



RAS Reinhardt Maschinenbau GmbH
Richard-Wagner-Str. 4-10
71065 Sindelfingen · Germany
Tel. +49-7031-863-0 · Fax +49-7031-863-185
www.RAS-online.de · Info@RAS-online.de

XXL-Center: Revolution in Long Bending



cause of the unique rotation of the machine's tools it is possible to bend precoated sheets without scratching the material surface! Where it took hours to complete an order before, the job can be done in minutes! Programming is so simple that even less experienced operators can produce perfect parts in no time. The XXL-Center automates the entire bend sequence,

Does this sound familiar to you? Your bread and butter is in long parts, but to bend them requires two, maybe three operators. The floor space in your factory is shrinking fast and the time, effort, and cost required to handle material has become increasingly expensive.

Bending your long parts has never been easier than with the RAS XXL-Center. One operator simply loads the workpiece onto a sheet support system in front of the machine, and then unloads the complete folded, finished part.



That's it. The machine automatically inserts, squares, positions to the bend line, and bends the flanges up or down. No more rotation. No more complicated handling. No more second or third operator. You've got automatically produced precision parts, in record time! And, be-

and eliminates operator involvement.

If you want to produce long parts with breathtaking speed, unheard of precision and repeatability, and if you want to eliminate most of the handling costs that eat into your profit, then RAS has a revolutionary solution for you.

The loading supports are an integral part of the XXL-Center's sophisticated ergonomics. They come out from the work surface and move forward from the machine. The operator then easily loads material onto these supports. (Optional automatic loading systems are also available, e.g. a pneumatic loading frame can put the blanks onto the loading supports. As soon as the operator presses a foot pedal, the loading supports automatically move the material into the machine and locate it against the squaring fingers.)



The squaring fingers automatically pop-up from the work surface 200mm/7.87" behind the bend line. Their funnel shape and 60mm/2.36" height insure that even wavy blanks are easily squared. As the workpiece is squared, the feeding grippers are activated.

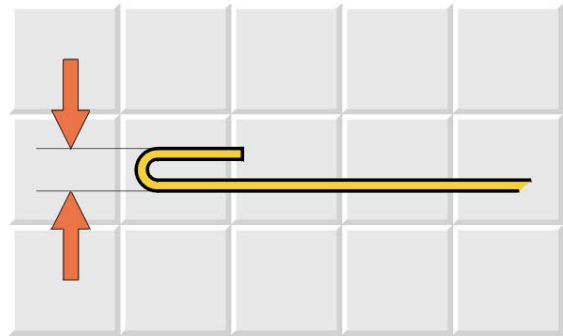


The feeding grippers hold the part during the entire bend cycle and position it automatically for each bend. For most parts the operator unloads only the finished workpiece. Only on parts with hems on both sides does the operator flip the workpiece once during the bend cycle. Even then, rotating the part is not required.

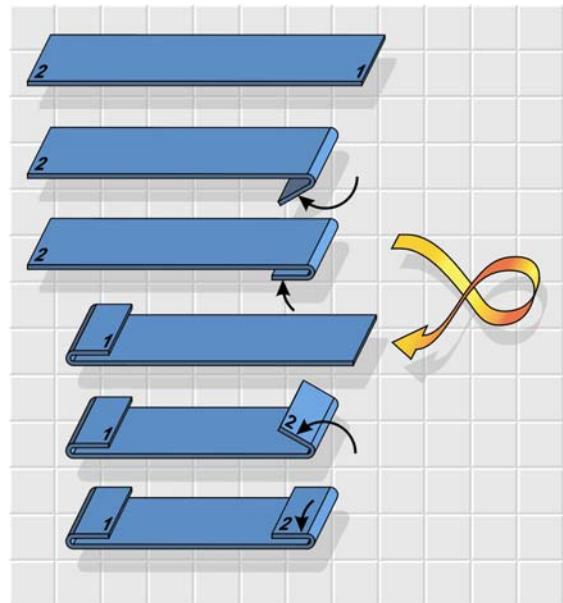


Hems should be closed to a programmable dimension. The operation of the machine should be as simple as possible, so that even less experienced operators can use the machine. The feeding grippers can clamp on straight material, but can also clamp above a pre-bent hem or a closed hem. Each gripper unit sits on a separate guiding system with high precision linear guides. This guarantees precision and accurate flange dimensions and a high speed, dynamic drive characteristic.

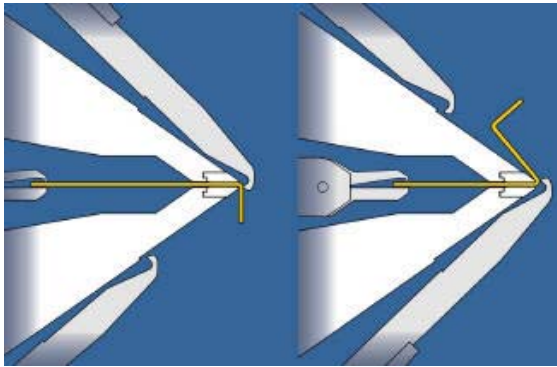
The work surface is covered with sheet supports that hold the workpiece up during the entire bend sequence.



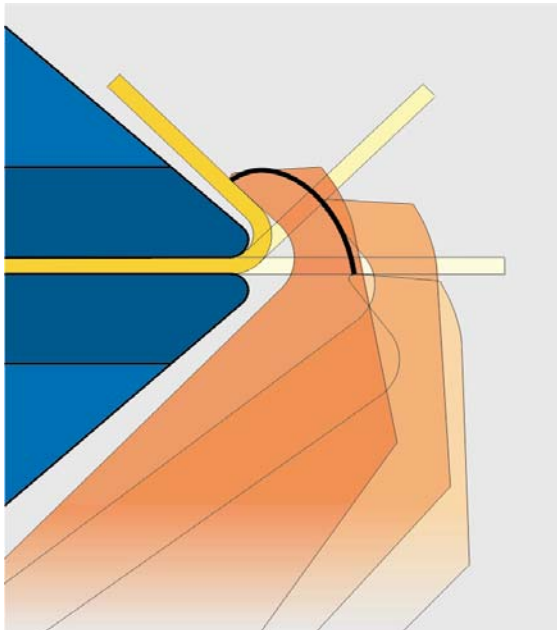
A masterpiece of engineering brilliance, the folding beams were designed to rotate during bending by only a few millimeters, and to roll away with the workpiece in a 3D motion. This motion insures that material surfaces will not be scratched. Depending on whether a part needs to be bent up or down, the active folding beam moves forward to the material, while the counter folding beam retracts in the upper or lower clamping beam. The free space created by this functionality provides part design capabilities never before seen on a metal folder.



The CAD designed and finite-element optimized folding beams offer a strength of more than 1000 N/mm², and are dimensioned to resist highest loads. The folding beams are supported every 270mm/10.63", two to three times more than on common designs. This design assures perfectly straight bends every time. You can always expect more from RAS!



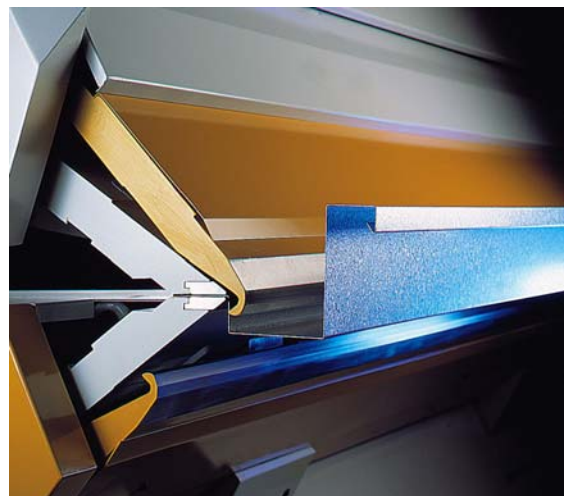
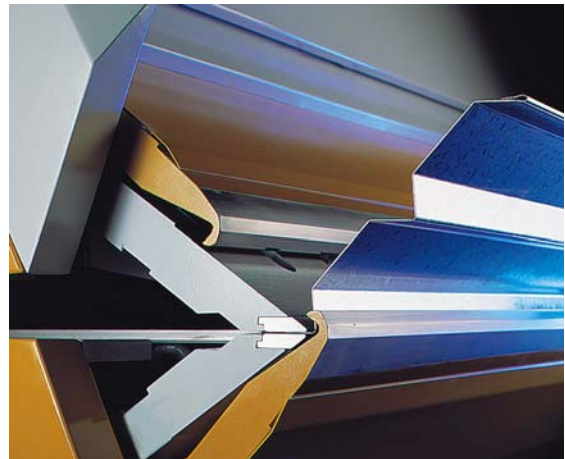
Tools with an extremely high tensile strength and with a 1.5mm/0.059" radius are built into the upper and lower clamping beam. If they show wear after intensive use, they can easily be replaced. The XXL-Center bends all materials and all material thicknesses with this inside radius plus the material springback. The free ends (both right and left) of the machine extend past the power unit only by 15mm/8.465". This also shows the effort RAS has put into the machine design to offer a super-rigid system.



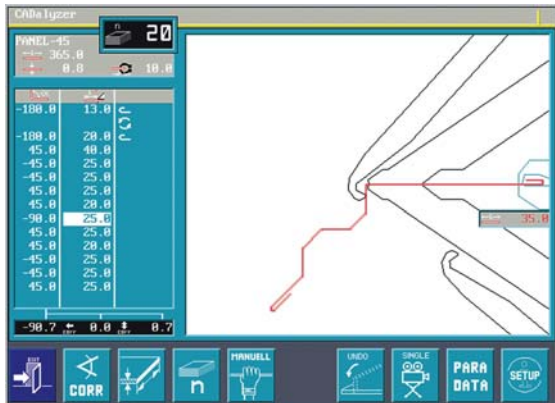
This XXL-Center uses no hydraulics. Instead, regulated and brushless AC-motors bring power and speed to the entire system. Forget about oil leaks, one side clamping, hems that are not consistent along their length or even over stressed machine components. All motors are placed at the center of the machine. This assures optimum flow of forces to the very end of the machine bed. The drive concept is responsible for the exact parallel motion of all beams, guaranteeing extremely straight bends and programmable hemming dimensions, where the hems are closed to the same height along the complete length of the part.

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The CNC is the brain of the XXL-Center and drives all actions with unheard of speed and accuracy. Programming with the RAS CADalyzer software is so simple that all you need is to enter angles and flange dimensions for each bend. Step by step the CNC shows the part creation on the screen. After that, you simply press the start button and off you go.



The CADalyzer software offers maximum ease of use:



Graphical input of the angles for up or down bends and the flange dimension. You can let the system calculate the developed length or start with the part width. In addition, data from other CAD systems can be imported as an ASCII or Excel file. Visual simulation of the bending sequence for visual collision checks.

That's all! So simple. So easy to use. So quick.

