

## XXL-Center



- Cutting
- Bending
- Forming



## XXL-Center

### RAS XXL-Center: Second generation!

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.

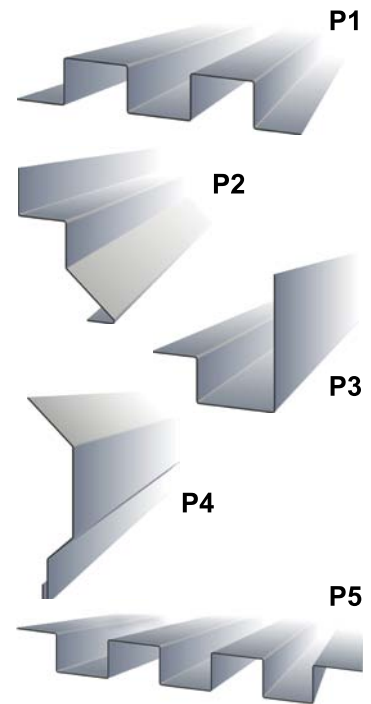
**RAS introduces the next generation of automated folding centers for long parts.**

One operator simply draws the profile on the MultiTouch monitor. The software automatically programs the part and suggests several folding strategies. The operator selects a folding sequence and the control simulates the entire program run in either a 2D or 3D view. After having started the program, the operator loads the blank comfortably on the loading tables, which have come out of the machine and starts the program cycle with the footswitch.

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!



Folding time	RAS 75.04-2 RAS 75.06-2	RAS 75.08-2
Profile 1 (P1)	45 s	49 s
Profile 2 (P2)	26 s	30 s
Profile 3 (P3)	29 s	33 s
Profile 4 (P4)	20 s	22 s
Profile 5 (P5)	66 s	72 s

Folding times of the XXL-Centers



## XXL-Center



The PC control simulates the folding sequence in 3D

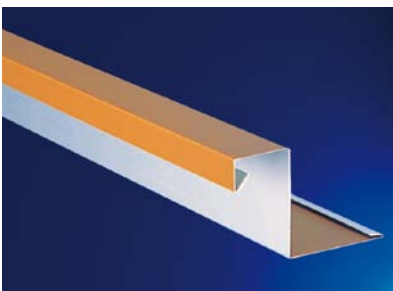
### PC control

The MultiTouch PC control is the heart of the machine. The program is so simple and so intuitive that training is almost obsolete. The operator draws the part with the finger on the screen and the PC control automatically calculates several strategies bending. The operator can view

the folding sequence in 2D or 3D view. The simulation also shows any collisions. If everything is in order, the operator pushes the start button and production begins. In addition to creating programs on the machine an offline version called Office XXL software is available for an office PC.

### PC control features

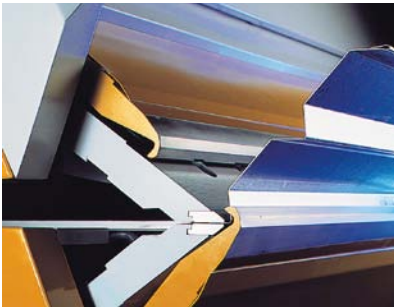
- PC based (Windows, LAN, WLAN, Bluetooth, etc.)
- 20" MultiTouch monitor
- Drawing the profile on the MultiTouch screen in 2D and 3D
- Programmable open or closed hemming dimensions
- Variable radii without a tool change (step bending)
- Material thickness input
- Automatic blank dimension calculation (inside dimensions)
- Automatic programming
- Automatic evaluation of different folding strategies
- Simulation of the folding sequences in 2D and 3D
- Angle corrections for single angle and overall program
- Job list for production sequencing
- Quantity input
- Online Support via TeamViewer
- Profile storage in a profile archive



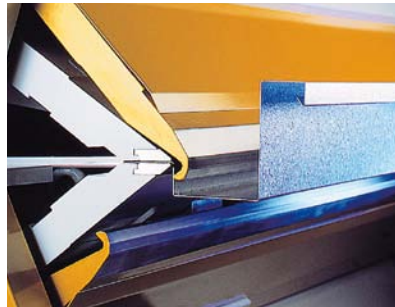


## XXL-Center

### The XXL-Center: Fast, flexible, accurate!

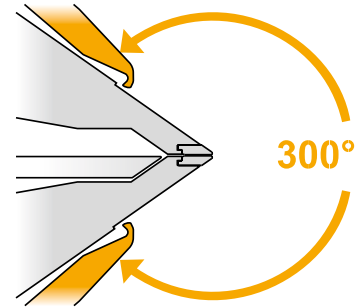


The two folding beams bend the workpiece up and down.



#### 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.



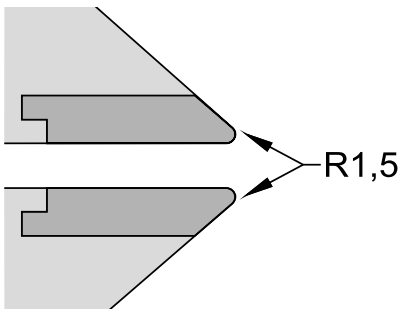
300 degrees free space for most complex parts

#### Upper and lower folding beam

The folding beams are designed to rotate during folding by only a few millimeters. They fold the material up and down and for most parts complete the workpiece without any operator involvement. For parts with hems on both sides or hems in the middle of the part, the operator in a manual sequence just flips the part or closes the hem. A rotation of the part is not required.

#### Power units

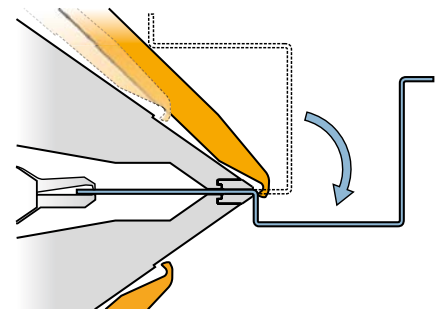
The XXL-Center is rigidly based on the extremely large power units. On conventional long folders the upper and lower beams are just bolted to the frames. The RAS XXL-Center does this connection with a special companion joint in two locations for the upper beam and in two for the lower beam on each of 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!



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

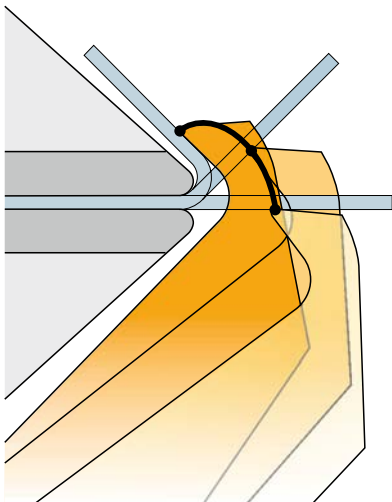


The form fitting folding beams create large free spaces and allow the beams to dive into pre-bent profiles.



## XXL-Center

The patented 300 degree free space in front of the beams offers almost unlimited part design flexibility. The beam arrangement does not only allow that profiles extend far toward the machine. This free space is even more beneficial when a folding beam reaches the next bend line by diving into a pre-bent profile.



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

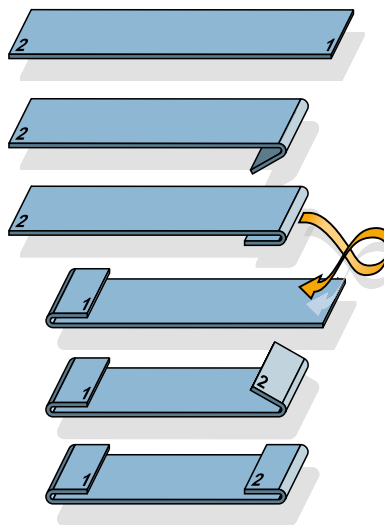
The folding beams are designed with strength of more than 1000 N/mm<sup>2</sup> (145,000 psi), and are dimensioned to resist the highest loads. The folding beams are supported two to three times more than on other designs. This design assures perfectly straight bends every time.

**You can always expect more from RAS!**

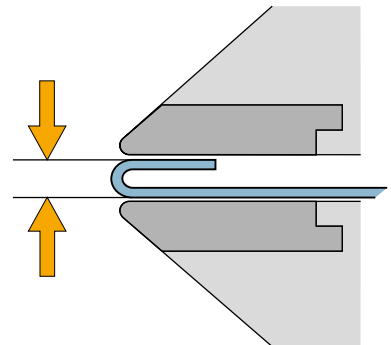
### Mechanical drive system

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 over stressed machine components.

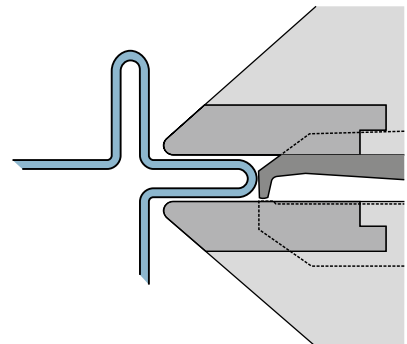
On the eight meter machines high-resolution absolute encoders synchronize the left and right hand machine components electronically. The drive concept is responsible for the exact parallel motion of all beams. XXL technology guaranteeing extremely straight bends and consistent programmable hems!



Folding parts with hems on both sides require a single manual flip operation.



Hems can be closed to a programmable dimension.



Closing hems inside the part

## XXL-Center

### 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.

### Stop fingers

As the loading tables move back into the machine, stop fingers



Pneumatically operated pop-up stop fingers automatically square the blank.

automatically pop-up from the work surface and square the blank. When the workpiece is squared, grippers are activated and take over the workpiece.

### Grippers

The grippers hold the part during the entire folding cycle and position it automatically for each bend. For most parts the operator unloads only the finished workpiece. The grippers can come within 12 mm (0.47") of the bend line. They are also designed to clamp above pre-bend or closed hem.

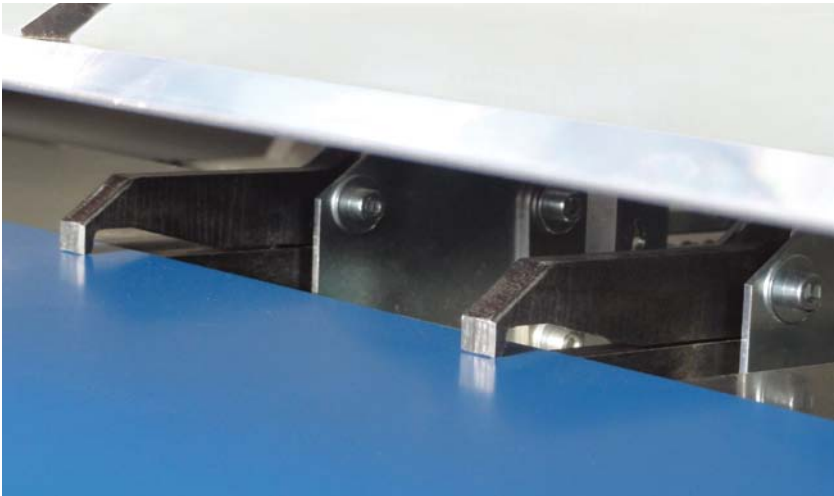
In addition the grippers can be used as stops. The grippers close automatically within the program cycle, so that the operator can use the front surface of the closed grippers as a stop finger.

***Flexibility that you will only find on the XXL-Center!***

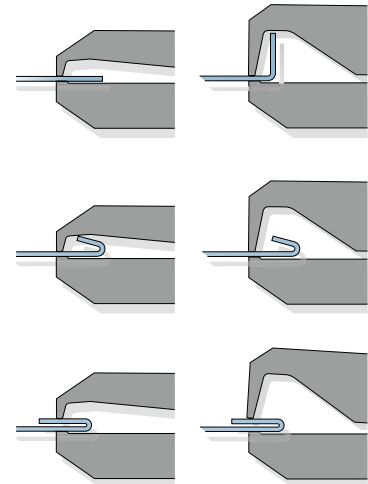


Stainless steel tables for easy material loading.

## XXL-Center



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



Standard and special grippers clamping positions

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.

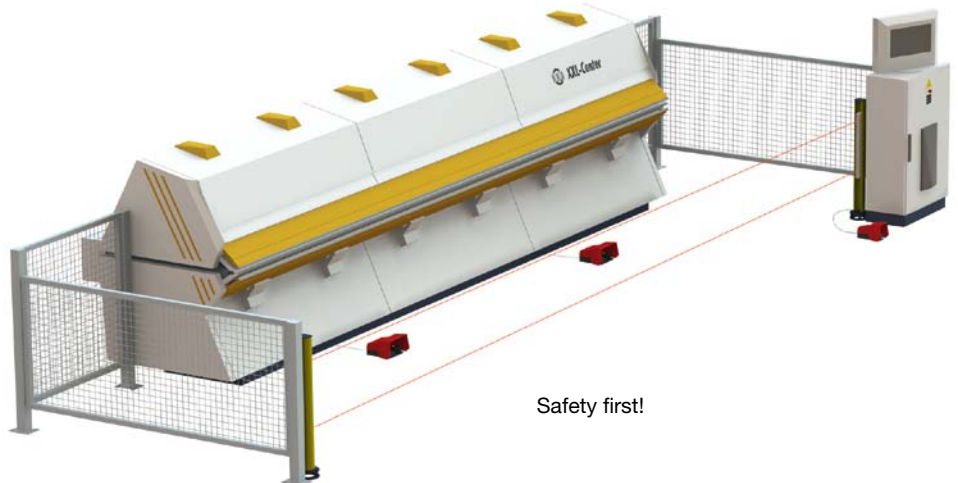
### Safety system

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.



Optional special grippers clamp above pre-bend.



Safety first!





# XXL-Center



Technical Data	RAS 75.08-2		RAS 75.06-2		RAS 75.04-2	
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	334"	6400 mm	252"	4240 mm	167"
Backstop depth min.	12 mm	0.47"	12 mm	0.47"	12 mm	0.47"
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"
Folding accuracy	+/- 1.0 Grad	+/- 1.0 deg	+/- 1.0 Grad	+/- 1.0 deg	+/- 1.0 Grad	+/- 1.0 deg
Distance between two feeding gripper units min.	180 mm	7"	180 mm	7"	180 mm	7"
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 depth with safety system	3000 mm	118"	3000 mm	118"	3000 mm	118"
Machine length without electrical cabinet	8630 mm	339"	6540 mm	257"	4380 mm	172"
Machine length with safety system about	11500 mm	453"	9400 mm	370"	7300 mm	288"
Machine height	1800 mm	71"	1800 mm	71"	1800 mm	71"
Weight approximately	2 x 8500 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
<b>Speeds</b>						
Upper and lower folding beam*	126 Grad/s	126 deg/sec	126 Grad/s	126 deg/sec	126 Grad/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

\* automatically reduced on thicker materials

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