

## Sun protection in a completely automated bending process

Aluminium specialist relies on folding machine from Schröder for sunshade products



### User

Window manufacturers looking for high-quality aluminium solutions get in contact with the company G.S. Georg Stemeseder GmbH. The family-owned company offers high-quality wood-aluminium and plastic-aluminium window systems, front doors and facade systems – as individual solutions for any architecture. Since 2018, the company has been developing new sun and insect protection products and since the beginning of 2020, the subsidiary TS Altotec GmbH has been in production. In the new plant, about 300 sun protection systems are manufactured daily in two shifts. The focus is on both the project business with individual solutions and classic sun and insect protection. ([www.stemeseder.com](http://www.stemeseder.com))

### Success

In terms of equipment for folding the large boxes for the external venetian blinds, the decision was quickly clear: „The Schröder machine is quite unique in terms of length and height. Precise processing of up to 3 mm thick aluminum sheets on up to 4,000 mm was one requirement. Clearance under the clamping beam was the other – and that in addition to the high tools“, Johannes Maultasch explains the requirements. At the Blechexpo show in 2019 Maultasch and his team saw the EVO Center for the first time.

### Used machine

#### EVO Center

- Folding machine up to 3 mm sheet thickness (400 N/mm<sup>2</sup>)
- 4040 mm working length
- Clamping beam stroke 850 mm
- Automatic bending process with unique Advanced Handling System (AHS)
- Fully automatic tool changer with hydraulic tool clamping
- 3D graphic control POS 3000

For the acceptance test of the EVO Center Johannes Maultasch came to the headquarters of Hans Schröder Maschinenbau GmbH in Wessobrunn, Bavaria. The set up and installation of the machine in Pinkafeld at the beginning of 2020 worked out very well, although the Covid-19-pandemic did present one or two obstacles during the set-up. „You can feel the experience in sheet metal working. Schröder has good technicians and the support was excellent and fast.“ This praise also refers to an improvement on the suction plate, which was immediately implemented by Schröder. When processing particularly large sheets, a slight slippage was evident under certain conditions. A new suction plate with more and smaller suction cups now reliably fixes even the largest sheets.

### Only one more step

Currently, the operator at the machine places the sheet against the gauge fingers of the EVO-CENTER and starts the bending program. The so-called Advanced Handling System (AHS) – the described turntable with suction plates – fixes the sheet

pneumatically and moves it to the bending edge. The clamping beam fixes the sheet for bending. All these processes are monitored and extremely precisely controlled by an optical measurement system. Once all bends on one side have been done, the turntable takes over again and positions the other side of the sheet for bending. After having finished all folding steps, the pneumatic manipulator pushes the finished workpiece onto the automatic destacking device at the back of the machine.

For Maultasch and his team, manual handling at the start of the bending process always carries the risk of scratching sheet metal. Despite subsequent powder coating, the boxes, which can be up to four meters long, are visible surfaces of the final product.

In future, a robot will also automate the mounting and feeding of the sheet metal. The space for the robot between the punching line and the folding center is already provided in the plant. Only this one step is still missing, then the production of the external venetian blind boxes can run through automatically. The sheets already come from the punching line with a barcode label, which is then used to call up the corresponding bending program.

### Ready for quantities

With external venetian blinds and other sun protection systems as an attachment or for integration into the windows, TS Altotec rounds off Stemeseder's portfolio. „Finally, we want to offer our customers complete ‚wall opening‘ solutions“, Maultasch describes the strategy of the innovative medium-sized company. „With our Schröder-EVO Center-production line we are well prepared for single pieces as well as for series production.“ The current 80-strong team at the Pinkafeld site got off to a good start despite Corona. Next year, more than 200 employees will produce high-quality sun protection solutions here.



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.

„The automated processing by the EVO Center has completely convinced me – Schröder, as a manufacturer, really sees the overall process with its customers,“ praises Maultasch. „You can feel the experience in sheet metal processing. Schröder has good technicians and the support was excellent and fast..“

Johannes Maultasch  
Ingenieur at TS Altotec

**SCHRÖDER**  
GROUP

Hans Schröder Maschinenbau GmbH  
Feuchten 2 | 82405 Wessobrunn-Forst  
Germany  
T +49 8809 9220-0  
F +49 8809 9220-700  
E [info@schroedergroup.eu](mailto:info@schroedergroup.eu)  
[www.schroedergroup.eu](http://www.schroedergroup.eu)