

# Folding machine PowerBend Industrial UD

The PowerBend Industrial UD is our professional solution for reliable and efficient operation in heavy production industrial shops. This powerful, motorized folding machine expands the portfolio of the PowerBend-series.



PowerBend Industrial UD

Work. length x Sheet thickn. (400 N/mm <sup>2</sup> )	3,240 x 6.0 mm	4,040 x 5.0 mm
---	----------------	----------------



The Up-and-Down folding beam allows counterbends in one working step.

Just as the PowerBend-series, the folding machine PowerBend Industrial was engineered using finite element analysis as well as latest computer simulations. Decades of experience in industrial folding result in a rigid frame that provides a base from which the PowerBend Industrial UD achieves unmatched precision and operational efficiency.

The PowerBend Industrial UD is available with a working length of 3,200 mm for bending steel sheets up to 6.0 mm thickness. This machine can also be acquired at a working length of 4,000 mm for steel sheets up to 5.0 mm thick.

## Highlights

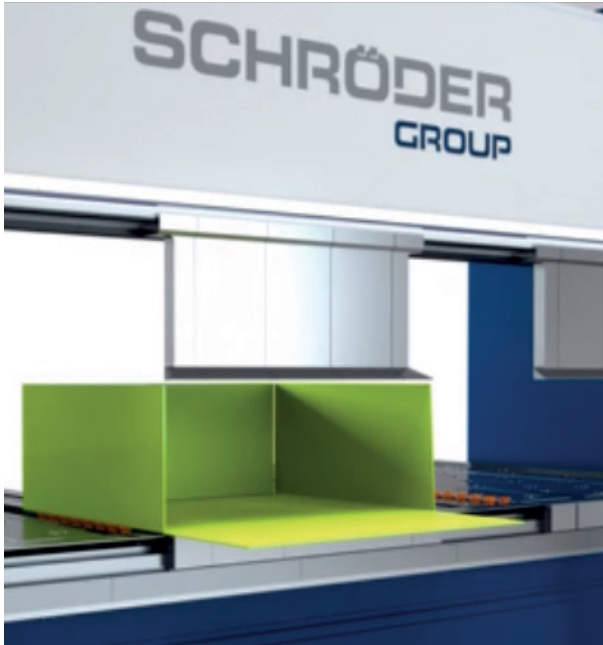
- Unique robustness, reliability and repeat accuracy
- Production of single pieces and prototypes
- Patented, hydraulic Up-and-Down system
- Clamping beam stroke of 650 mm
- Tool positioning display alongside the clamping beam
- Bilateral drives on the clamping- and the folding beam achieve extremely fast clamping and folding speeds



Standard equipment	
Software control	<ul style="list-style-type: none"> <li>- Graphic control POS 2000 Professional on swivelling arm</li> <li>- PC Version (external programming), 1st licence</li> <li>- Radius function</li> <li>- Remote maintenance</li> </ul>
Clamping beam	<ul style="list-style-type: none"> <li>- Drive: 2 x 3.0 kW (converter controlled, recirculated ball screw)</li> <li>- Clamping beam geometry: 180°</li> <li>- Clamping beam stroke: 650 mm</li> <li>- Axis inclination of clamping beam</li> <li>- Hydraulic tool clamping device (WZS 2000)</li> <li>- Tool positioning display alongside the clamping beam</li> </ul>
Folding beam	<ul style="list-style-type: none"> <li>- Up'n Down folding beam, program-controlled</li> <li>- 2 servo drives for continuous commuting of the axis</li> <li>- Drive: 2 x 5.5 kW (converter-controlled, trapezoidal spindle)</li> <li>- Hydraulic tool clamping device (WZS 15100)</li> <li>- Motorized folding beam adjustment 170 mm, servo-controlled</li> <li>- Motorized folding center adjustment +80/-15 mm</li> <li>- Motorized central crowning device</li> </ul>
Back gauge	<ul style="list-style-type: none"> <li>- Positioning gauge as U-shape: 20 - 1600 mm, 2 sectors pneumatically lowerable, sheet support table with balls, recirculated ball screw (+/- 0,1 mm)</li> </ul>
Tools	<ul style="list-style-type: none"> <li>- Standard machine without clamping beam- and folding beam tools</li> <li>- Bottom beam blade, one-piece, 30° with finger grooves, minimal gauge 20 mm, ca. 1100 N/mm<sup>2</sup> surface-hardened (nitrated) (WZS 16300)</li> </ul>
Safety	<ul style="list-style-type: none"> <li>- Light barrier package for operation from the front or rear side</li> <li>- 2nd foot switch on rail for lateral movement</li> <li>- RFID switch thru cabinet door</li> </ul>
Others	<ul style="list-style-type: none"> <li>- Air conditioner, foot switch, LED Status display</li> <li>- Anchor plates incl. dowels</li> </ul>

Special equipment	
Technology package 3D	<ul style="list-style-type: none"> <li>- POS 3000 3D-Graphic control, DXF-Import and more processor capacity</li> <li>- Suction plates in gauge table with 6 suction units, program-controlled incl. positioning against the folding beam</li> <li>- 2 fixed square arms (left + right side)</li> <li>- 2 pneumatic pop-up square arms assembled aisle side</li> </ul>
Software control	<ul style="list-style-type: none"> <li>- POS 3000 3D Graphic control, DXF-Import and more processor capacity</li> <li>- POS 3000 or POS 2000 Professional PC Version</li> <li>- Unfold software „SCHRÖDER Unfold“ (POS 3000 PC Version required)</li> </ul>
Back gauge	<ul style="list-style-type: none"> <li>- Back gauge extension to J-gauge (1600/3200 oder 1600/4000 mm) or U-gauge (1600/3200/4000 mm) (see p. 21)</li> <li>- 2 fixed square arms (left + right side)</li> <li>- 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>- Voltage transformer 30 kVA</li> <li>- Overseas packaging</li> <li>- Tool options see p. 30-31</li> </ul>

# Dimensions and technical data



PowerBend Industrial UD	3,200 x 6.0	4,000 x 5.0
Working length (a)	3,240 mm	4,040 mm
Sheet thickness 400 N/mm <sup>2</sup>	6.0 mm	5.0 mm
Machine length (b)	5,078 mm	5,878 mm
Machine height max.	2,610 mm	
Machine width with back gauge (c)		
U-1600	3,033 mm	
U- or rather J-3200	4,490 mm	-
U- or rather J-4000	-	5,290 mm
Weight basic machine (ca.)	12,600 kg	15,200 kg
<b>Clamping beam</b>		
Geometry	180°	180°
Stroke	650 mm	650 mm
Drive (speed)	2 x 3.0 kW (65 mm/sec)	2 x 3.0 kW (65 mm/sec)
<b>Folding beam</b>		
Drive power (speed)	2 x 5.5 kW (90°/sec)	2 x 5.5 kW (90°/sec)
Folding beam adjustment, motor.	170 mm	170 mm
Folding center adjustment, motor.	+80/-15 mm	+80/-15 mm

Clamping beam stroke of 650 mm leaves room for tall work pieces.



## Great variety of tools

Thanks to various tools the PowerBend Industrial is able to handle most complex folding tasks. For every product we can offer you a wide range of segmented tools, that can be changed fast and easily thanks to a hydraulic tool clamping device. The clamping beam stroke of 650 mm enables the use of 400 mm high tools and offers a lot of space when processing bulky work pieces.



## Suction gauge controlled via POS 3000

The suction gauge is an optional extension of the back gauge and enables a pneumatic fixing of sheets. Sheets can be gauged precisely against the folding beam and get fixed by suction cups. The software control recognizes the position of the sheet and starts the processing step. Afterwards the suction gauge positions the sheet automatically for every bend on that sheet - thanks to the Up-and-Down-folding beam with folds and counterfolds and without any intervention by the operator.



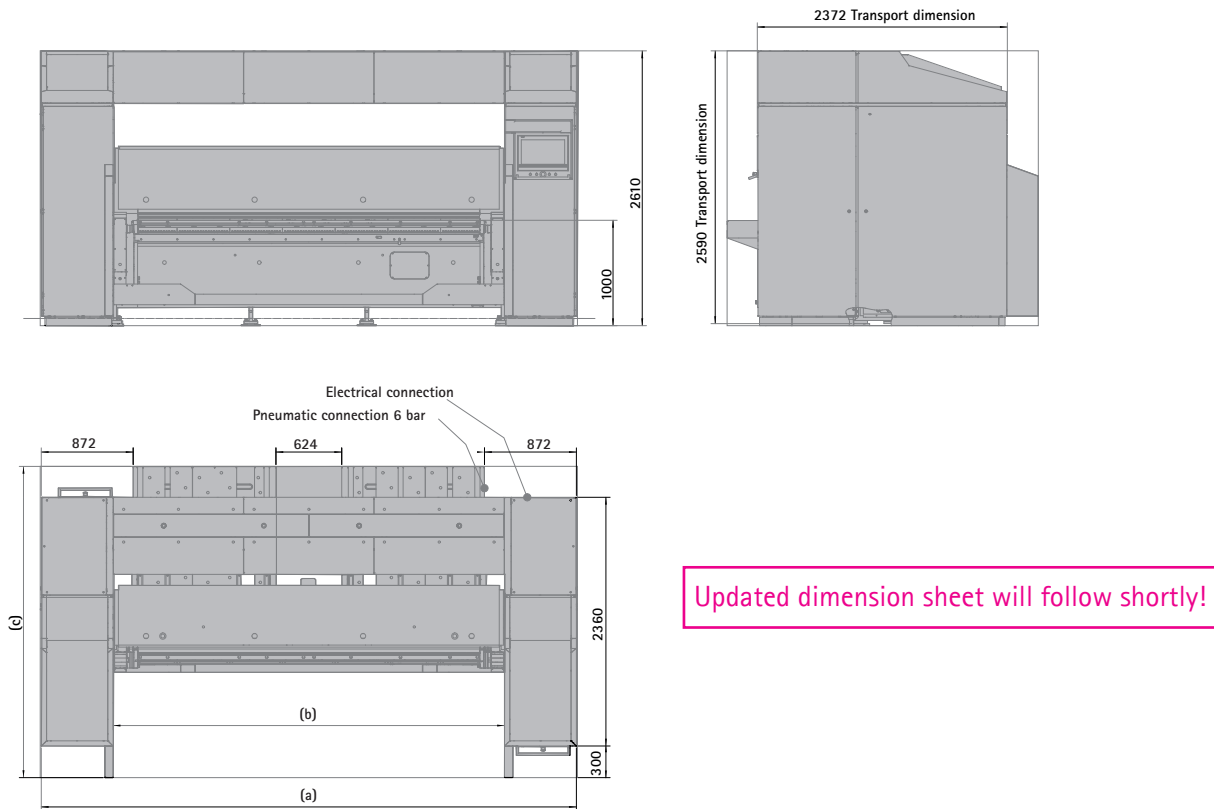
## Highlight: Tool positioning display

The correct positioning of clamping beam tools is visualized by an integrated LED bar over the total length of the clamping beam. The folding program visualizes the position of the tools by a tool positioning display - extremely practical e.g. if you want to set up two different tool stations on the clamping beam.



- 3D graphic control with schematic representation of machine, tool and workpiece
- Intuitive, visual touch-screen programming
- 3D bending simulator for visual program control
- Automatic setup programming and control of the tool changer
- Cycle time calculator
- PC-Version, CAM connection, ERP/PPS interfaces and DXF converter
- Options: Unfold software „SCHRÖDER Unfold“

## Dimensions: PowerBend Industrial UD



## Options for back gauge extensions

Back gauge extensions: Basis: U-shape 20 - 1,600 mm

- J-shape 1600/3200 mm
- J-shape 1600/4000 mm
- U-shape 3400 mm
- U-shape 4000 mm

