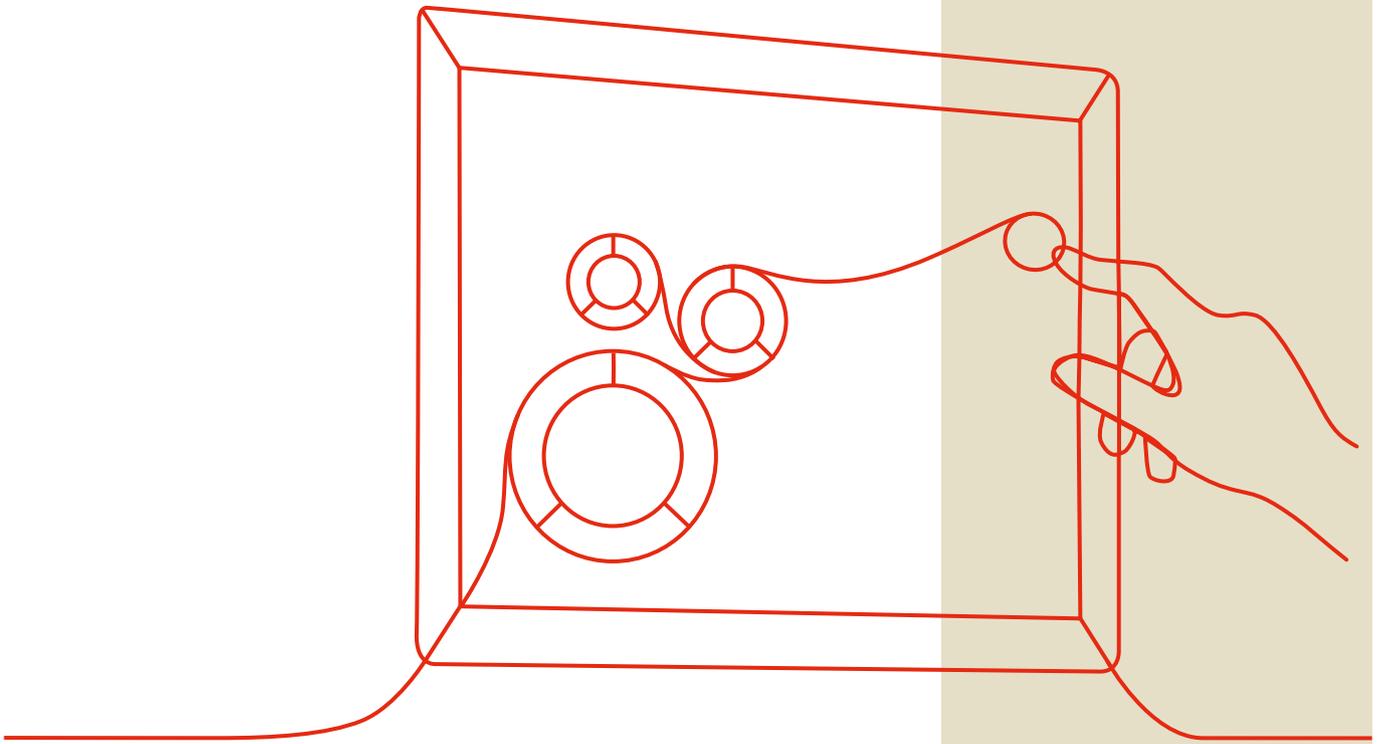
Automation configuration

Laser cutting system	Automation systems						
	Byloader	ByTrans	ByTrans Extended	ByTrans Modular	BySort*	ByTower**	ByTower Compact
ByStar Fiber 3015	✓	✓	✓	✓	✓	✓	✓
ByStar Fiber 4020	✓		✓	✓	✓		✓
BySmart Fiber 3015	✓	✓	✓	✓	✓	✓	✓
BySmart Fiber 4020	✓		✓	✓	✓		✓
ByCut Star 3015	✓	✓	✓	✓		✓	
ByCut Star 4020	✓		✓	✓			
ByCut Smart 3015	✓	✓	✓	✓	✓	✓	✓

✓ Available in combination with the corresponding laser cutting system

* Functionality in combination with ByTrans Modular only. BySoft CAM is recommended.

** Functionality in combination with ByTrans/ByTrans Extended only



Software

Your best choice.

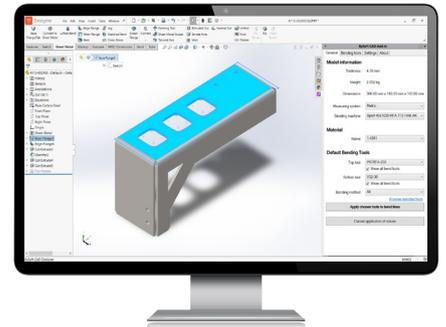
bystronic.com

BySoft CAD Designer



Get your designs ready for CAM.

BySoft CAD Designer is a comprehensive 3D design system that allows you to import, design, and review your parts and assembly designs, regardless of the input file format and the complexity of the design.



Your benefits

- 01 Efficient 3D designing**
Easy-to-use parametric design module that enables you to edit designs at any stage of the process.
Define specific properties and machining rules before sending your designs to CAM.
- 02 Built-in applications**
BySoft CAD Designer is a highly productive 3D CAD software integrated into the BySoft Software Suite.
It allows the exchange of the designs between different systems in any phase of your workflow.
- 03 Compatibility with customers and suppliers**
BySoft CAD Designer is based on SolidWorks®, one of the most widely used CAD solutions in the industry.
This eliminates the need to convert files from one format to another, which reduces sources of error and streamlines your collaboration with customers and suppliers.
- 04 Specifically designed for sheet metal processing**
BySoft CAD Designer ensures the manufacturability of your designs and thus minimizes potential design errors.

Your features



3D CAD designs

Import a wide range of file formats and quickly and efficiently create complex part and assembly designs.



Parts and assembly modeling

Powerful and flexible 3D modeling tools cover a comprehensive range of design tasks and enable you to rapidly develop your product concepts.



Integration with BySoft CAM

The BySoft CAD Designer integrates with BySoft CAM technology, which allows you to unfold and prepare your 2D drawings for cutting and bending by Bystronic machines.



Design validation

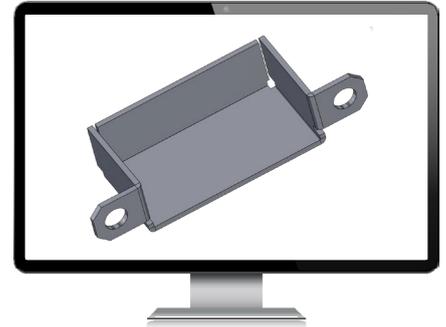
Verify the design of your parts to ensure they can actually be manufactured and assembled before the production process even begins.

BySoft CAD SolidWorks® Add-in



Get your SolidWorks® designs ready for BySoft CAM.

The **BySoft CAD SolidWorks® Add-in** is the ideal ingredient to add to your 3D CAD design environment. Validate your designs for the sheet metal manufacturing process.



Your benefits

- 01 Efficient 3D design**
Seamlessly integrate your SolidWorks® package into BySoft CAM and define comprehensive bills of materials by disassembling each part.
- 02 Built-in application**
The BySoft CAD SolidWorks® Add-in is a built-in application from the SolidWorks® platform that allows you to utilize all the benefits of the SolidWorks® CAD system, integrating leading sheet metal industry tools into your workflow.
- 03 BySoft CAM compatibility**
The SolidWorks® Add-in simplifies your design process by reducing the number of necessary tools. Transfer your design to the CAM in just a few efficient steps.
- 04 Industry-specific features**
The SolidWorks® Add-In unifies design tools and sheet metal industry utilities in a single environment in order to ensure the manufacturability of your designs and thus minimize design errors.



Your features



Integration with BySoft CAM

The integration with BySoft CAM allows you to unfold designs and prepare your 2D drawings for cutting and bending by Bystronic machines.



Elimination of design deviations between systems

Ensure that any design changes are applied throughout your business flow.



Parts and assembly modeling

Flexible 3D modeling tools cover a comprehensive range of design tasks and help you to rapidly develop your product concepts.



Design validation

Verify the design of your parts to ensure they can be manufactured and assembled before even launching the production process.

BySoft CAD Importer



Import a wide variety of native CAD file formats into BySoft CAM.

BySoft CAD Importer allows you to import designs from your customers or in-house designers without losing any detail in order to create the cutting, bending, and tube jobs to manufacture the parts.



Your benefits

- 01 Work without a CAD package**
BySoft CAD importers allow you to seamlessly import the most widely used native CAD file formats into BySoft CAM.
- 02 Eliminate the need for CAD converters**
Any CAD conversion process can result in data loss or misinterpretations due – a potential source of errors that is eliminated by importing directly into BySoft CAM.
- 03 Ensure compatibility with customers and providers**
Customers and suppliers frequently work with a wide range of CAD systems. BySoft CAD importer can handle all of the most widely used CAD formats in the industry.
- 04 Get the design right**
BySoft CAD Importer is based on technology that understands a wide range of file formats natively, allowing it to always ensure the correct interpretation of the designs and you to easily modify them once they have been imported.

Your features



Support a wide range of CAD formats

BySoft CAD Importer allows you to import a wide range of formats such as: STEP, IGES, SAT/ACIS®, Inventor®, Solid Edge®, SOLIDWORKS®, Parasolid®, Catia® V4/ V5/V6, PTC Creo®/ProENGINEER®, Unigraphics®, IFC, DSTV, PRC, VDAFS.



Import individual parts or entire assemblies

BySoft CAD Importer can import all the items included in your file – regardless of whether it is a single part or a complex assembly and whether the order involves the processing of sheet metal (cutting and/or bending) or tubes.



Integration with BySoft CAM

BySoft CAD Importer integrates seamlessly with BySoft CAM and allows you to import files and prepare them for production in just a few simple steps.

BySoft CAM Cut



The best choice for your advanced Bystronic laser cutting machines.

BySoft CAM Cut ensures that your Bystronic laser cutting system achieves maximum performance. Gain access to the most advanced tool for the preparation of cutting jobs, which is fully compatible with your Bystronic machines. Take the first step on your path towards the smart factory.



Your benefits

- 01 A unique CAM tool**
Control all your cutting jobs for Bystronic machines using a single tool. Take your cutting programming to the next level.
- 02 Make complexity simple**
Create cutting plans in just a few seconds. BySoft CAM turns even users with limited experience into programming professionals. BySoft CAM helps you get your machine up and running in next to no time – while offering many of the most advanced features in the industry.
- 03 Reduce costs**
BySoft CAM is equipped with the most advanced nesting algorithms that reduce your parts costs by maximizing raw material utilization.
- 04 Cut and bend**
Thanks to the seamless integration between BySoft CAM Cut and BySoft CAM Bend, the system can handle cut-bend technologies with ease and transparency.

Your features



Integration with BySoft CAD

BySoft CAM is fully integrated with the BySoft CAD family of products and allows you to import files to prepare your cutting plans in just a few simple steps.



Collision prevention

BySoft CAM Cut is equipped with state-of-the-art functions that defines the cutting sequence to prevent collisions and even takes account of potential tilted parts.



Reduce the number of plans

BySoft CAM Cut has an integrated function that searches for solutions that reduce the number of different plans. Without this function, even the best nesting solution is not necessarily the most efficient.



Advanced nesting options

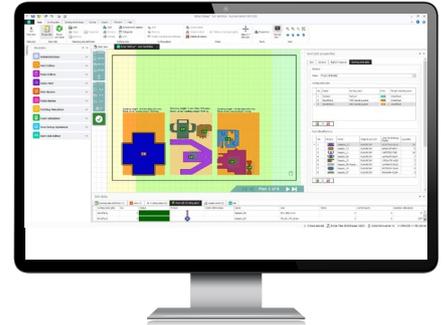
Adapt the nesting strategy based on the priority of the parts, or define the nesting direction to suit your requirements.

BySoft CAM Cut – Sort



The best choice for your advanced Bystronic automated sorting solution.

BySoft CAM Cut – Sort is compatible with all Bystronic automated sorting solutions and ensures that they achieve optimal performance. This module integrates with BySoft CAM Cut and provides the most advanced tools for the preparation of sorting jobs.



Your benefits

- 01 Integration with BySoft CAM Cut**
BySoft CAM Cut – Sort is fully integrated into the BySoft CAM product family and allows you to prepare your sorting jobs based on your cutting plans.
- 02 Compatible with all of Bystronic's sorting solutions**
BySoft CAM Cut – Sort is compatible with all of Bystronic's sorting solutions and helps you determine the most efficient configuration for your requirements.
- 03 Optimize your production batches**
BySoft CAM Cut – Sort allows you to plan production batches and adapt the production cycle duration to your needs.

Your features



Optimize sorting for down-stream processes

Operation-oriented sorting allows you to sort the parts on different stacks based on how the next process needs them.



Tool station management

Set up dedicated sorting tool stations (instead of utilizing the maximum number of usable tools per sorting job).



Stack stability warnings

The system warns about and prevents unstable stacks, for example due to excessive height or when stacking narrow parts, factoring in potential shocks and inclination.



Bulk sorting containers

In addition to stacking on pallets, BySoft CAM Cut – Sort also supports bulk sorting containers.



Gripper configuration

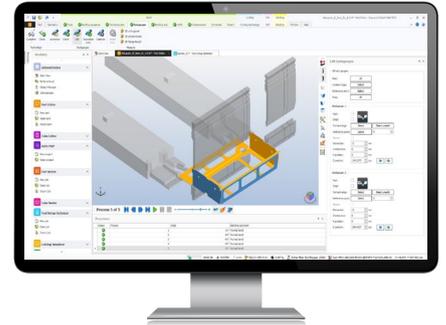
BySoft CAM Cut – Sort allows you to define any type of gripper tool, for example with suction cups arrays that can be individually controlled using multiple valves and moved along the x and y axes.

BySoft CAM Bend



The best choice for your advanced Bystronic bending machines.

BySoft CAM Bend ensures that your Bystronic bending machine achieves the highest possible performance. With this solution, which is compatible with all Bystronic bending machines, you gain access to the most advanced tool for the preparation of bending programs and take the first step on your path towards the smart factory.



Your benefits

- 01 A unique CAM tool**
BySoft CAM Bend is a fully integrated part of the BySoft CAM family that allows you to import files and prepare your bending jobs in just a few steps.
- 02 Make complexity simple**
Create machine programs in a matter of seconds. BySoft CAM Bend turns even users with limited experience into programming professionals. BySoft CAM is one of the most comprehensive CAM packages that enables you to put your machine into productive operation in next to no time.
- 03 Reduce bending programming time and avoid collisions and errors**
BySoft CAM Bend speeds up your bending job preparation by defining and proposing bending sequences, back gauge positions, and tooling plans. And the simulation of the entire bending sequence enables you to prevent collisions and costly errors.
- 04 Optimize setup times**
Optimize setup times when manufacturing multiple bent parts. BySoft CAM Bend calculates and proposes the ideal processing sequence.

Your features



Advanced editing functions

The part editor and the bending advisor are integrated into one tool, so you can easily



Smart automatic bending technology

Powerful algorithms automatically select the optimal bending technology, such as tools, bending sequence, tool setup and back gauge positioning, generating the part in a fast and simple workflow.



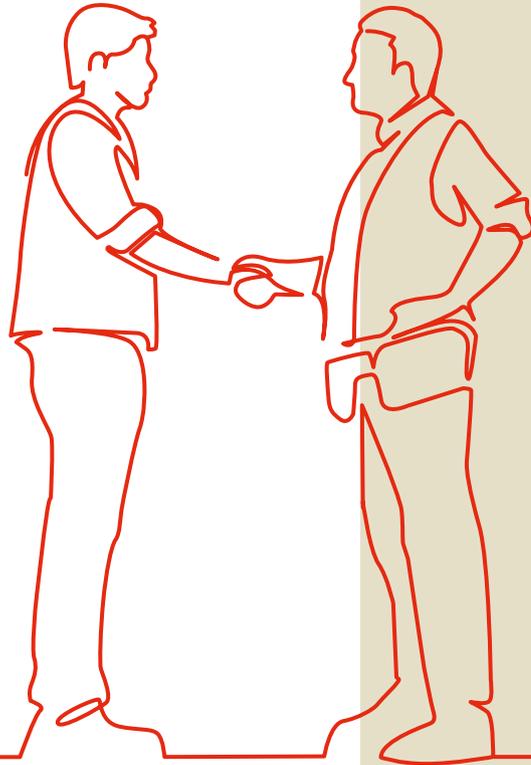
Customized to your needs and know-how

Define the parameters to suit your needs and know-how. During each step, your settings are verified to ensure that the part that is to be bent can actually be produced within the working range of your bending machine and without causing collisions.



Connected to Bystronic machines

The bending program can be exported directly to the machine for processing, eliminating the need for machine-specific adaptations and adjustments.



Services

Your best choice.

[bystronic.com](https://www.bystronic.com)



Local expertise

**Bystronic is globally on your doorstep and speaks your language.
We understand your requirements and develop the suitable solutions for you.**

Customer benefits

- 30 years of experience. Bystronic stands for know-how in the development of high-tech systems and services for economical sheet metal processing and automation
- Specialists for every area. Bystronic supports you with software, plant and system configurations, applications training, and technical maintenance
- Quickly on site. With our service technicians, we are ready worldwide, in order to provide professional support throughout the entire operating life of your systems
- Bystronic offers technology and servicing from a single source. The development depth of our products enables us to support you with a comprehensive range of services



Requirements and solutions

Bystronic offers you a comprehensive range of services. With us as your technology and service partner, you can focus on what really counts: your business.

Consulting and customer service

Make the right choice for the manufacturing solution that meets your requirements today and in the future. Our specialists will be pleased to provide you with advice about Bystronic's versatile portfolio.

Instruction and training

Make the most of your systems. We train your operators in the professional use of our system solutions.

Maintenance and servicing

You use high-precision machines and want to produce smoothly even under the most demanding of requirements. With our maintenance and servicing portfolio, we provide you with fast and reliable support.

Digital services

With our digital services, you stay networked and at the forefront of technology. Monitor and analyze your processes. Our solutions help you make your production more transparent and more efficient.

Financing

Open up new opportunities with the appropriate financing solution. We can offer you flexible solutions that support your requirements.

Bystronic web shop

Easily and conveniently order your spare parts, consumables, and tools in our web shop. Around the clock.





The ideal solution for every requirement

Make the right choice for the manufacturing solution that meets your requirements today and in the future. Our specialists will be pleased to provide you with advice about Bystronic's versatile portfolio.

Customer benefits

- Our specialists carry out feasibility analyses and help you to choose the right systems and tools for your individual applications
- Quickly and simply make the transition to new technologies. Our wide range of refurbished laser cutting systems offer you favorable conditions at any time
- Open up new capacities and applications. With upgrades for your existing machines and with software updates, we adapt your production capabilities retrospectively to changing requirements



Know-how for your company

Make the most of your systems. We train your operators in the professional use of our system solutions.

Customer benefits

- Fast track to the required level of quality. Certified training courses ensure safe and efficient use of your machines and systems
- We offer you a wide range of training that is based on a combination of theory and practical application
- The training takes place at our modern training centers using the latest equipment. Upon request, we also carry out training courses on site at your business location



Ensure smooth production

You use high-precision machines and want smooth production even under the most demanding of circumstances. With our maintenance and servicing portfolio, we provide you with fast and reliable support.

Customer benefits

- Our service agreements for software and hardware form the basis for value retention and the unrestricted performance of your machines and ensure that your production runs smoothly
- In the event of machine downtime, our support team is available via telephone helpline and with powerful remote support tools to provide you with quick and efficient support
- Thanks to our worldwide network, our service technicians are quickly on site when required, in order to troubleshoot your problem
- Scheduled maintenance and revisions ensure the best possible technical condition of your systems and thus help maximize availability



Updates und Upgrades

Gain a competitive advantage and sustainably enhance your systems. Our software and hardware upgrade options enable you to easily add new functions and thus expand your spectrum of applications.

Customer benefits

- Upgrading individual components is a profitable solution that enables you to continuously modernize your production environment
- We support you with a wide range of updates and upgrades for your software and hardware



Spare parts and consumables

Safeguard the high performance of your machine. Rely on our quality standards, also when it comes to spare parts and consumables.

Customer benefits

- Original Bystronic spare parts guarantee the value retention of your systems and increase their operating life
- Bystronic consumables are carefully selected and tested by our experts. They are optimally suited for your system and contribute towards ensuring excellent production results
- Our decentralized logistics enables us to offer you a high degree of availability and fast delivery times



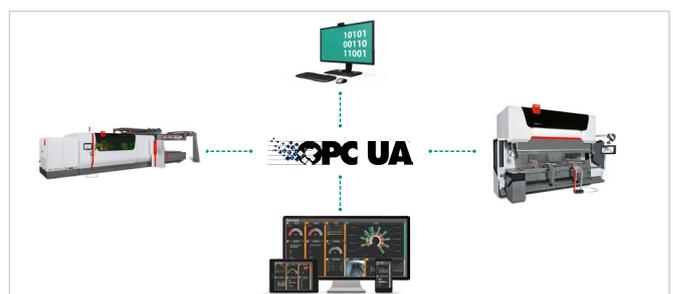


Digital and networked

With our digital services, you stay networked and up to date with the latest technologies. Monitor and analyze your processes. Our solutions help you make your production more transparent and more efficient.

Digital Services

Bystronic already delivers its state-of-the-art machine platforms "Industry 4.0 ready". Machine data can be collected and analyzed via the Connectivity Kit. So our global support is always just a click away and supports you in the event of a machine failure quickly and competently. With our OPC-UA interface we also enable the integration of systems and software.





ByCockpit

Digital real-time information for sheet metal parts production. The ByCockpit keeps you up to date with selected key indicators on the machine performance, manufacturing efficiency, and material stock.

Customer benefits

- Full transparency on productivity and optimization potential. Real-time monitoring provides key indicators on all the integrated Bystronic cutting and bending machines (that are equipped with the OPC UA interface)
- Unique widget design enables a global overview of the production processes and detailed views of the machine performance, machine utilization, productive and maintenance times, and material stock in the warehouse
- The ideal configuration for every user. A wide range of widgets enables individualized selection of key indicators and a combination of detailed views in the ByCockpit using the drag and drop principle
- Monitoring of key indicators at any time and from anywhere. As a web application, the ByCockpit is available on virtually all mobile devices





Flexible financing

**Open up new opportunities with the suitable financing solution.
We offer you flexible solutions that support your requirements.**

Customer benefits

- We understand your business and develop the suitable solution for you, fast and transparently
- We adapt the financing to your requirements. Bridge a start-up phase with flexible payment plans, take advantage of development funds, or factor in seasonal sales fluctuations
- The proceeds from trading in your used machine can be used as a down payment to reduce the leasing instalments
- We offer you everything from a single source: state-of-the-art technologies, intelligent financing solutions, competent installation, and professional maintenance



Convenient online ordering

Easily and conveniently order your spare parts, consumables, and tools in our web shop. Around the clock.

Customer benefits

- Our web shop is available around the clock. Here, you can find all the available products for your systems online
- Thanks to your purchase history and the “My best choice” function, you can save your individual purchasing lists or quickly and simply reorder a part
- Benefit from special online promotions and always stay up to date about our product innovations