

SCHRÖDER
GROUP



FOLDING MACHINE
EVO DuoBend

EVO DuoBend with even more flexible application possibilities

The innovative EVO DuoBend double-folder is used in sheet metal processing industrial plants and offers the perfect solution for the production of large-format products with counterbends.

EVO DuoBend with two folding beams



Positive bend

EVO DuoBend with two folding beams

The new motorized folding machine EVO DuoBend owes its name „DuoBend“ to its two independently operated folding beams. With the EVO DuoBend, the Schröder Group is once again increasing its flexibility in the area of sheet metal folding many times over: Products for container construction, vehicle construction or conventional folding applications, such as heavy sheets with counterbends, can be manufactured efficiently.

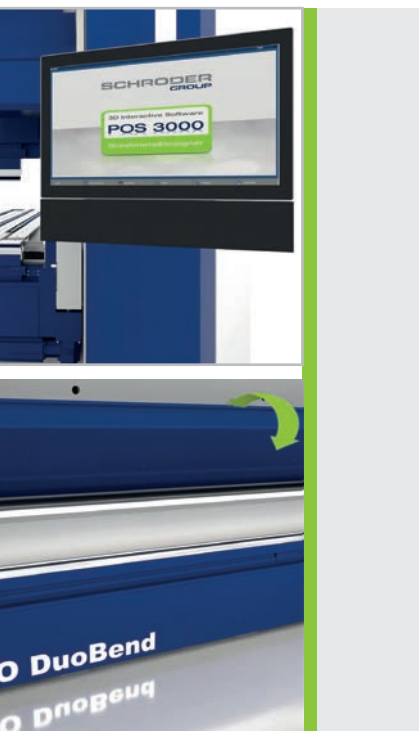
The machine can also be used by large contract manufacturing companies. It can be purchased in the working lengths 4040 mm for sheets up to 4 mm thickness or 3200 mm for sheets up to 5 mm thickness.

The two folding beams of the EVO DuoBend enable a highly efficient motion sequence:

A positive bend is performed by the bottom folding beam and folding of a negative bend by the top folding beam. This eliminates the need to bypass product sides that have already been bent, which means that there are no longer any restrictions due to the maximum bypass radius of less than 200 mm. The time saved when changing from up to down or down to up bending results in a shorter cycle time.

The workpiece is processed during the entire folding process without a machine operator as the operator only has to position the product once at the beginning. This significantly reduces the error rate by the operator. The high bending quality is supported by the motorized crowning on both folding beams, which contributes to a straight bending result.

The machine is programmed with Schröder's own POS 3000 control on swivelling arm



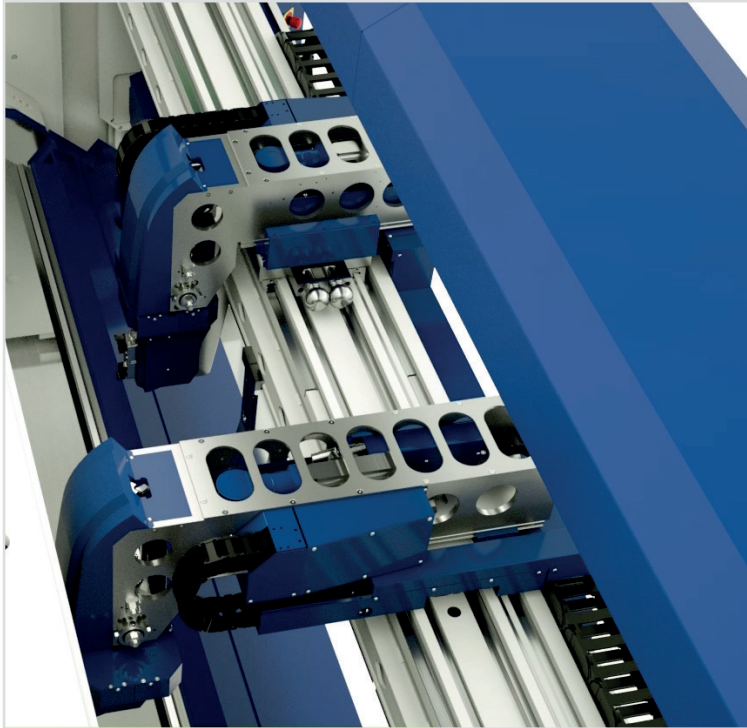
Negative bend

Standard equipment	
Software control	<ul style="list-style-type: none"> – POS 3000 3-D Graphic control on swivelling arm – Radius function – Remote maintenance via Internet – External programming (PC-Version 1. Licence)
Clamping beam	<ul style="list-style-type: none"> – Clamping beam stroke: 850 mm – Clamping beam geometry: 180° – Fully automatic tool changer WZS 6500: for clamping beam tools with a hydraulic tool clamping device (a total of 8 axis) for max. tool height of 500 mm, two asynchronously movable tool changers with one gripper unit each
Folding beam	<ul style="list-style-type: none"> – Two folding beams, program-controlled – Mechanic tool clamping device (screwed) (WZS 19000) – Motorized folding beam adjustment 150 mm – Motorized folding center adjustment 370 mm – Motorized central crowning device in both beams
Back gauge	<ul style="list-style-type: none"> – Gauge table 1700 mm as U-shape divided support plates with steel balls – Lateral angle gauge right and left side 1500 mm (outside) – Suction plates in gauge table, controlled via POS 3000 – 2 pneumatic pop up square arms assembled aisle side, program-controlled – Gauge axis in front
Work safety	<ul style="list-style-type: none"> – Protection via light curtain controlled by safety-PLC for operation from the rear – Safety fence with lateral access door
Others	<ul style="list-style-type: none"> – Standard machine without tools – Working height 1160 mm – Foot switch, anchor plates incl. dowels, decentralized lubrication system – Air conditioner on both switch cabinets

Special equipment	
Back gauge	<ul style="list-style-type: none"> – Side table left or right, sheet support table closed with ball rollers – Pneumatically lowerable gauge fingers (2 sectors 850/1700 mm) – Back gauge extension right and/or left with pneumatically lowerable gauge fingers (balls in table), combinable with side table – Gripper gauge system: <ul style="list-style-type: none"> U-shaped table 2000 mm, movement range 150 - 2150 mm, 2 lateral moveable pneumatic grippers Additional gauge options: <ul style="list-style-type: none"> – 2 gauge fingers – 2 suction plates (gauge options cannot be used in combination) 2 additional side tables left and right, sheet support table closed with ball rollers to extend the table up to machine width
Safety	<ul style="list-style-type: none"> – Additional equipment for 2-man-operation control in accordance with accident prevention rules required
Software control	<ul style="list-style-type: none"> – SCHRÖDER Unfold software
Others	<ul style="list-style-type: none"> – Voltage transformer 52 kVA, Overseas packaging – Tool options, please see p. 6-7

Fully automatic tool changer

EVO DuoBend is equipped with a fully automatic tool changer on the clamping beam as standard. This effectively reduces preparation times for small batches, minimizes set-up errors and increases output at the same time.



Two asynchronously movable tool changers each have a gripper unit.



Cross section: clamping beam tools, bottom beam tools and folding beam tools of the upper folding beam

Fast and safe setup

The EVO DuoBend is equipped with a fully automatic tool changer on the clamping beam, which can be set up with up to 500 mm high tools. Two rotary units, each moved by high-precision linear drives, use a gripper unit to remove tools from the magazine and position them in the tool clamping device or remove the existing tools.

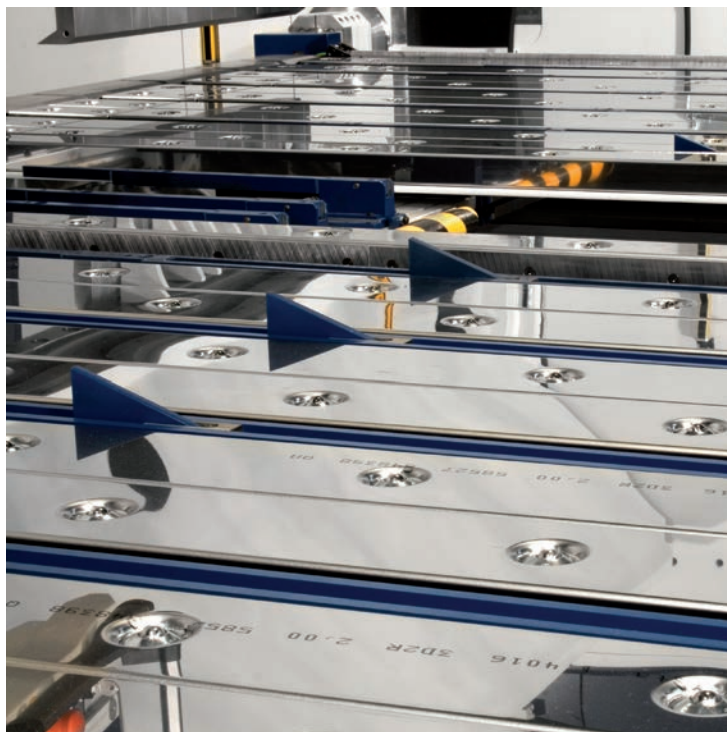
A clamping beam stroke of 850 mm enables four-sided boxes with a depth of 500 mm to be bent. The machine is controlled via the graphic control POS 3000 that has been developed in-house by Schröder and which works already successfully on other Schröder folding machines.

The fully automatic tool changer of the EVO DuoBend addresses central challenges in your production:

- **Shorten setup times**
You minimize downtimes, shorten throughput times and increase output.
- **Avoid errors**
Incorrect tooling is a common cause of sheet metal forming errors. These can be avoided with automatic setup. Quality increases, scrap and costs decrease.
- **More flexible and cost-effective production**
Batch sizes in production are decreasing – with automatic tool change, even small batch sizes and one-off production get efficient and error-free.

Gauge options

The EVO DuoBend can handle a wide variety of sheet formats.



Example of a back gauge system with pneumatically lowerable gauge fingers. Optionally a gripper gauge is available.



U-shaped back gauge with suction cups, controlled via POS 3000.

Back gauge system

In its standard version the EVO DuoBend has a U-shaped 1700 mm sheet support table. This sheet support table with balls makes handling easy and gentle on the material. There are 1500 mm angle gauges on the left and right side of the table as well as pneumatically lowerable angle gauges in the aisle of the machine that enable exact positioning of the sheet.

Suction gauge

The basic version of the EVO DuoBend is equipped with suction plates in the gauge table. These enable pneumatic fixing of the workpiece: the sheet gets fixed pneumatically once and, thanks to the

intelligent control system, all bends on one side run automatically and without further handling by the machine operator.

Option: Gripper gauge

Optionally, you can increase the operating comfort with an additional gripper gauge. With two laterally movable pneumatic grippers, this gripper gauge offers you even greater safety when fixing heavy large-format sheets.

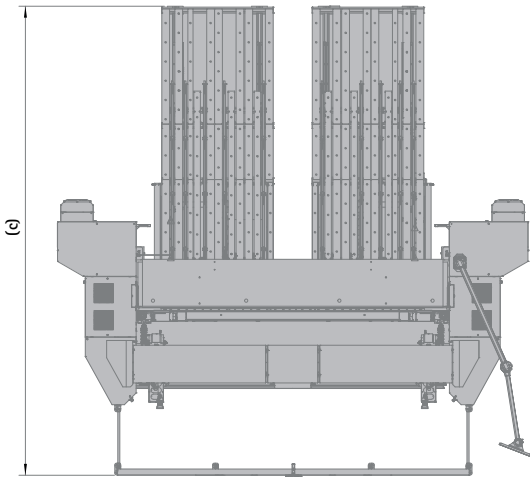
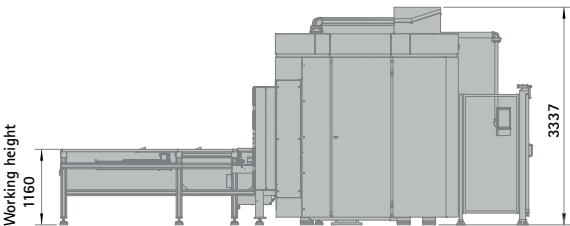
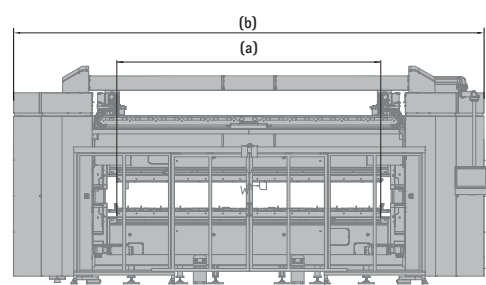
Dimensions and technical data



EVO DuoBend	3,200 x 5.0	4,000 x 4.0
Working length (a)	3,240 mm	4,040 mm
Sheet thickness (400 N/mm²)	5.0 mm	4.0 mm
Machine height with ATC	3,337 mm	3,337 mm
Machine length (b)	6,420 mm	7,220 mm
Back gauge (c)		
U-3400	5,310 mm	-
U-4250	-	6,160 mm
Weight without back gauge	ca. 27,500 kg	ca. 29,000 kg
Clamping beam		
Geometry	180°	180°
Stroke	850 mm	
Drive power	2 x 9.45 kW	2 x 9.45 kW
Speed	100 mm/sec	100 mm/sec
Folding beam (2x)		
Adjustment, motorized	150 mm	
Drive power	2 x 9.42 kW	2 x 9.42 kW
Speed	150°/sec	150°/sec
Folding center adjustment	370 mm	

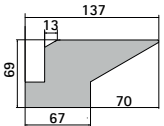
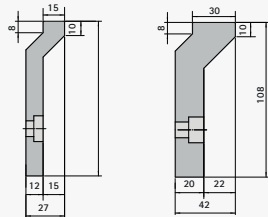
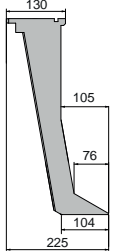
Thanks to the two folding beams the machine is able to bend a large number of counterfolds one after the other. The prime example of such workpieces is a customer-specific trapezoidal sheet.

Dimensions: EVO DuoBend



Dimension side table (wxd):
 WL 3200: 1,336 x 1,864 mm
 WL 4 000: 1,716 x 2,614 mm

Special tool options

Tool options	
Bottom beam tools WZS* 10500 surface-hardened ca. 1100 N/mm ² (nitrated)	Bottom beam blade one-piece, directly screwed, 30°, clearance 70 mm - without finger grooves (min. gauge 130 mm) - with finger grooves 
Folding beam tools WZS 19000 surface-hardened ca. 1100 N/mm ² (nitrated)	1 pair folding blades cranked one-piece, directly screwed, H = 108 mm Folding blade width: 15/20/30/35 mm 
Folding beam tools WZS 19100 surface-hardened ca. 1100 N/mm ² (nitrated)	1 pair folding blades cranked for clamping system WZS 19100 Folding blades segmented, H = 108 mm: No. 1 - L = 2 x (25/30/35/40/45/50) = 450 mm No. 2 - L = 200 mm (number according to working length) Folding blade width: 10/20/30/35 mm
Clamping beam tools WZS 6500 laser hardened, mangan-phosphated ca. 1100 N/mm ²	Goat's foot segment „C“, 30°, (from radius 1.0 mm), Tool depth 225 mm, minimal tool height H = 250 mm clearance 76 mm, clamping range 104 mm No. 1 - L = 2 x (30/35/40/45/50/55/60) = 630 mm No. 2 - L = 80 mm (number according to working length) Height 330 or 400 mm 
Corner parts	- 1 pair fixed corner parts L= 2x 110 mm = 220 mm (suitable for goat's foot set) - Additional pair of hinged corner parts - Clamping beam with drive for active driven corner parts (free space of total clamping beam tooling is reduced by 31 mm) - Additional pair of active driven hinged corner parts (free space of total clamping beam tooling is reduced by 31 mm)

* WZS = Tool system



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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