

SCHRÖDER

Finely edging heavy plates

MAK 4 Evolution UD swivel folding machine at Karl Dieringer



User

The Karl Dieringer company, a Berlin-based family business run by the fourth generation, specialises in high-quality metal façades and roofing. The company which has an unusually large machinery is doing half of its business with metal façades. The other half of the company's business is equally divided between metal roofs, weather protection grids and commissioned sheet metal forming for the metal, ventilation and vehicle construction sectors. (www.karl-dieringer.de)

Success Demanding façade projects require large, dimensionally accurate cassettes. Processing sheets that weigh up to 150 kg on a press brake was a sweat-inducing job that required four to five men. What makes the process so complex is a special fixing mechanism that relies on numerous counter-foldings. Thanks to the MAK 4 Evolution UD, these cassettes can now be manufactured by only one employee in one single pass, with extreme precision and without damaging surfaces.



Machine used

MAK 4 Evolution UD swivel folding machine

- 5,000 mm working length
- up to 5 mm sheet thickness
- up-and-down folding beam
- 850 mm clamping beam stroke
- operation from the front or the rear
- POS 3000 3D graphic control
- radius bending with the clamping beam in any number of steps
- preconfigured material features for automatic angle gauge adjustment
- automatic crowning device
- front stop limit function for folding beam

Special tasks require special tools – the Berlin-based Karl Dieringer family company with its 45 employees has always embraced this credo. Plant manager Christopher Kern assumes that the company has the largest machinery of all façade builders in Germany. But a key component had been missing: a swivel folding machine for thick sheets. A folding centre set up at a trade fair caught the attention of the plant manager, so he approached the exhibitor, Hans Schröder Maschinenbau. It was in particular the offer that the MAK 4 Evolution UD would be custom-built for him to accommodate 5000 mm long sheets that attracted the façade builder. Christopher Kern knows from experience: "Other manufacturers don't go beyond four metres."

Power and precision

The larger 4-mm sheets that Dieringer processes weigh 150 kg. Previously, they had to be shaped with a press brake. Despite the use of a crane, this job got four to five employees sweating. With the

"The quality of our work depends on the outside dimension of the visible area. We must perform these steps with rigorous precision in order to achieve highly narrow and even joints. The repetitive accuracy of the Schröder machine greatly supports this task, and the five-metre work space is also invaluable."

Christopher Kern

MAK 4 Evolution UD, a single worker can handle the same task. Once the sheet has been placed onto the roller table with motorized back gauge by means of a crane, all folding operations are carried out by one employee. This is possible thanks to the 'up and down' function referred to by the 'UD' in the machine designation. What this means is that the folding beam not only performs its low-impact forming work in the known manner by swivelling up, but it also moves around the workpiece to bend it from top to bottom for counter-folding. "The facade parts are particularly tricky as the edge requires several folds for our special fixing mechanism. We are now able

to carry out this task without any effort and much more quickly than before", Kern says.

Hardware and software

The façade builder has already formed numerous workpieces with the MAK 4 Evolution UD, and so far the company has not even come close to reaching the limit of the machine's capabilities. Apart from the machine's extremely sturdy and torsionfree design, the POS 3000 graphic control is also particularly appreciated at Karl Dieringer. The controller, which was developed in-house by Schröder, allows, among other things, the folding of curves by placing the clamping beam against the bottom beam and the folding beam and performing any number of fine radius bending operations.



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 bending 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.



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