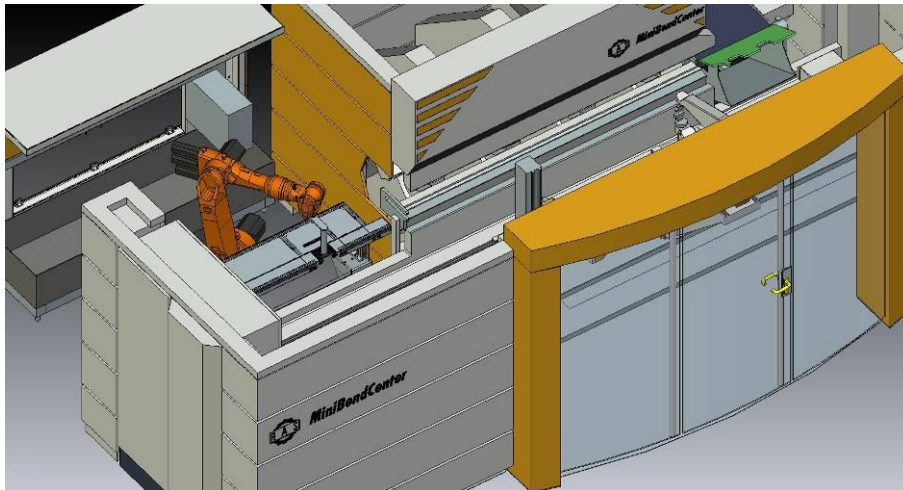




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RAS MiniBendCenter with intelligent robot loading



RAS presents the MiniBendCenter with an intelligent load robot. The MiniBendCenter is a unique automatic folding system for small and complex metal parts.

On the RAS MiniBendCenter the tools of the upper and lower beam clamp the workpiece. An arcing movement of the upper or lower folding beam bends the metal part precisely to the programmed angle. What makes the RAS MiniBendCenter unique is the smallness of the components that start from blank sizes of 40 x 50 mm (1.5" x 1.96") and range up to 600 x 600 mm (23.6" x 23.6"). The system is designed for a maximum of 3 mm (11-gauge) mild steel applications.

The MiniBendCenter is a flexible and fully automated folding system. Automated means that blanks will be loaded, squared measured, and folded automatically. It also means that the machine will set up the tools automatically.

A manipulator automatically moves and rotates the parts from folding station to folding station (one set up could have multiple stations). The machine checks the exact position of the blank in the manipulator when starting of the folding sequence. As the machine will not release the blank before the part is finished the MiniBendCenter is able to fold the part without using any gauges or mechanical stops. This leads to a fast folding sequences, high throughputs, short cycle times and low costs per part. The pro-

duction cell automatically folds the workpiece up and down and the part run out unloads the finished parts automatically.

An intelligent robot load system completes the MiniBendCenter. This load component is seamlessly integrated in the structure of the MiniBendCenter. If blanks are produced on a laser, an operator must manually remove the parts from the resi-

dual grids and thus they can sort them to a stack. But so many customers have asked, what about if these blanks are created on a turret punch or a stamping press? There, they typically fall into a bulk box. This is exactly, were the intelligent loading robot come into the picture.

Using a camera and a scanner this system detects the location of the blanks in the bulk box. The software calculates which blanks are the top layers and which blanks are in position for the robot to be picked up. Fed with this information, the robot reaches into the box, picks out the top blank and feeds it to the MiniBendCenter. No programming. No teaching. More flexibility is just not possible!

On medium and small batch sizes it becomes essential to use a powerful programming system. To be able to reach this target RAS has developed its own CAM system, based on a 3D platform. The programming system visualizes the folding sequence step by step. After the folding program has been created on the PC, the MiniBendCenter has all the information, in order to generate the machine sequence. With the efficiency of this software system the most complex parts can be programmed in very short time.