

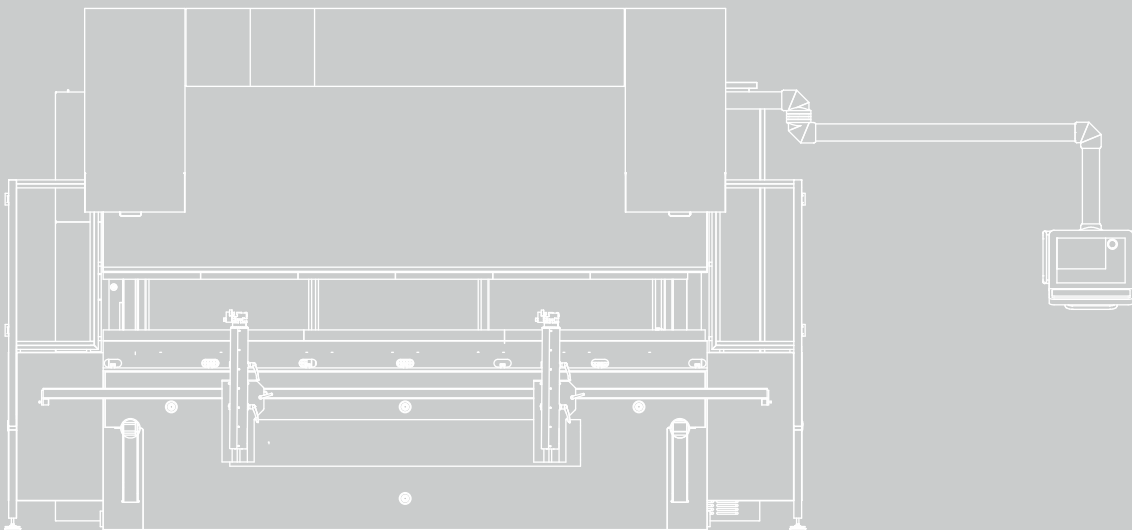
Bystronic



unique in
bending

Xpert

Pressbrake for maximum repetition accuracy at the touch of a button



Xpert – smart, profitable, precise

With the pressbrakes of the Xpert series, users can take advantage of all of Bystronic's experience with bending. The machine makes its extensive and expandable database available at the touch of a button and ensures that each operator becomes a bending professional, regardless of previous knowledge. Programming and operation are extremely simple, thanks to the control panel with its intuitive user guidance. The pressure reference (PR) bending technology with hydraulic-dynamic crowning of the lower beam, automatic protection of the tools against overload, compensation of the temperature-dependent side frame deflection, automatic dynamic process control, and material thickness measurement ensure maximum angle accuracy, thus satisfying the highest demands.

Features

- **Smart:** The Xpert is equipped with the world's most extensive database, which can be expanded as required.
- **Precise:** The Xpert is the only machine that produces no angle errors itself. It delivers the highest repetition accuracy on the market.
- **Profitable:** All major tool styles can be used on the Xpert.
- **One-button:** Perfect bending results are achieved at the touch of a button, regardless of the operator's previous knowledge.





Important features Xpert 60–320

Tonnage	600–3200 kN
Bending lengths	2050–4100 mm
Control	MMC Bybend
Backgauge system	2–6 axes
Entire series overfloor construction	
Safety: CE and EMC certified	



Important features Xpert 250–1000

Tonnage	2500–10000 kN
Bending lengths	3100–8200 mm
Control	MMC Bybend
Backgauge system	2–6 axes
Over- and under-floor construction depending on the tonnage and bending length	
Safety: CE and EMC certified	



Bystronic control with MMC Bybend software

The Xpert is equipped with a Bystronic proprietary control that features an ergonomic operator panel with TFT-based 15" color LCD and membrane keypad, supplemented by a computer keyboard and mouse. The Bybend MMC software for 2D/3D programming includes an automatic bending sequence calculation and an extensive database with bending technologies, and part, material, and tool data, which can be expanded continuously. Bending processes are displayed graphically together with manipulation instructions.

Pressure reference (PR)

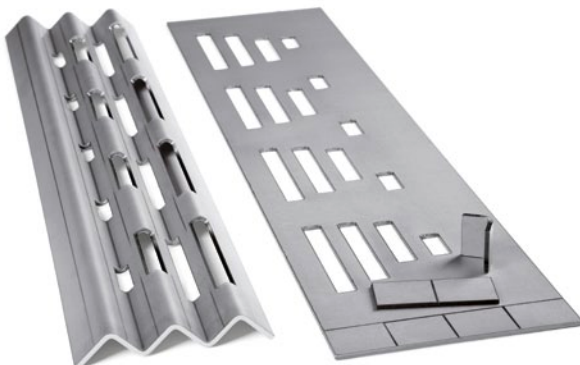
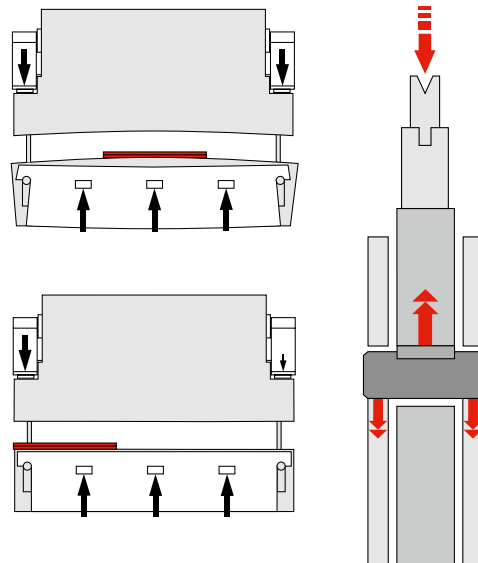
Continuous compensation of the side frame deflection. The regulation takes place with the help of pressure sensors even for non-symmetrical load types.

Important components



Hydraulic-dynamic crowning

The position and length of the sheet metal are determined by precise pressure measurement. Short-stroke cylinders in the lower beam ensure the necessary compensation of the upper and lower beam deflection. The system automatically guarantees bend accuracy regardless of the bending length.



Automatic dynamic pressure control

Regulation of the pressure occurs dynamically during bending. If the part geometry within a bending sequence requires different bending forces, the adjustment is made automatically.

Tool protection

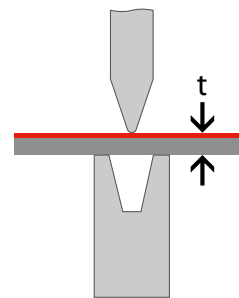
The forces applied during the bending process are compared constantly with the permissible maximum values stored in the database. If these values are exceeded, the bending process is interrupted and an error message is displayed on the screen. This way, dangerous situations and tool breaks are avoided.

Compensation for the temperature-dependent side frame deflection

A temperature sensor monitors and reports changes in the system to the controller. It handles the corresponding compensations automatically, taking into account the coefficients of expansion. Manual corrections based on changes in the operating and ambient temperatures are thus no longer necessary.

Material thickness measurement

The material thickness is determined by high precision pressure sensors. Differences in thickness are corrected by automatic recalculation of the lower dead center during the bending process.



Expansion possibilities



Fast Bend

Safety system, manually height-adjustable, with camera-based protective field evaluation.

- **Fast Bend+** – Safety system for maximum machine safety and 20% greater productivity
- **Energy Saver** – Up to one-third lower energy consumption
- **Bar code scanner**
- **LAMS** – Angle measurement in real time with automatic correction
- **LED workspace lighting** – completely shadow-free, but also glare-free in the working area of the machines
- **Hydraulic-dynamic bending aids** – make the bending of large-format, heavy and long-shanked parts easier
- **Robot applications**
- **Tandem operation**
- **Remote diagnostics**

Service & Support

Bystronic's proven technology and extensive expertise produce systems that are extremely reliable. With its global network of specialized service and training experts and comprehensive spare parts inventories in the local markets, Bystronic guarantees that it will support what it sells. In addition to maintenance, spare parts delivery, and repair services, customers are also offered training programs as well as hardware, software, and operational support so that they are in a position to get the most from their machine investment.

Peripherals

Xpert 60–320

Front workpiece supports

The workpiece supports can be adjusted in the R and Z directions. Parking positions are provided on both ends of the lower beam. The support consoles have T-slots for attaching tilting and side stops.



Backgauge system

The Xpert can be equipped with different variants of the backgauge system from two to six axes.



Type X, R:
Two CNC-controlled axes. Both fingers can be adjusted laterally in the Z direction.



Type X, R, Z1, Z2:
Four CNC-controlled axes.



Type X, X1, R, Z1, Z2:
Five CNC-controlled axes with X1 range of +/- 150 mm.



Type X1, X2, R1, R2, Z1, Z2:
Six CNC-controlled axes.

Peripherals

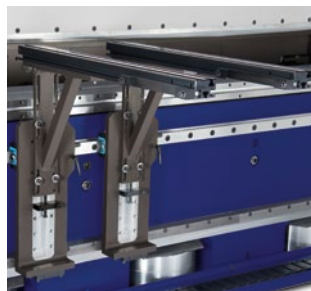
Xpert 250–1000

Front workpiece supports

The front workpiece supports can be adjusted manually in the R and Z directions. Parking positions are provided on both ends of the lower beam. The aluminum support consoles have T-slots for attaching tilting and side stops.



Workpiece supports for machines of 320 tons and less

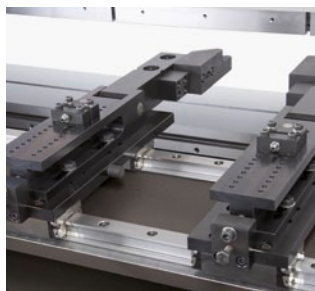


Workpiece supports for machines of 400 tons and greater



Doubled upper beam

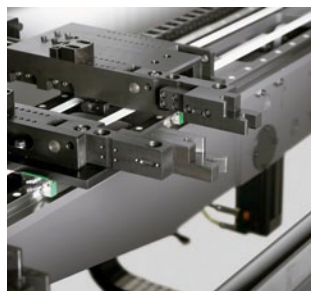
To increase stability there is also a second guide. The second guide is attached to the side of the hydraulic cylinder.



Type X, R:
Two CNC-controlled axes. Both fingers can be adjusted laterally in the Z direction.



Type X, R, Z1, Z2:
Four CNC-controlled axes.



Type X, X1, R, Z1, Z2:
Six CNC-controlled axes with X1 range of +/- 150 mm.



Type X1, X2, R1, R2, Z1, Z2:
Six CNC-controlled axes.

Areas of application

Sheet metal

thicknesses	Xpert 60–320	Xpert 250–1000
Mild steel	0.5–15 mm	1–40 mm
Stainless steel	0.5–12 mm	1–30 mm
Aluminum	0.5–25 mm	1–50 mm

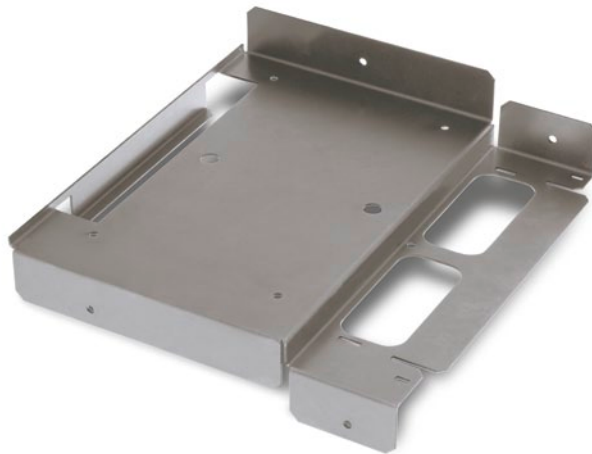
- General job order production
- Steel construction
(door and window frames)
- Machine and system engineering
- Electrics, electronics
(switch cabinets, housings)
- Power technology
- Air conditioners
- Vehicle and railway carriage construction
- Agricultural machines and construction elements
- Kitchen and hospital equipment
- Office furniture (cabinets, drawers)

Finished parts 60–320

Appliance industry

Device holders

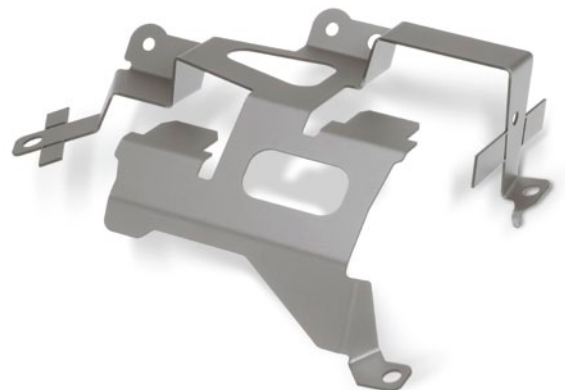
1.5 mm, mild steel



Machine construction

Cover

2 mm, mild steel



Vehicle construction

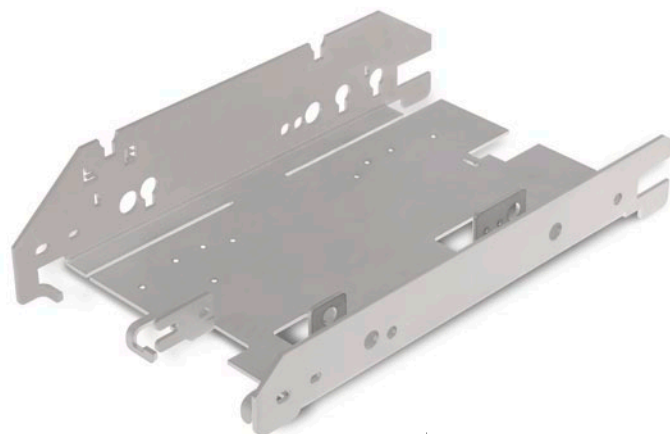
Bracket for servo containers

1.5 mm, mild steel

Plant construction

Cylinder bearing

8 mm, high-strength steel

**Job order production**

Feed element

3 mm, stainless steel

Customer benefits

- The Xpert makes every user a bending professional
- Excellent finished part quality thanks to outstanding positioning and repetition accuracy
- Seamless integration of cutting and bending processes
- Minimized scrap and thus higher productivity
- Just six mouse clicks from the 3D data file to the 3D part
- All major tool styles can be used on the Xpert and are supported by the control's comprehensive database
- Simple and convenient operation of the whole machine, including its control
- Numeric inputs can be made directly on the machine, no additional PC is required
- The machine autonomously corrects deviations from the target values
- Longer system life thanks to the fully-automatic parameterization and optimal processes
- The open bending philosophy saves costs

Finished parts 250–1000

Job order production

Cover plate
3 mm, mild steel



Lift technology

Crane arm
8 mm, high-strength steel



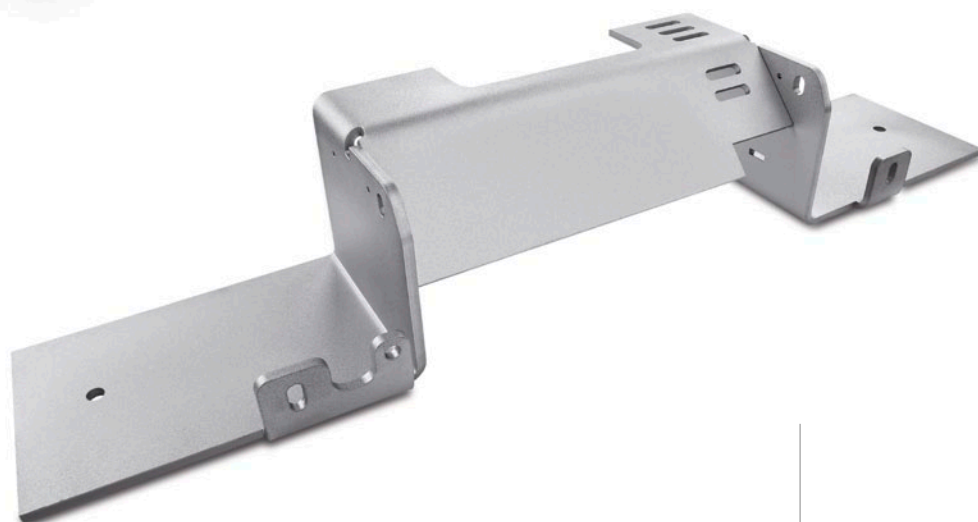
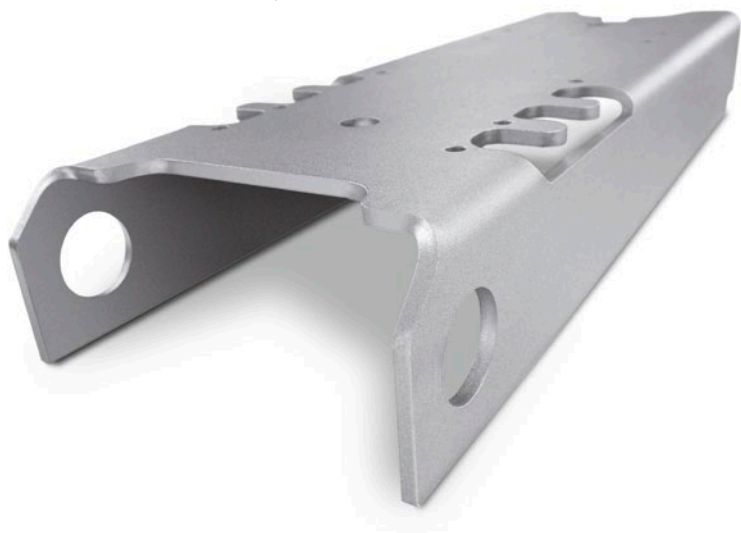
Vehicle industry

Canopy
3 mm, mild steel

Commercial vehicle production

Beam

3 mm, high-strength steel

**Mechanical engineering**

Construction element

6 mm, high-strength steel

This brochure may show parts that are not standard equipment, but are available as options. For the better visibility of machine details, some safety covers may have been opened or removed for these pictures. The right to make changes to dimensions, construction, and equipment is reserved. For technical data, see separate data sheet.

ISO-9001-certified

Bystronic is a worldwide active supplier of application-oriented systems and services for the laser and waterjet cutting processes, as well as bending: economical, high-performance, reliable.

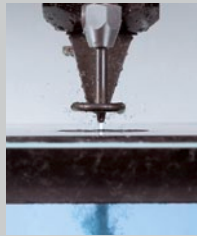
Best choice.



Laser cutting
Laser cutting systems for the innovative processing of a wide variety of materials and geometries



Bending
3-point and air bending machines for high-precision working of sheet metals



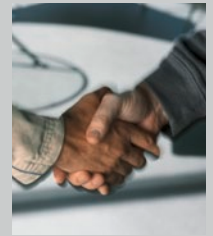
Waterjet cutting
Waterjet cutting systems for cutting metals, glass, synthetics, ceramic, and many other materials



Automation
High-performance handling and automation solutions from simple loading systems to fully automated laser production cell with integrated storage system



Software & Control
User-friendly programming and operation with requirement-oriented application programs and interfaces to CAD and ERP systems



Service & Support
Competence and customer proximity with after-sales support available worldwide: local contact persons, prompt delivery of spare parts, and professional training courses

Your contact

bystronic.com