

Creasing stainless steel, accurately and without scratches

SPB Evolution UD and MAK 4 Evolution UD swivel folding machines
from Rippert Anlagentechnik



User

Rippert Anlagentechnik GmbH & Co. KG is a family business founded in 1966. The company currently employs nearly 400 people and is headquartered in Herzebrock-Clarholz. The highly specialised equipment manufacturer designs, produces and assembles state-of-the-art systems for surface treatment, automation, dust removal and ventilation. Each of these systems contain large quantities of high-quality stainless steel sheets. (www.rippert.de)

Success

Today, Rippert Anlagentechnik processes approximately 300 tons of steel sheets per month. The cutting unit works fully automated, in some cases around the clock, whereas the folding tasks must be completed using Schröder swivel folding machines in a single-shift operation. Thanks to the up-and-down technology, even sheets of three to four meters in width can easily be moved and fully processed on the machine by a single person.

Machines used

- Swivel folding machine
MAK 4 Evolution UD
 - 4,000 mm working length
 - up to 5 mm sheet thickness
 - up-and-down folding beam
 - 850 mm clamping beam stroke
 - fully automatic tool changer
 - POS 3000 3D graphic control
- Swivel folding machine
SPB Evolution UD
 - 4,000 mm working length
 - up to 3 mm sheet thickness
 - up-and-down folding beam
 - preconfigured material features for automatic angle gauge adjustment
 - automatic crowning device
 - POS 3000 3D graphic control

Sometimes good things happen by chance: At a trade fair, Uwe Berndsen, production manager at Rippert, saw how fast and how accurately swivel folding machines from Schröder could bend large 5 mm thick sheets. This experience was enough to convince him that swivel folding had uses beyond thin sheet applications. Prior to purchasing the swivel folding machines, Rippert had worked the stainless steel sheets that were often several meters in width and up to 4 mm thick on conventional press braking machines. This technology has the distinct disadvantage in that handling large and heavy sheets – i.e., positioning the sheets in the machines and removing and repositioning them after they bent open in the punching machine – required three to four employees to work together in unison at the machines.

This is where Berndsen sees the great advantage of swivel folding. Even large sheets can easily be moved on the workbench by a single employee as well as accurately positioned using the electronically controlled strokes and the crowning device. High-end machines from the Schröder Evolution line feature the up-and-

down technology (UD), meaning the folding beam can bend both up and down. In practice, this greatly reduces the workload of the operator, as for many steps the sheet does not need to be turned of the folding process.

A further advantage of swivel folding compared to press brake folding is that no marks are left on the sheets. The top and bottom beam hold the sheet in place, whilst the folding beam moves around its pivot point. In the process, the sheet basically rolls off the folding beam, with almost no relative motion between the tool and the surface. This avoids scratches and the need for folding foils. This gentle surface treatment is particularly beneficial when working

with stainless steel, because, in many cases, the stainless steel surface also serves as the surface of the finished product.

These particular advantages offered by the process convinced the equipment manufacturer from Ostwestfalen-Lippe of its merits. Rippert Anlagentechnik uses automatic tool changers in its Schröder machines. This reduces set-up times and demonstrates the advantages of swivel folding machines in the flexible production of small batch sizes and individual parts. In addition, it reduces the workload of employees, as changing the large tools that may weigh up to 15 kg is physically taxing. Thanks to the fact that every tool change is saved and managed in the respective folding program, the error sources and costs associated with manual changes are eliminated.

“Quickly and efficiently creasing three to four millimetre thick stainless steel sheets at widths of three to four meters using up-and-down technology – this is where the Schröder machines are unbeatable. Many companies do not even know the many possibilities that this technology offers. Of course, there are not many manufacturers that are able to do this.”

Uwe Berndsen



Schröder Group

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

Founded in 1949, Hans Schröder Maschinenbau GmbH combines traditional and modern aspects in mechanical engineering. Successfully managed as a quality and customer-oriented family company, Hans Schröder Maschinenbau specialises in the development of modern machine concepts for folding and cutting sheet metal.

Thanks to the 2006 integration of the Fasti Company and its workshops and a global presence, the Schröder Group is now a leading provider of machines for folding, cutting, crimping, beading, and circular folding sheets of all kinds. The diversity of the range of precision machines ranges from proven solutions for trade to innovative, high-performance machines for automated industrial production. The Schröder Group now employs more than 240 workers at various domestic and international locations.

SCHRÖDER
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