



FOLDING MACHINE  
**SPB Evolution UD**

# SPB Evolution UD

The SPB Evolution UD is our versatile industrial folding machine for the single piece and serial production that unifies power, speed and precision.



SPB Evolution UD



Up-and-Down-function:  
counter folds without turning  
upside down the sheet

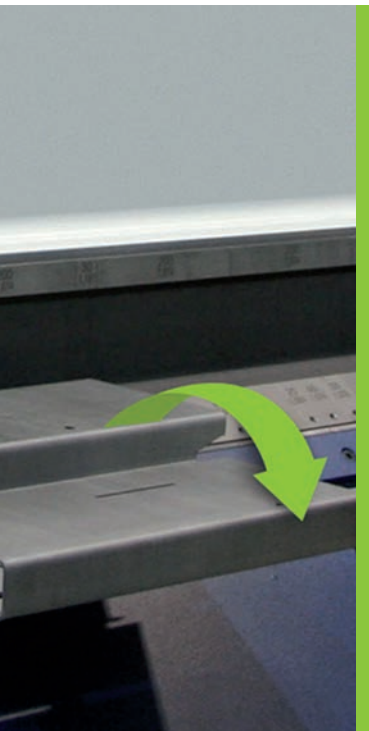
The SPB Evolution UD allows you to bend complex work pieces such as panels, boxes or cassettes and to achieve high productivity at the same time. The machine with the working length 3200x4,0 or 4000x3,0 is an extremely flexible Up-and-Down folding machine. Besides of precise linear drives and graphical programming, the highlight functions are definitely options such as the rotating clamping beam or the suction gauge. All these are possibilities to make your production faster, more efficient and more flexible.

Multi-shift operation, industrial series production, complex processing of stable metal sheets – the SPB Evolution UD provides the ability and robustness required for these challenges.

## Up-and-Down-Technology increases productivity

Minimize the costs of handling large metal sheets on the machine and take advantage of Schröder's Up-and-Down technology. More processing steps in shorter times. With conventional folding machines, the sheet needs to be turned. Even a simple Z-fold becomes a challenge if an operator needs to turn a four-meter long sheet upside down.

We provide the solution: The SPB Evolution UD (Up-and-Down) bends up and down in one processing step. This saves numerous manual actions, simplifies the handling of unwieldy work pieces, shortens throughput times and lowers costs per unit.

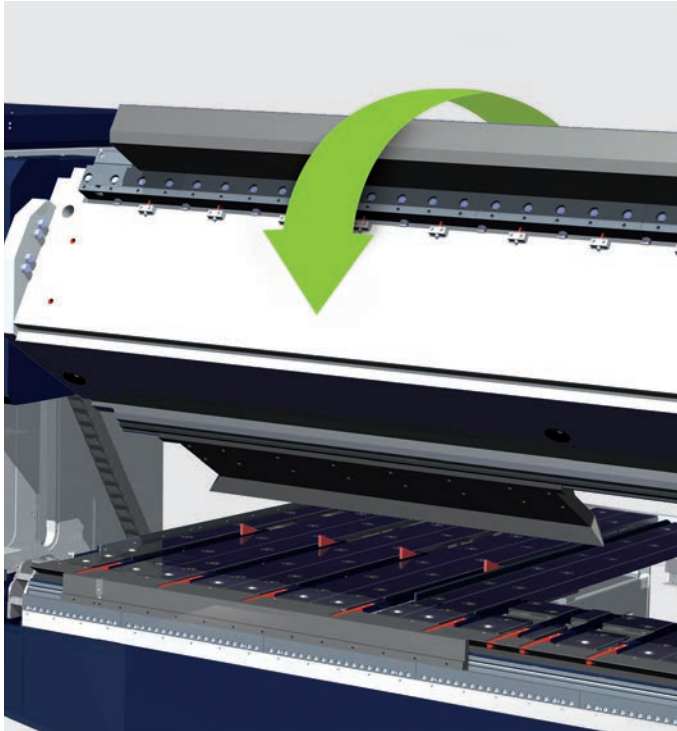


Standard equipment	
Software control	<ul style="list-style-type: none"> <li>- POS 3000 3-D graphic control on swivelling arm</li> <li>- Radius function</li> <li>- Remote maintenance via internet</li> </ul>
Clamping beam	<ul style="list-style-type: none"> <li>- Stroke: 650 mm</li> <li>- Geometry: 180°</li> <li>- Tool clamping, hydraulic (WZS 2000)</li> </ul>
Folding beam	<ul style="list-style-type: none"> <li>- Up'n Down folding beam, program-controlled</li> <li>- Tool clamping, pneumatic (WZS 7000)</li> <li>- Adjustment, motorized: 200 mm</li> <li>- Folding center adjustment, motorized: 80 mm</li> <li>- Central crowning, motorized</li> <li>- Center point adjustment, converter-controlled drive</li> </ul>
Back gauge	<ul style="list-style-type: none"> <li>- Positioning gauge 10-3400 mm bzw. 10-4250 mm U-shape with sectors, pneumatic pop-up gauge fingers, steel balls in sheet support table, square arm 1500 mm left and right. The segmented support plates can be removed to make room for downflange applications.</li> </ul>
Work safety	<ul style="list-style-type: none"> <li>- Protection via light barrier controlled by safety-PLC for operation from the rear</li> <li>- Safety package for operation from the front, incl. 2nd foot switch on rail for lateral movement</li> </ul>
Others	<ul style="list-style-type: none"> <li>- Standard machine without clamping beam and folding beam tools</li> <li>- Foot switch</li> <li>- Anchor plates incl. dowels</li> </ul>

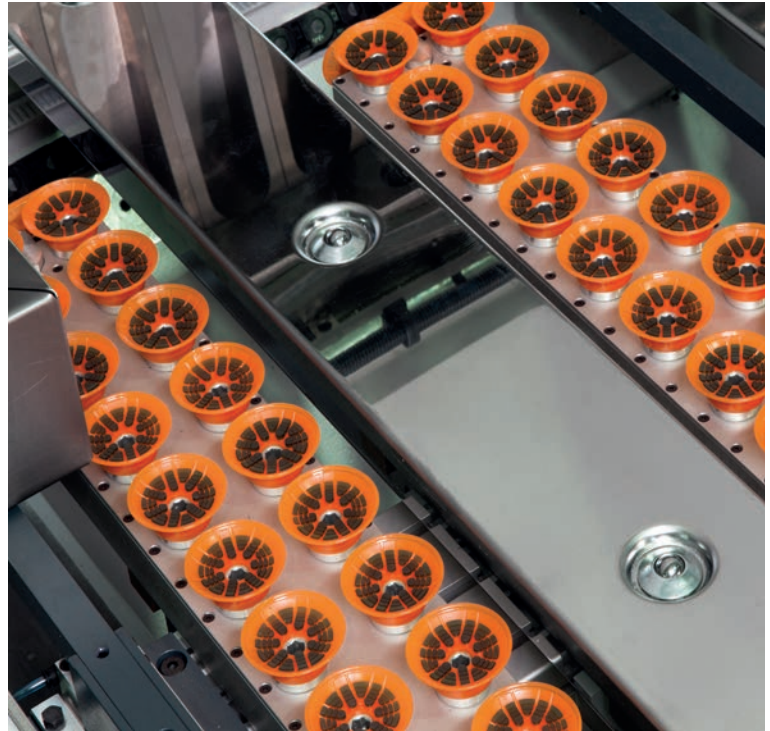
Special equipment	
Clamping beam	<ul style="list-style-type: none"> <li>- Rotating clamping beam as automatic tool changing system incl. hydraulic tool clamping device for 2nd tool station (not in combination with clamping beam stroke)</li> <li>- Speedoptimizer Z-axis drive (max. axis speed: 120 mm/sec)</li> <li>- Increase of clamping beam stroke Z-axis to 830 mm (not in combination with rotating clamping beam)</li> </ul>
Back gauge	<ul style="list-style-type: none"> <li>- Suction plates in gauge table, program-controlled incl. 2 pneumatic pop up square arms assembled aisle side</li> </ul>
Safety	<ul style="list-style-type: none"> <li>- Additional equipment for 2-man-operation control in accordance with accident prevention rules required</li> </ul>
Others	<ul style="list-style-type: none"> <li>- Tool cart for blades, rails and segmented tools</li> <li>- Voltage transformer 18 kVA</li> <li>- Air conditioner on both switch cabinets</li> <li>- Tools see page 5</li> <li>- Options to software control see page 7</li> </ul>

# Rotating clamping beam and back gauge

We offer you additional options such as rotating clamping beam but also a wide range of back gauge and integrated sheet support systems.



The rotating clamping beam holds a second set of tools.



Suction plates in gauge table, controlled via POS 3000.

## Rotating clamping beam

Fast changing jobs or complex folding tasks with different folding tools – the SPB Evolution UD holds a second set of tools in the rotating clamping beam. Where other folding machines need to be re-equipped, the SPB Evolution UD simply continues to work. An additional advantage: The rotating clamping beam provides an alternative machine geometry (45°) with other clearances.

## Gauge systems

Ball transfers placed throughout the sheet support system provide a frictionless surface on which the workpiece is easily manipulated. The standard back gauge of the SPB Evolution UD offers a sheet support in U-shape which allows to gauge 10 - 3400 mm or 10 - 4250 mm respectively. The gauge fingers pop-up pneumatically.

In order to be able to bend long slim sheets exactly at a right angle, we recommend the pneumatic pop-up square arms assembled aisle side.

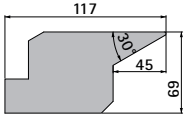
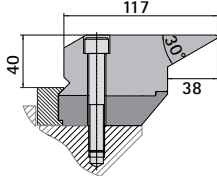
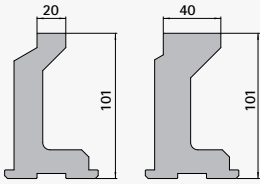
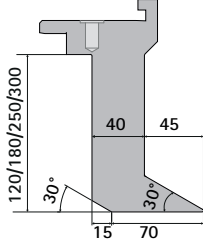
## Option: Gauge with suction plates

As additional option plates are available for the gauge table. These suction cups pneumatically fix the sheet: The suction gauge takes effect where the pop-up gauge fingers have no reliable grip if the work piece on the gauge side e.g. has cut-outs or roundings. One great advantage: The sheet gets pneumatically fixed and thanks to the intelligent software control all bends on one side can be carried out with one single manual action.

# Tools

Use the right tool for the job – Schröder understands this better than anyone else. With high-quality tools from Schröder you achieve exact folding results.

## Special equipment tools

Tool options	
Bottom beam tools WZS* 10000/10300	<p>Bottom beam blade, one-piece, directly screwed surface-hardened (nitrated) ca. 1100 N/mm<sup>2</sup></p> <ul style="list-style-type: none"> <li>- Without finger grooves (Min. gauge 130 mm)</li> <li>- With finger grooves</li> </ul> 
Bottom beam tools WZS 4100/4200	<p>Bottom beam blade, divided incl. clamping rail directly screwed surface-hardened (nitrated) ca. 1100 N/mm<sup>2</sup></p> <ul style="list-style-type: none"> <li>- Without finger grooves (Min. gauge 130 mm)</li> <li>- With finger grooves</li> </ul> 
Folding beam tools WZS 7000	<p>Folding blade segmented (101/81 x 65 mm) surface-hardened (nitrated) ca. 1100 N/mm<sup>2</sup></p> <p>No. 1 - L = 2 x (25/30/35/40/45/50) = 450 mm</p> <p>No. 2 - L = 200 mm (number according to work. length)</p> <p>Standard-folding blade width: 10/15/20/25/30/35 or 40 mm</p> 
Clamping beam tools WZS 2000	<p>Goat's foot blade „C”, 20°/30°, R 1/1,5/3 mm clearance 45 mm, foot width 85 mm surface-treated (phosphated), ca. 1100 N/mm<sup>2</sup></p> <p>No. 1 - L = 1 x (25/30/35/40/45/50) = 250 mm</p> <p>No. 2 - L = 200 mm (number according to work. length) from H = 300 mm, L = 100 mm</p> <p>Nr. 3 - L = 2 x 100 = 200 mm (corner parts)</p> <p>Height 120/170/200/250 or 300 mm</p> 
	<p>Set of segments for goat's foot blade „C” clearance 45 mm, foot width 85 mm</p> <p>No. 1 - L = 1 x (30/35/40/45/50) = 200 mm</p>

\* WZS = Tool system



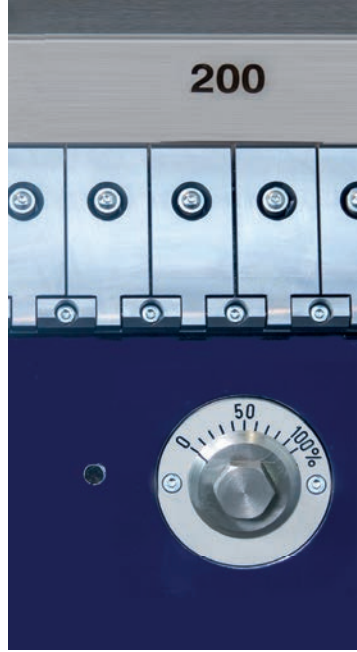
Always tidy: Use our practical tool cart for blades, rails and segmented tools as optional equipment.



# Dimensions and technical data



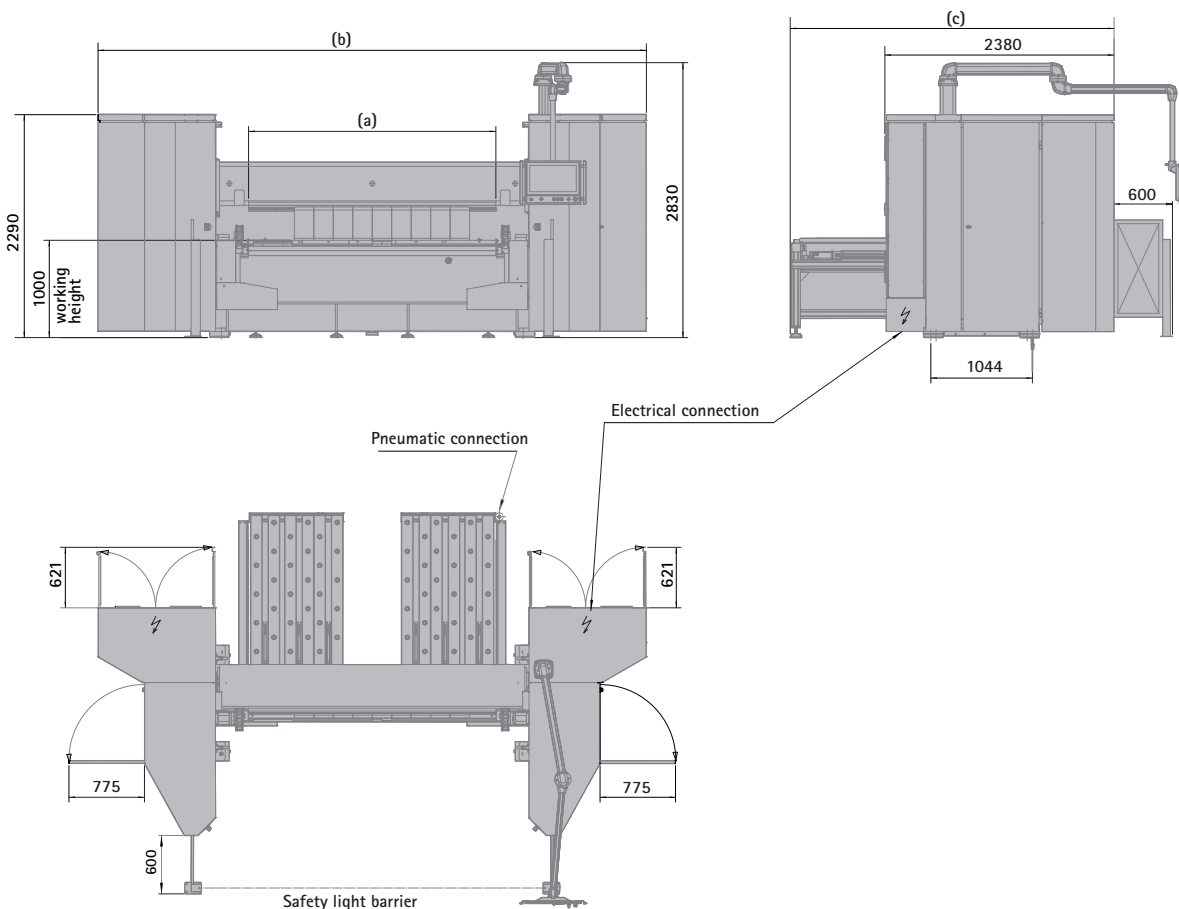
SPB EVOLUTION UD	3,200 x 4.0	4,000 x 3.0
Working length (a)	3,240 mm	4,040 mm
Sheet thickness (400 N/mm <sup>2</sup> )	4.0 mm	3.0 mm
Machine length (b)	6,332 mm	7,132 mm
Back gauge (c)		
U-3400	5,180 mm	-
U-4250	-	6,030 mm
Weight without back gauge	12,260 kg	13,350 kg
Clamping beam		
Geometry	180°	180°
Stroke	650 mm	650 mm
Drive power	2 x 6.69 kW	2 x 6.69 kW
Speed	120 mm/sec	120 mm/sec
Folding beam		
Adjustment, motorized	200 mm	200 mm
Drive power	2 x 7.0 kW	2 x 7.0 kW
Speed	150°/sec	150°/sec
Folding center adjustment	80 mm	80 mm



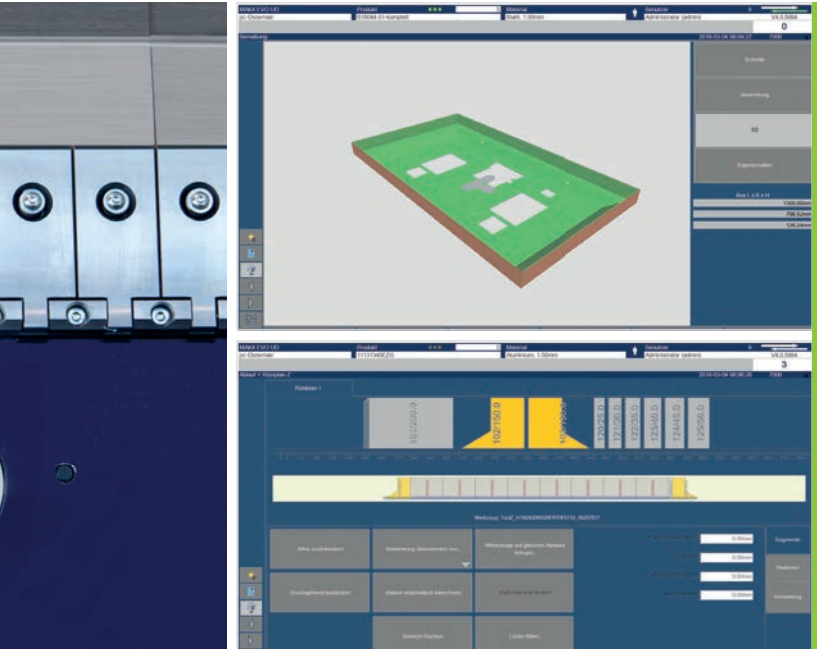
Bottom beam blade with finger grooves

For fine-tuning: motorized crowning device

## Dimensions: SPB Evolution UD



# POS 3000 3D-graphic control



The easy to understand graphics present a clear visual interaction between the part, the machine and the tools. Sophisticated parts are easily understood.



## Visualize quality: POS 3000 3D-graphic control with simulation

The POS 3000 software control allows you to import DXF, BPX and GEO-files. Hence the most important product- and folding parameters can be imported automatically and without any intervention of the operator. Using this function, all shapes of a sheet can get displayed and the operator can choose between additional gauge options. This means substantial time savings and has the additional advantage that the operator does not have to program the workpiece that has to be bend.

With the POS 3000 software, the machine, tool, and work piece are all clearly displayed. The operator bends the part visually beforehand on the screen and checks the result in the 3D bending simulator. This ensures a perfect processing of the sheet. Once a bending program has been created they can be called up again quickly, checked visually, and corrected according to material requirements.

## Highlights



- 3D-graphic control incl. schematic depiction of the machine, tools and work piece
- Intuitive, visual touchscreen-programming
- 3D-bending simulator for visual program inspection
- Cycle time calculator
- CAM-connection
- ERP/PPS-interfaces
- DXF, BPX and GEO-import

### Option:

- External programming (POS 3000 PC-Version)
- Unfold software „SCHRÖDER Unfold“



## Schröder Group

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

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. Overall, the Schröder Group currently employs more than 270 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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