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When quantity 1 becomes the rule



nical capabilities in fabrication von Arb creates very functional solutions. They are superior to welded tubular structures previously used and also more economical.

At the production start, the CAD software automatically generates a DXF file for the laser from any component and a Step-file for the RAS

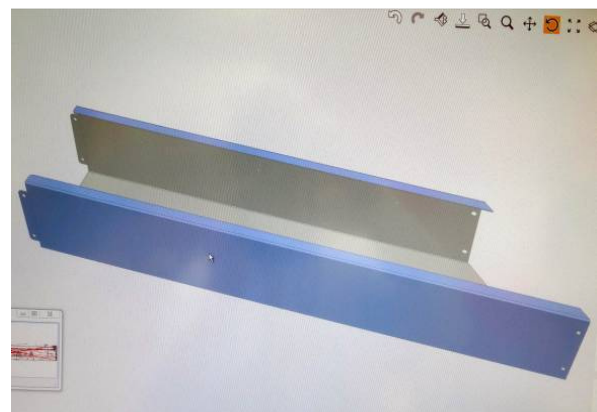
Roman von Arb has seen the RAS UpDownCenter for the first time at the Prodex show in Switzerland. From that moment it was clear to him that he has to have a machine like that. But what got the metal specialists Neuendorf (Switzerland) so excited?

The von Arb AG SAS produces sound proof enclosures, which eliminate noise emissions in production processes. In addition, the company has established itself as a highly flexible job shop. Even special orders can usually be provided with same day delivery.

UpDownCenter. Once the lasered blank gets to the folding center, the machine operator calls the part number and imports the Step file in the software interface of the machine. Part designer Markus Augstburger emphasizes: "With this approach, we produce always based on the latest version number of a part and make sure that the laser contours of the required blank corresponds to the developed blank calculation for the panel bender."



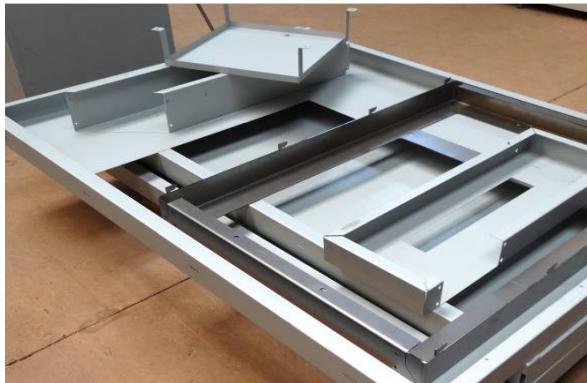
For the job shop parts the von Arb's design department typically receives dxf or dwg files of the individual components items from the customers. For the enclosures however, they usually start from Step files that show an entire cabin as an assembly. Von Arb develops the individual sheet metal parts in 3D CAD system. With their tech-



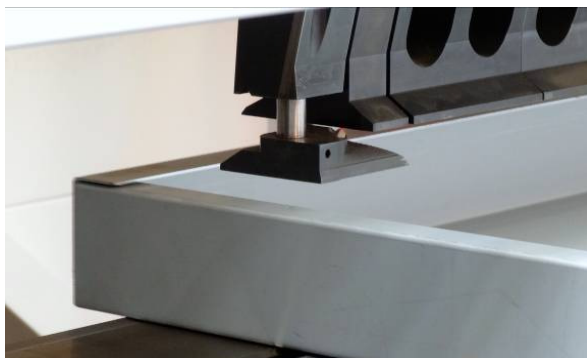
After the 3D model of the part appears on the RAS machine monitor, it only requires a single mouse click and the part is programmed. The program takes into account any movement of the machine. Thus, the automatically created program includes the loading position of the blank, the tool setup or retraction movement so that the folded part can be unloaded.



This automatic programming got Roman von Arb enthusiastic from the first moment. "If you want to produce single customized parts, you have to consider machines that can handle Step files and automatically program the component," says von Arb. This is exactly what he found on the UpDownCenter and what fascinated him completely. He had finally found what every sheet metal worker is dreaming of.



The sound proof enclosures are all individual and built to custom order. The length, width and height change with each cabinet. Sometimes an extraction is needed, sometimes a service door or a window for process control. Markus Augstburger confirmed: "Mostly, each of the about 400 parts of a cabinet is unique."



From opening the Step file at the machine via the fully automatic part programming sequence to the

start of the bending program, it only takes 20 seconds. Technically, this work could also be done in the office and a job list could be sent to the machine. Because, all the required STEP files for UpDownCenter are generated fully automatically at the von Arb SAS AG and made available on the network for the machine, the programming of the components is carried out directly on the machine, which also makes perfect sense with just 20 seconds programming time.



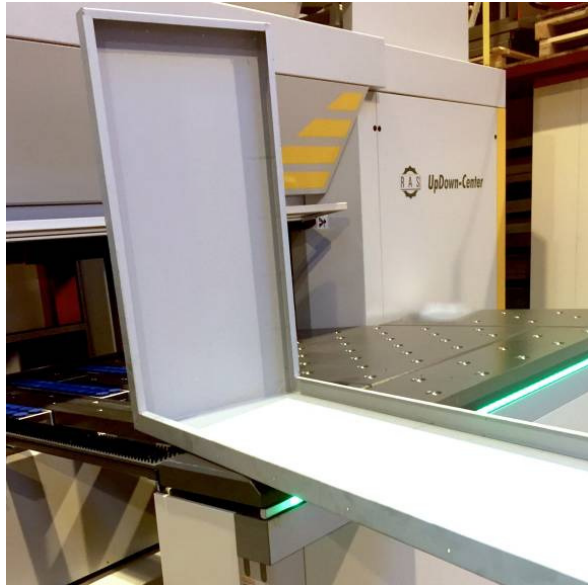
After starting the program, the tool changer sets the upper beam tools automatically in position. Machine operator Fabian Arn says: "The setup of the UpDownCenter is completed in 30-40 seconds. This time I use to load the blank on the machine, align it at the stops and already start preparing the upcoming part."



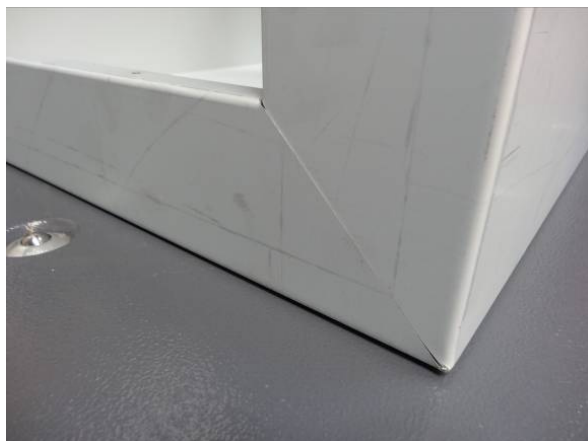
Once the blank is in aligned the suction cups of the positioning system take it over and automatically position it to the bend line for each bend.

The UpDown folding beam can bend both up and down. Therefore, rotation of the workpiece is entirely superfluous. With the UpDownCenter the sheet always remains on the table. "Something like this is the dream for every operator. Previously I often had back pain, but those days are

long since gone," says Fabian Arn. Even bending parts of 3000 x 1500 mm from 2 mm stainless steel, weighing over 70 kg, can be processed by one person on the UpDownCenter.

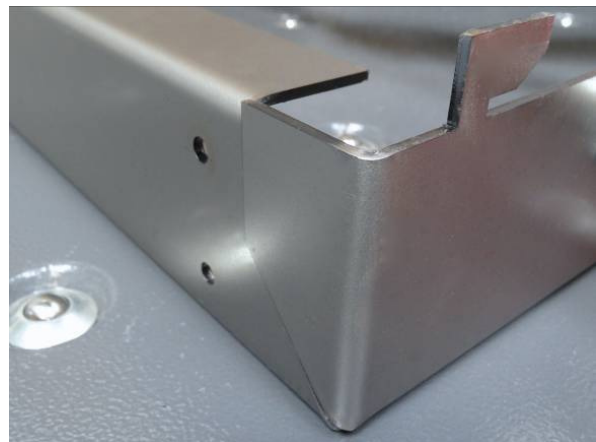


Whether one or two people working on a machine that is a decisive cost factor! For small businesses, such as, von Arb AG SAS with only six specialized employees in the entire production area, it makes matters worse that for assisting operations often the necessary manpower is simply not available.



A crucial point is also the expectation regarding part accuracy and production repeatability on the UpDownCenter. Roman von Arb confirms: "The dimensional perfection and repeatability of UpDownCenters are extremely impressive." With the incorporated material tables the Swiss company achieves the required precision so that the components can be just slotted together in the assembly and riveted to the designated locations or wedged. Production methods such as enlarg-

ing holes by drilling, welding and grinding have largely disappeared at the von Arb SAS AG.



The company also produced small and medium size parts with less weight and only a few bends, which come in batches of 20 and more. If the programming time and setup time can be divided by many parts, a press brake might be more efficient. However, for small quantities the setup time quite often consumes 70% to 80% of the entire production time. Therefore, Roman von Arb says: "For small production batches, alternating bending directions, large formats and heavy parts the UpDownCenter is unbeatable."



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