

XXL-Center



- Cutting
- Bending
- Forming



XXL-Center

RAS XXL-Center: A revolution in folding long parts

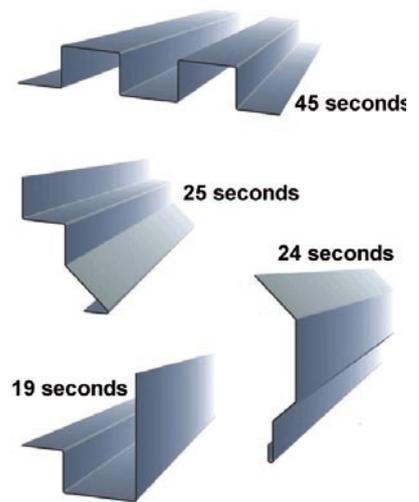
Does this sound familiar? Your bread and butter is in long parts, but bending them requires two, maybe three operators. The floor space in your factory is shrinking. On the other hand the effort and cost to handle sometimes complicated profiles has become increasingly expensive.



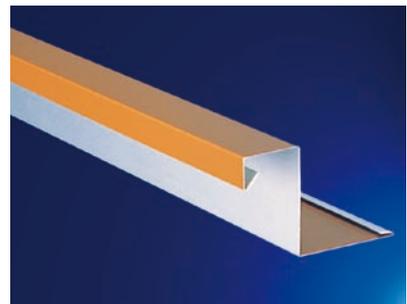
The solution: An automated folding center for long parts.

One operator simply loads the workpiece and then unloads the folded part. That's it. The machine automatically inserts, squares, positions to the bend line, and folds the flanges up or down. No more rotation. No more complicated handling. No more second or third operator. The XXL-Center automatically produces precision long parts in record time!

Because of the unique motion of the machine's tools, it is possible to bend pre-coated sheets without scratching the material surface! Hems will be closed to a programmable dimension and this dimension will be the same all along the part. Where in the past it has taken hours to complete a job, the same task can now be done in minutes!



Production times incl. loading



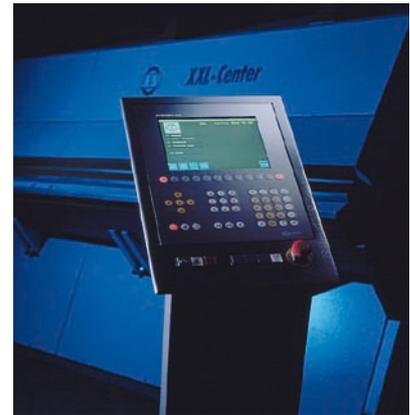
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CNC Control

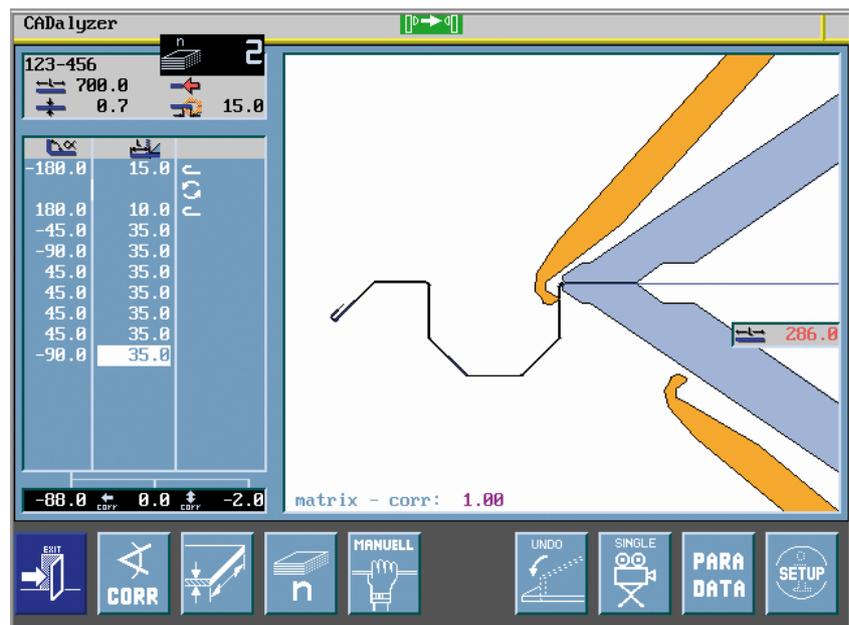
The CNC is the center of intelligence on the XXL-Center. Programming with the superior RAS CADalyzer software is so simple all that is needed are angle and flange dimensions. The CADalyzer software offers an on-screen simulation of the entire bending sequence or a single bend for visual collision checks. If what you see on the screen is what you want, simply press the “Start” button and the folding process is started.

The CADalyzer also allows:

- Programmable open or closed hemming dimensions
- Thickness based springback compensation
- Material based springback compensation for the entire program or a single line
- Composition of an order sequence in a job list
- Number of parts being produced of the selected profile
- Blank width and the remaining flange dimension indication
- Manual folding operations e.g. to close a hem in the middle of the part



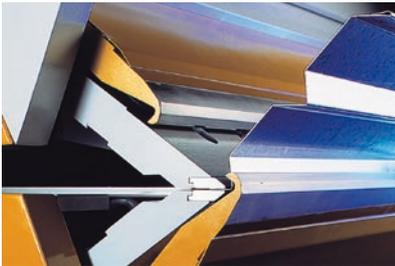
Programming at the machine or in the office is so simple that even less experienced operators can produce perfect parts after minimal instruction.



The CADalyzer-Graphic simulates the folding sequence.

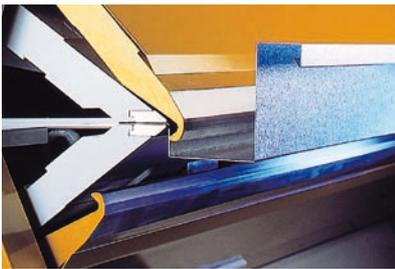
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The XXL-Center: Complete in detail!



Upper and lower clamping beam

Tools with an extremely high tensile strength and with a 1.5 mm/0.06" 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 right and left end of the machine just slightly extend past the power units. This minimum length demonstrates RAS' efforts to build a superior rigid system.



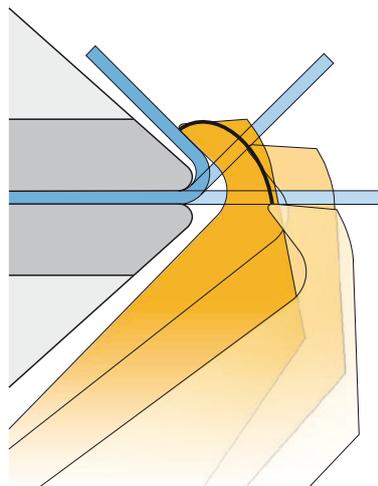
The folding beams bend the workpiece up and down

Power units

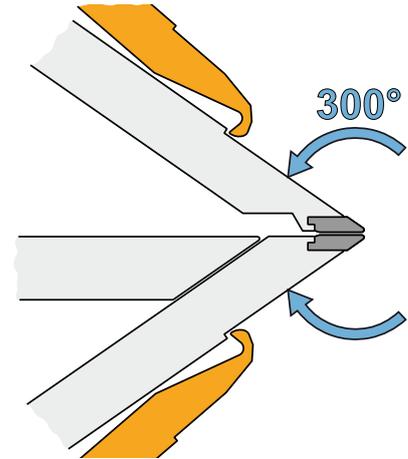
The XXL-Center rigidity is based on the extremely large power units. On conventional long folders the upper and lower beams are just bolted to the frames. The RAS XXL-Center does this connection with a special companion joint in two locations for the upper beam and in two for the lower beam on each of the extremely wide and heavy power units. The numerous connections provide excellent power transmission, which results in perfect bends. And as the special joints add extra stiffness to the very front nose of the tools, the quality and precision of the parts produced is unbelievable!

Upper and lower folding beam

The folding beams are designed to rotate during folding by only a few millimeters. They fold the material



The folding beam rolls away with the workpiece in a 3D motion. This motion insures that material surfaces will not be scratched.



up and down and for most parts complete the workpiece without any operator involvement. For parts with hems on both sides, the operator just flips the part once on the support tables. A rotation of the part is not required.

The folding beam that is not in action retracts to its home position. The patented 300 degree open space in front of the beams offers almost unlimited part design flexibility.

The folding beams are designed with strength of more than 1000 N/mm² (145,000 psi), and are dimensioned to resist the highest loads. The folding beams are supported two to three times more than on other designs. This design assures perfectly straight bends every time. You can always expect more from RAS!

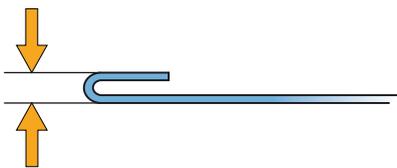
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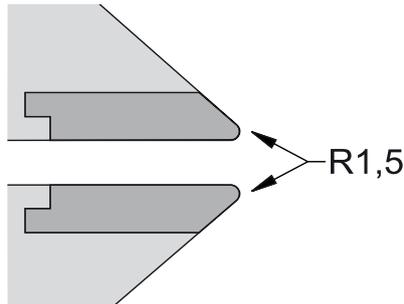
With 300 degrees free space most complex parts can be created.

Drive system

This XXL-Center uses no hydraulics. Instead, regulated AC-motors bring power and speed to the entire system. Forget about oil leaks, uneven clamping, inconsistent hems or even overstressed 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 consistent programmable hems.



Hems can be closed to a programmable dimension.



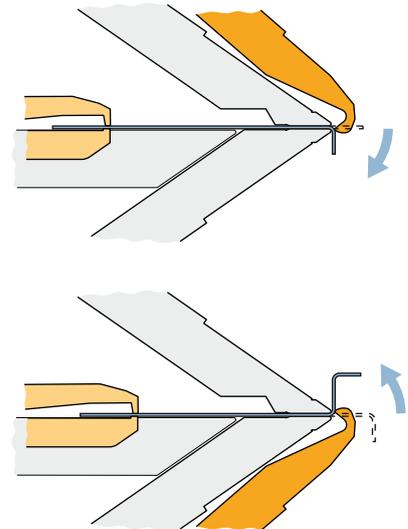
High tensile strength tools with 1.5 mm/0.06" radius.

Loading tables

Adding to the uniqueness of the XXL-Center is a very special feature: The stainless steel loading tables. At the beginning of the folding cycle they emerge from the working area and come out the front of the machine. To save time, the tables come out of the machine to the dimension required for the actual part width. The operator then easily loads material onto these supports. As soon as the operator presses a foot pedal, the loading tables move the material into the machine.



Stainless steel tables for easy material loading



Folding down
Folding up

Stop fingers

As the loading tables move back into the machine, stop fingers automatically pop-up from the work surface and square the blank. When the workpiece is squared, grippers are activated and take over the workpiece.



Stop fingers automatically square the blank.

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Grippers

The 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. The grippers can come within 10 mm (0.395") of the bend line. They are also designed to clamp above pre-bend or closed hem.

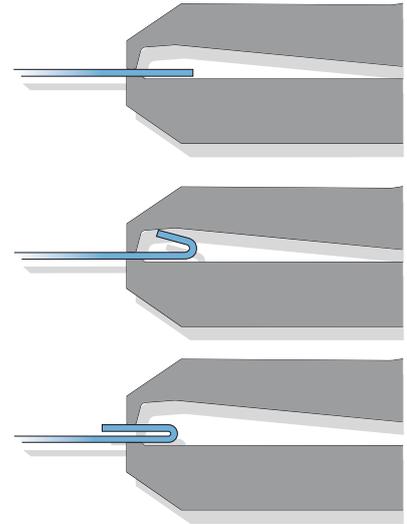
Optional special grippers are located between the standard gripper pairs. They can grip over a 25 mm (1") flange and can come within 130 mm (5.12") of the bend line.



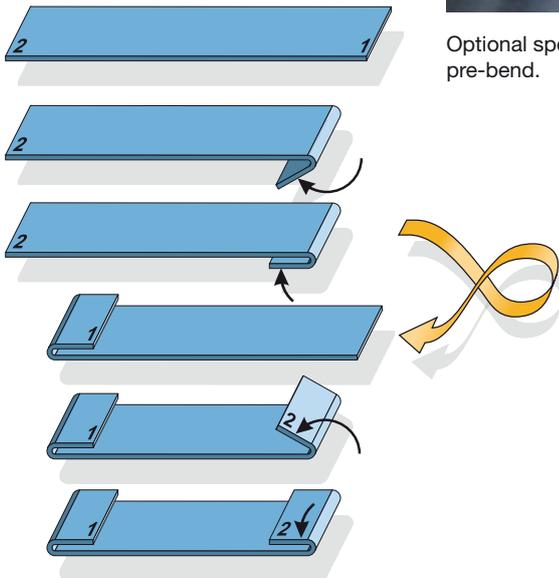
Grippers clamp the squared blank and position the parts during the entire folding cycle.



Optional special grippers clamp above pre-bend.



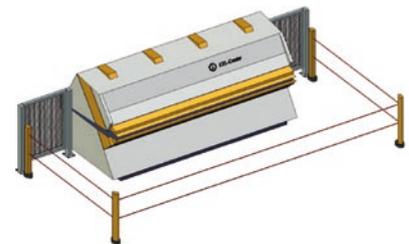
The grippers may clamp the part in different situations.



Parts with hems on both sides require a flip once within the folding cycle.

Safety system

Well designed machine covers insure safe operation during the automatic folding cycle based on latest safety guidelines. Additional fences and light barriers complement the safety of the XXL-Center.



Safety first!

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Programming: a milestone is ahead!

Do you produce roofing and architectural sheet metal components not only for your own installation team, but also for third parties? Have you seen illegible, unclear or incomplete sketches? How long does it take until the customer has an offer in hand? What are the costs of preparing proposals?

The Bendex3D.shop software revolutionizes this entire process. Using this upgrade, the profile manufacturer can provide access through his internet service for his customers. The customer can create their requested designed profiles via

the Internet 24 hours a day, 7 days a week and are not limited to the profile catalog offered by the manufacturer. The software instantly proofs the profile. Missing dimensions and incomplete information as well as incorrect dimensions are a thing of the past. If the profile cannot be produced on the XXL-Center – even with the large free space – the software shows the customer what needs to be changed.

After choosing the linear dimensions and selecting the material, the customer places the profile in the shopping cart. By pressing

a single key, the program calculates the cost and automatically provides the customer an offer, without the involvement of the manufacturer. If the offer is acceptable, the customer can instantly order the parts. There is not a faster or simpler way for a customer to order part profiles. After the customer makes use of this simplicity and speed once, he will no longer accept traditional faxes and waiting for proposals for one or two days.

The manufacturer receives the order online and he saves the total estimating department costs. In addition, the market will recognize a leading and innovative company who's corporate image will get a tremendous boost. The manufacturer will not only receive a clean profile drawing from the customer, he will also receive a created program for the RAS XXL-Center - all automatically!



The Bendex3D.shop software automates workflows.



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Folding Center

Technical Data	RAS 75.08		RAS 75.06		RAS 75.04	
Material thickness max. (mild steel)	1.5 mm	16 Ga	1.5 mm	16 Ga	1.5 mm	16 Ga
Material thickness max. (stainless steel)	1.0 mm	20 Ga	1.0 mm	20 Ga	1.0 mm	20 Ga
Material thickness max. (aluminum)	2.0 mm	14 Ga	2.0 mm	14 Ga	2.0 mm	14 Ga
Working length max.	8480 mm	27.82"	6400 mm	21.00"	4240 mm	13.91"
Backstop depth min.	10 mm	0.39"	10 mm	0.39"	10 mm	0.39"
Backstop depth max.	750 mm	29.5"	750 mm	29.5"	750 mm	29.5"
Backstop accuracy	+/- 0.1 mm	+/- 0.004"	+/- 0.1 mm	+/- 0.004"	+/- 0.1 mm	+/- 0.004"
Distance between two feeding gripper units min.	180 mm	7.08"	180 mm	7.08"	180 mm	7.08"
Number of extra wide power units	8	8	6	6	4	4
Male-female joints of the beams to the power units	32	32	24	24	16	16
Number of stop fingers and grippers	12	12	8	8	6	6
Free space in front of the beams up to	300 Grad	300 deg	300 Grad	300 deg	300 Grad	300 deg
Working height	950 mm	37.4"	950 mm	37.4"	950 mm	37.4"
Machine depth	1500 mm	59.0"	1500 mm	59.0"	1500 mm	59.0"
Machine length without electrical cabinet	8630 mm	339"	6540 mm	257"	4380 mm	172"
Machine height	1800 mm	71"	1800 mm	71"	1800 mm	71"
Weight approximately	2x8500 kg	2x18700 lbs	12500 kg	27500 lbs	8500 kg	18700 lbs
Air pressure	5.5 bar	80 psi	5.5 bar	80 psi	5.5 bar	80 psi
Drive power total	12.0 kW	16 hp	6.0 kW	8 hp	6.0 kW	8 hp
Speeds						
Upper and lower folding beam	126 °/s	126 deg/sec	126 °/s	126 deg/sec	126 °/s	126 deg/sec
Upper clamping beam	60 mm/s	2.36"/sec	60 mm/s	2.36"/sec	60 mm/s	2.36"/sec
Backstop	350 mm/s	13.78"/sec	350 mm/s	13.78"/sec	350 mm/s	13.78"/sec

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