



FOLDING MACHINE
PowerBend Universal

PowerBend Universal

The versatile solution for lean sheet metal forming in a wide variety of metal forming applications.



PowerBend Universal with positioning control Classic Bend.



The name says it all: the folding machine PowerBend Universal has been constructed to meet the demands for a wide range of applications. In order to create a machine for all application areas up to 4 mm sheet thickness, Hans Schröder Maschinenbau took advantage of decades of experience in industrial sheet metal working.

The PowerBend Universal provides the perfect balance between technology and performance. It offers the greatest precision, longevity and an extremely rigid machine body that has been engineered using state of the art tools and finite element analysis.

The path-breaking electronic software control including the radius-step-bending function in standard, can be programmed quickly and easily with no computer skills. Anyone can program with the new software Classic Bend, making it the perfect machine for a wide array of production requirements. This software increases production and efficiency without increased complexity.



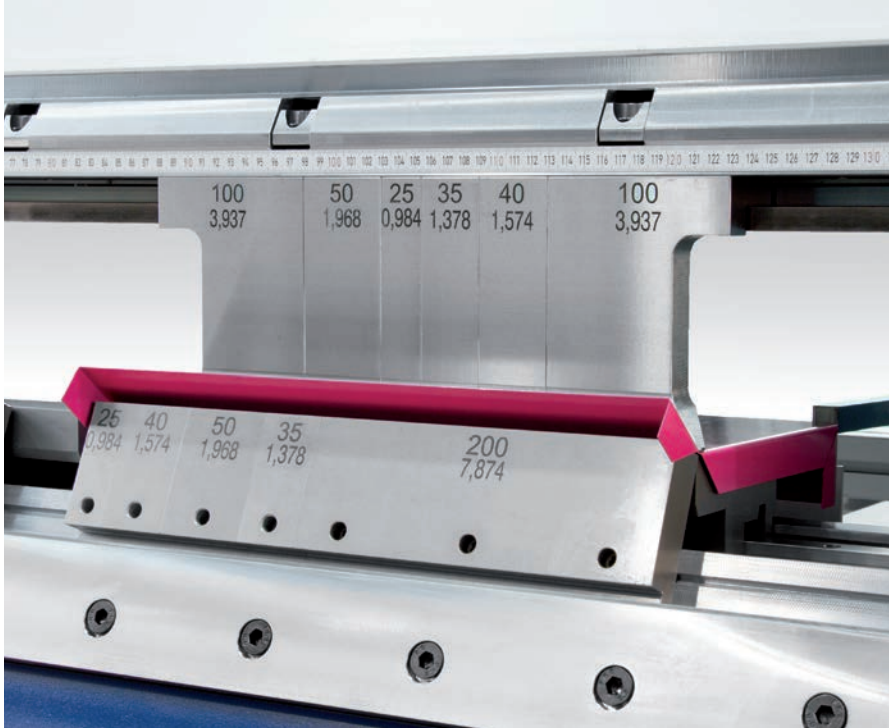
A reinforced drive of the folding beam increases the bending performance by 1 mm

Standard equipment	
Software control	<ul style="list-style-type: none"> - Positioning control Classic Bend, 10,1" screen on swivelling arm - Radius function
Clamping beam	<ul style="list-style-type: none"> - Drives: 2 x 2.2 kW (converter controlled, 65 mm/sec; circulated ball screws) - Stroke: 350 mm (325 mm with manual clamping device) - Clamping beam geometry: 48° or 180° choosable - Manual tool clamping device (WZS 020)
Folding beam	<ul style="list-style-type: none"> - Drives: 2 x 2,2 kW (converter controlled, 85°/sec) - Adjustment, manual: 80 mm - Manual tool clamping device (WZS 15000/15100)
Bottom beam	<ul style="list-style-type: none"> - Bottom beam blade one-piece ca. 1100 N/mm² surface-hardened (nitrated), minimum gauge 10 mm
Others	<ul style="list-style-type: none"> - Foot switch - Anchor plates incl. dowels - Standard machine without folding- and clamping beam tools

Special equipment	
Software control	<ul style="list-style-type: none"> - Technology package POS 2000 Professional: Graphic control with touch screen on swivelling arm, motorized folding beam adjustment 80 mm, remote maintenance - POS 2000 Professional PC Version (external programming)
Clamping beam	<ul style="list-style-type: none"> - Hydraulic tool clamping (WZS 2000)
Folding beam	<ul style="list-style-type: none"> - Power-Package folding beam increases the bending capacity by 1 mm: reinforced drive incl. folding blade 35 mm, ca. 1100 N/mm² (in combination with sharp-nose blade WZS 020, bending angle restriction to max. 140°) - Clamping device, pneumatic (only in combination with WZS 15100) - Folding beam adjustment motorized: 80 mm - Central crowning device, manual - Central crowning device, motorized (only in combination with technology package POS 2000 Professional)
Safety & Others	<ul style="list-style-type: none"> - Additional equipment for 2-man-operation control in accordance with accident prevention rules required - Operation from the rear in addition (2nd foot switch and access security in front via light barriers) - Foot switch on rail for lateral movement, - Voltage transformer, air conditioner
Gauge options and tables	<ul style="list-style-type: none"> - Motorized back gauge up to 1600 mm, closed, 2 sectors with pneumatic lowering device, sheet support table with balls, recirculated ball screws ($\pm 0,1$ mm) - 2 fixed square arms (left + right) - 2 pneumatic pop up square arms (only in combination with POS 2000 Professional) - U shape and J shape gauges in various depths

Your options

The PowerBend Universal offers you a lot of possibilities – you decide what level of technology fits your individual requirements.



Manual clamping device: segmented tools provide flexibility for a variety of geometries



Fine tuning: crowning system manual or CNC crowning systems

The PowerBend Universal in its standard configuration is already a versatile machine. Thanks to its superior drive technology, the machine can handle the most difficult materials. In order to comfortably produce complex workpieces, we offer you segmented tools.

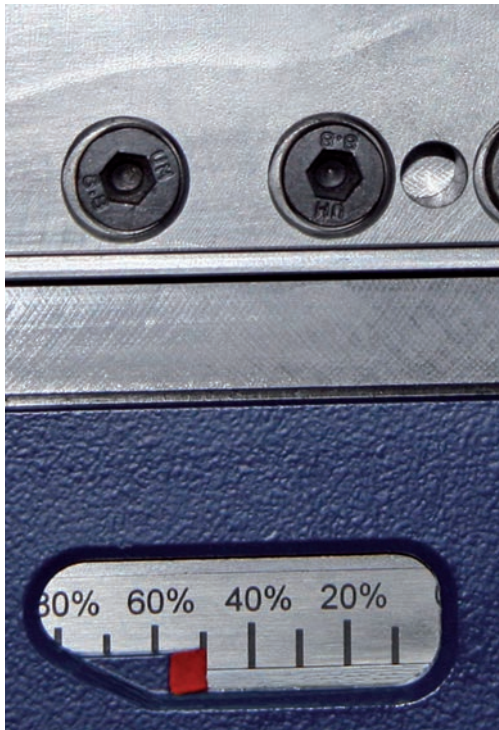
Even more power

The "Power-Package" option offers a reinforced drive system, increasing the capacity on the PowerBend Universal to 5 mm mild steel for even more bending power.

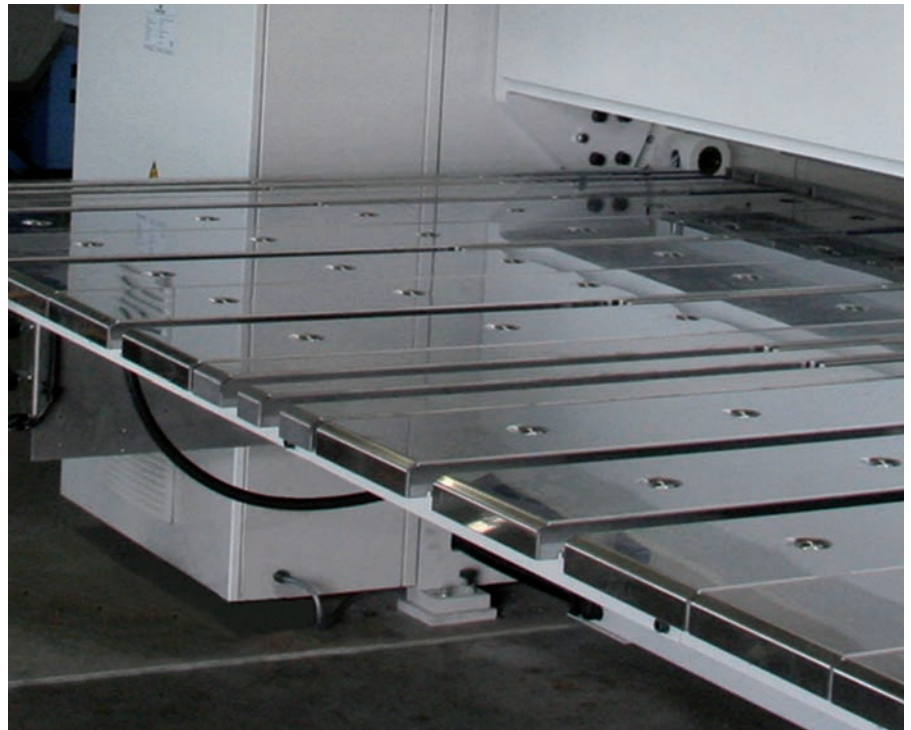
CNC folding beam adjustment, manual or CNC crowning, and speed enhancement are just a few of the options that add specific features with benefits to the PowerBend Universal.

Gauge options for optimal handling

The options for the PowerBend Universal are as varied as the workpieces that you can produce on it.



Display of crowning system



Gauge table, 1,600 mm, closed, with ball transfers

Schröder offers a wide range of back gauge and integrated sheet support systems. The material rests on the support table while the gauge feeds the part through the bending sequence.

Select the gauge best suited for your part requirements. Starting at 1,000 mm, the back gauge is accurately positioned using high precision ball screws to an accuracy of ± 0.1 mm. Gauges with depths from 1,600 mm are divided into two or more sections with pneumatic pop-up fingers to hit any dimension quickly and accurately.

Ball transfers placed throughout the sheet support system provide a frictionless surface on which the part is easily manipulated.

Adding squaring arms at the operator lane provides an ergonomically convenient method of aligning parts to tooling stations, or for squaring long thin rectangular profiles. If you are working with the control POS 2000 Professional, two pneumatic squaring arms at the operator lane can be controlled automatically in connection with gauge extensions.

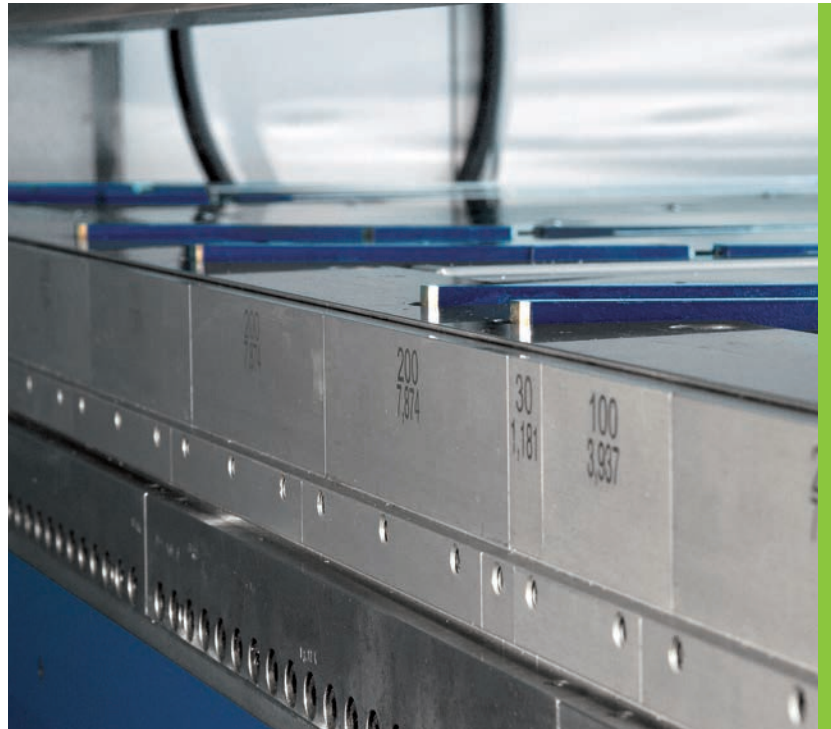
Gauge depths can be extended up to 4,000 mm, and can be configured in a J or U shape. A 1,600 mm gauge table forms the basis for this option.

Tools

Use the right tool for the job – Schröder understands this better than anyone. With dozens of standard geometries, and engineered customs, your parts will always hit the mark.



The optionally available hydraulic tool clamping device for the clamping beam reduces set-up times.



Segmented tools on the folding beam leave more space.

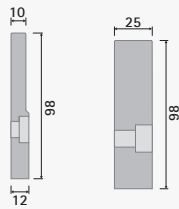
Tool flexibility is key to minimizing set up times and maximizing capabilities. Tooling must be material and thickness independent, high capacity, and with generous free space. A compromise on any of the above is a compromise on the machine itself.



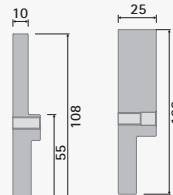
Always tidy: Use our practical tool cart for blades, rails, and segmented tools as optional equipment..

Tool options

Folding beam tools
(WZS 15000 / 15100)

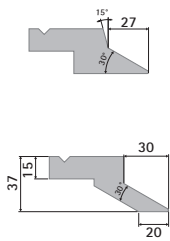


Folding blade one piece, directly screwed, 10/15/20/25/35 mm, 98 mm high, ca. 1,100 N/mm² surface hardened (phosphated) (only with manual clamping device)

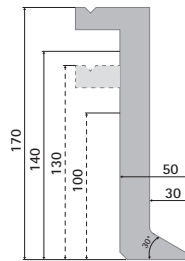


Folding blades segmented 10/15/20/25/35 mm, 108 mm high, surface hardened ca. 1,100 N/mm² (phosphated)

Clamping beam tools, manual clamping device hardened, ca. 1,100 N/mm² (WZS 020)

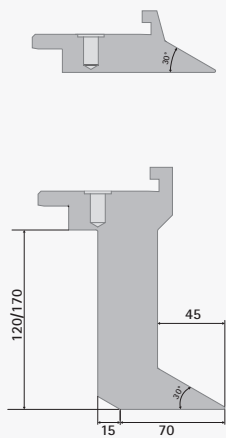


Sharp nose blade 30°, R 1/1.5/3, divided
Tinsmith blade, 30°, R 1/1.5/3, foot width 20 mm, clearance on the rear 10 mm, segmented

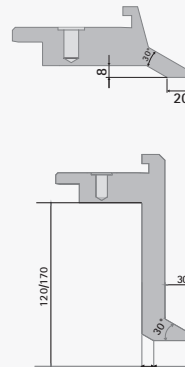


Goat's foot blade 100 or 140 mm high, (total high 130 mm or 170 mm), 30°, R 1/1.5/3, foot width 50 mm, clearance 30 mm

Clamping beam tools, hydraulic clamping device, ca. 1,100 N/mm² (phosphated) (WZS 2000)



Sharp nose tool 20°/30°, R 1/1.5/3, segmented
Goat's foot blade 120 or 170 mm high, 20°/30°, R 1/1.5/3, foot width 85 mm, clearance 45 mm



Tinsmith blade, 20°/30°, R 1/1.5/3, foot width 20 mm, clearance on the rear 8 mm, segmented
Goat's foot blade 120 or 170 mm high, 20°/30°, R 1/1.5/3, foot width 50 mm, clearance 30 mm

Optionally:
Additional pair of hinged corner parts.



Example: segmentation of folding blades at a working length of 2,040 mm (segmentation varies according to working length)



Example: segmentation of a goat's foot blade at a working length of 2,040 mm (segmentation varies according to working lengths)

* WZS = Tool system

Classic Bend

The most clearly laid-out alphanumeric control



Simple symbols and alphanumeric data describes the bending program.

The Classic Bend is a modern alphanumeric touch screen control. Self-explanatory and very easy to operate. Control of the machine axes is through a path measurement system, programming from flange to flange. A clearly laid out user interface with easy to understand icons with text and numeric displays eases the operator through his day of running jobs.

Corrections for angle and flange length are entered per part or per bend for even more accuracy control. The Classic Bend is proof positive that sometimes simpler is better. Hans Schröder Maschinenbau is setting new control standards for companies needing the advantages of folding as a process, but does not need the sophistication of a high end control system.

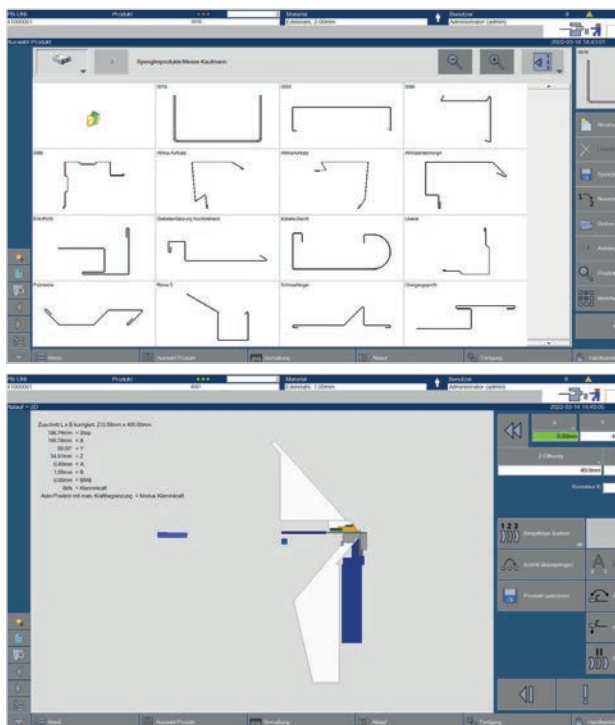


Classic Bend

- 10,1 inch monitor mounted on swivelling arm
- Bending programs are stored in folder structures
- Icon based programming
- Possibility of incremental step programming
- Position measurement system,
- Separate axis correction for each step
- Bend list with current bend highlighted
- Scribe bending
- Piece counter
- Foot pedal display
- Option: remote maintenance

POS 2000 Professional

The graphical solution to your complex forming needs



POS 2000 Professional keeps the operator informed, from programming to the running part.

For parts requiring graphical assistance to program and manipulate through the bending sequence, the POS 2000 Professional provides a visual interface for the operator and programmer. Through it, every step of the bending process is clearly shown. The graphics show the part as it is formed around the tooling and machine. The product is confirmed in a virtual mode prior to putting the sheet on the back gauge table, so the operator can form the part with 100% confidence. Part processing is as simple as following the on screen visual and written queues. From loading the sheet in the proper orientation, through each and every bend, the POS 2000 Professional shows how to progress through each and every step of the part.



POS 2000 Professional

- Windows 10 operating system
- Unlimited profile storage
- Automatic cut length calculation
- Unlimited tool storage
- Unlimited materials library
- Accurately scaled virtual bending simulation
- Zoom function
- Infinitely variable machine speed

Options

- External programming (POS 2000 Professional PC-version)

Dimensions and technical data

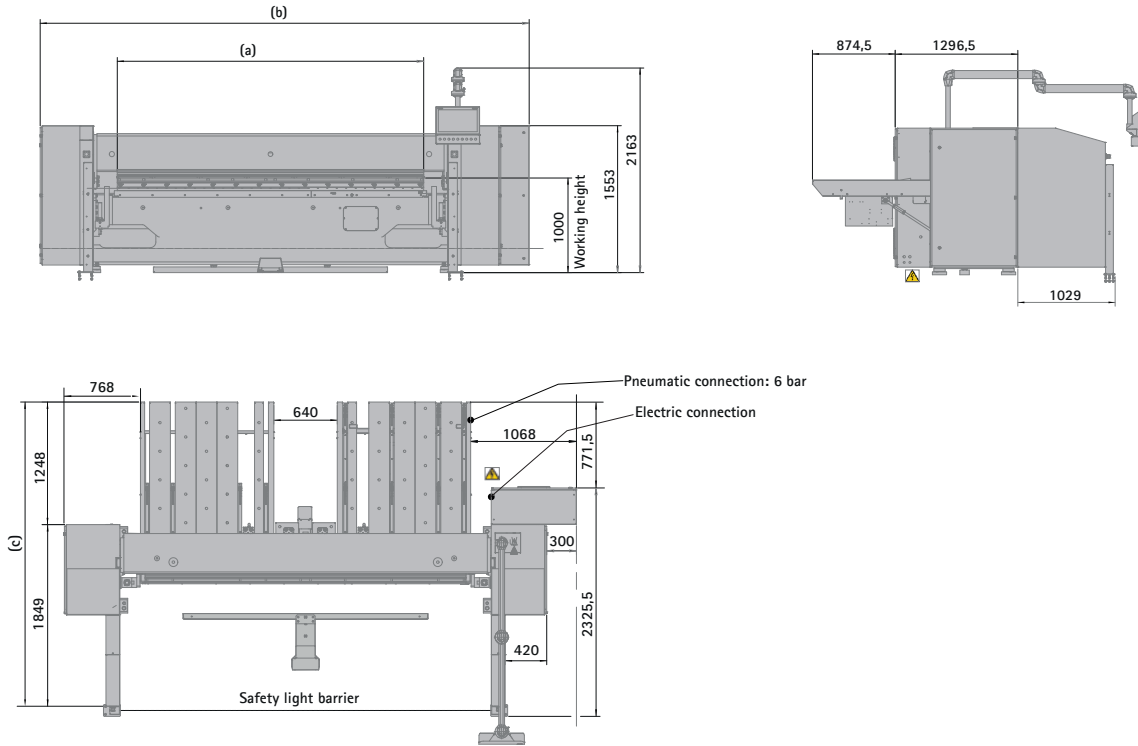


PowerBend Universal	2,000 × 4.0	3,200 × 3.0	4,000 × 2.5
Working length WL (a)	2,040 mm	3,240 mm	4,040 mm
Sheet thickness (400 N/mm ²)	4.0 mm	3.0 mm	2.5 mm
Machine length (b)	3,970 mm	5,170 mm	5,970 mm
Machine height	1,553 mm		
Working height	1,000 mm		
Machine height with swivelling arm	2,163 mm		
Weight of basic machine (ca.)	5,800 kg	7,100 kg	8,080 kg
Machine width with motorized back gauge (c)			
1 000 mm closed	3,097 mm		
1 600 mm closed	3,097 mm		
U-1600 mm	3,097 mm		
U-or rather J-shape 3200 mm	-	4 829 mm	-
U-or rather J-shape 4000 mm	-	-	5,617 mm
Clamping beam			
Geometry	48° (180°)		
Stroke	350 mm (325 mm with manual clamping device)		
Drive power	2 × 2,2 kW		
Speed	65 mm/sec		
Folding beam			
Drive power	2 × 2.2 kW		
Speed	85°/sec		
Adjustment, manual/motor.	80 mm		

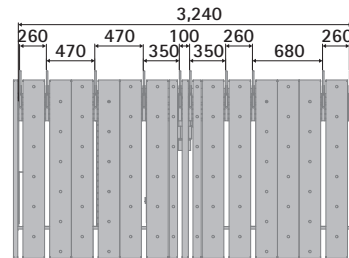
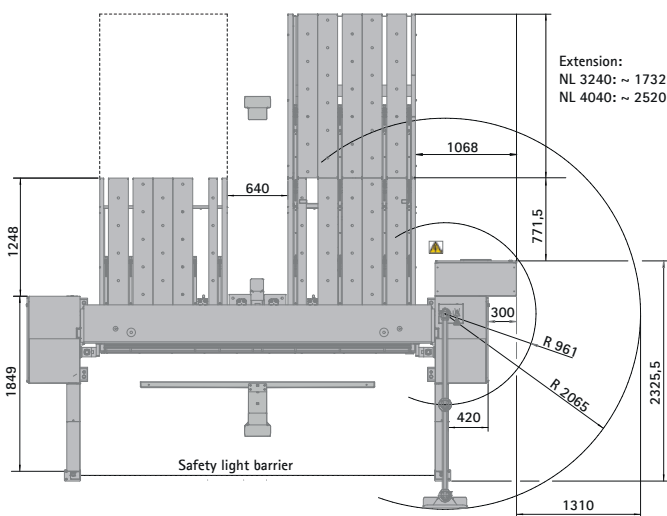
Standard tools can also be used to form rounded edges.

All specifications are considered as guidelines and may be subject to changes at any time.

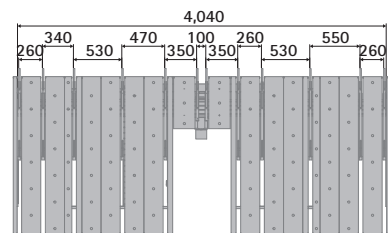
Dimensions: PowerBend Universal



Special accessory extensions



Gauge table 1,600 mm, closed



U shape 1,600, 2 x 800 mm
U shape 3,200, 4 x 800 mm
U shape 4,000, 5 x 800 mm

All dimensions in mm

Standard colour: RAL 7035 light grey, RAL 5003 sapphire blue. Special painting at an extra charge.



Schröder Group

The Schröder Group consists of Hans Schröder Maschinenbau GmbH, which is located in Wessobrunn, Germany, SCHRÖDER-FASTI Technologie GmbH, located in Wermelskirchen, Germany and the SMU GmbH, located in Leinburg-Weißenbrunn.

Founded in 1949, Hans Schröder Maschinenbau GmbH unifies traditional and modern approaches in machine building: Successfully managed as a quality and customer-oriented, family-owned company, Hans Schröder Maschinenbau is specialized in the development of modern machine concepts for bending and cutting sheet metal.

The successful integration of the Fasti Company in 2006 and its worldwide presence make the Schröder Group one of today's leading providers of machines for bending, cutting, beading, flanging, and circular bending all types of sheet metal. The company's precision machines range from proven solutions for craftsmen to innovative, high-performance machines for automatic industrial production processes. 2021 the Schröder Group was expanded by the tool manufacturer SMU GmbH. Overall, the Schröder Group currently employs more than 300 people at various locations at home and abroad.

All information provided as a guide only
and subject to change at all times.
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