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Flexible bending of office furniture components



Small quantities and flexibility become daily challenges.

The majorities of orders for table frames are produced in small quantities today and go hand in hand with the lean production processes and the sophisticated lean organization at Veyhl. The focus here is on flexibility, fast processes, short downtimes and short-term responses to individual customer requests. This change has also brought up a rethink in the machine park.

On the one hand, Veyhl GmbH develops and produces individual table systems and add-on parts for office furniture manufacturers, on the other hand, customers from the agricultural, automotive, medical or photovoltaic sector also count among the customer base. This diversity, coupled with decreasing quantities, demands flexibility in production. The project group at Veyhl had clear ideas about what the up-down folding machine RAS XLTbend had to do.

Veyhl GmbH, located in the idyllic Black Forest, is an expert in table systems in the office furniture sector. More than 500 employees are committed to designing and producing creative solutions for individual table systems as a system supplier. This market is in constant change. In the past, shelves and base cabinets for files and hanging files were in great demand. Due to digitization, the focus today is on electrification and the additional comfort of the tables.



This is accompanied by components for height adjustment, cable trays and monitor back panels. Standard products are replaced by customized solutions. Large production lots become rare.



The UpDown folding machine replaced an older bending center. The panel bender was no longer fully utilized, and the XLTbend also offers more diverse bending options for narrow cable trays and shelves.



The possibility of generating the bending programs directly from the STEP and dxf files has been a very positive machine feature - not only among those people responsible for production, but also among the part designers. In addition programs for quickly required components can also be generated directly at the workshop using the automatic part programming software. The machine operator loads all other programs from the production server into the job list of the ma-

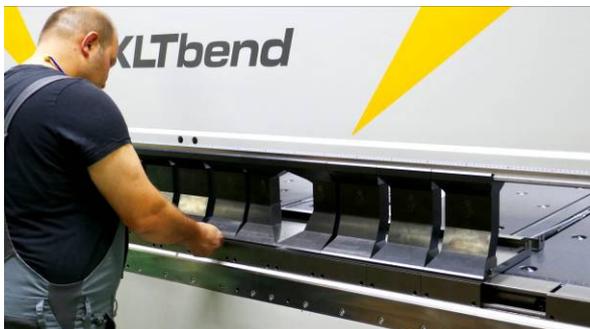
chine and can then process the orders to the exact needed quantity.



With the selected machine configuration, Veyhl can produce all the parts required in their production. With short-side bends on narrow parts, an extended T-stop with a stop depth of 3050 mm would sometimes be helpful. As the folding beam can be used as a front stop, parts longer than the maximum stop dimension of the existing rectangular gauging system can also be bent. Paired with a side pop-up squaring arm that lifts up automatically from the table surface, the metal components can also be very narrow.



The suction cups in front of the stop units hold the blank to the stop fingers. This means that positive and negative subsequent bends can run automatically one after the other, which is very close to the process at a bending center.



Veyhl uses both common sheet metal bending processes: folding and press brake bending. For the large-area components, the production specialists clearly see the advantages in the folding technology.

Some components require multiple tool stations for completion is a single sequence. The XLTbend can also be tooled up with two or three tool stations along the bending length of the machine. This means that the operator picks up the sheet once and places the finished part on the transport pallet. With the presses, the same workpiece would require 2 setup processes and would have to be placed down several times in between. Automatically clamped tools and the automatically programmed set-up instructions reduce setup times for a complex job to two to three minutes.



At the folding machine, a single operator can even bend large cable trays without the help of another person, since the components always rests on the gauging system and can be rotated on the table. Coupled with the complete bending sequences, the cycle times are significantly lower than on a press brake. With narrow parts, it is more practical to work from the front. Large, flat office furniture components are easier to handle from the gauging system side. The XLTbend offers both options and thus maximum flexibility.

Long and large parts are ideal for the UpDown folding system, as a single worker can load, position, turn, bend and unload the parts with almost no strain. The presses easily require two operators, which results in higher costs per part. Bending precision and repeatability allow interesting product solutions. The table frames and attachments do not need to be welded. They can be sent to the customer in a package kit, which saves a lot of shipping volume.

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