Folding system

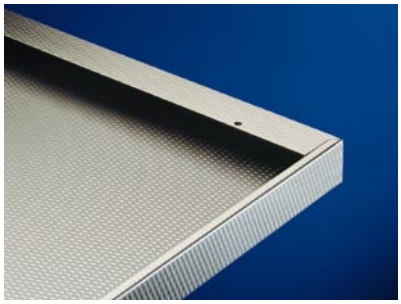
FLEXIbend

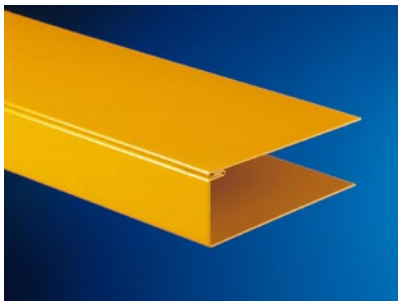
- Cutting
- **Bending**
- Forming

RAS Reinhardt Maschinenbau GmbH

FLEXIbend

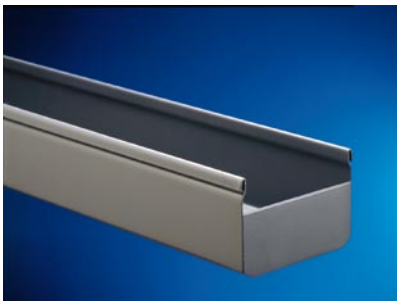
Amazing Flexibility!

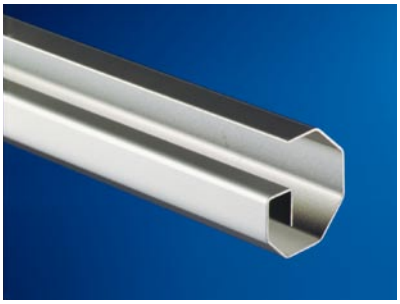




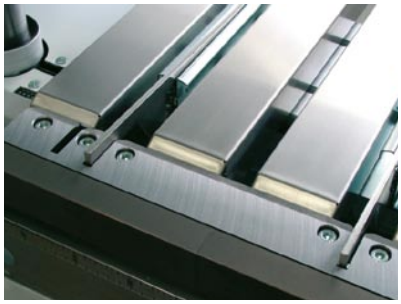
The FLEXIbend metal folding system is a study in flexibility. There are almost no limitations to your imagination, when you want to create unique, complex parts with a high level of added value for your customers. Flexibility is the key for new products that will help you outperform your competition in the future.

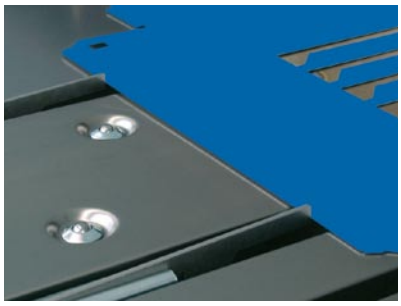
If your operation requires complex precision parts, including boxes, pans, enclosures, and panels, and you must have high levels of productivity and throughput at an affordable price, then the FLEXIbend is the machine for you!



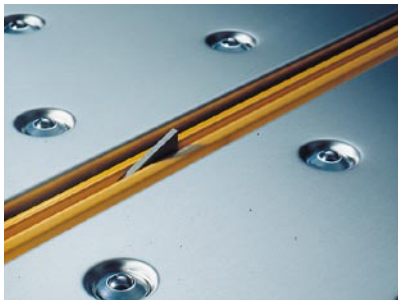


FLEXIbend





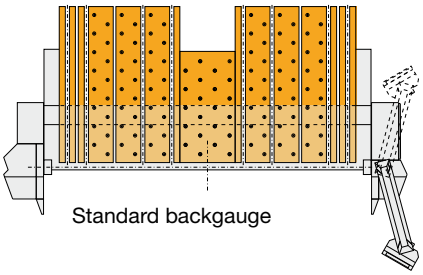
Depending on the dimension the front or rear pop-up fingers position the part



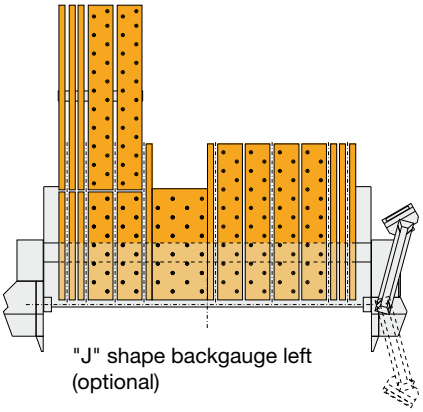
Ball casters as standard

The Integrated Backgauge and Sheet Support System

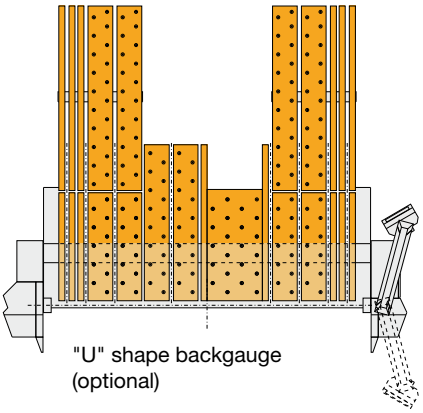
The backgauge and sheet support system automatically holds, precisely positions, and offers flexible manipulation of your workpieces for maximum quality and productivity. A servo motor drives the pop-up finger units into position. The FLEXIbend backgauge reaches any dimension in under two seconds! All of the fingers drop down automatically for part rotation. Each finger unit can be moved laterally on the backgauge to match up with notches for maximum accuracy. The galvanized sheet support panels seamlessly fit into the high quality FLEXIbend design. For large parts, a “J” or “U” shape backgauge is a useful option. If parts come with flanges close to the lower tool, the sheet support can be moved backwards for additional flexibility.



Standard backgauge



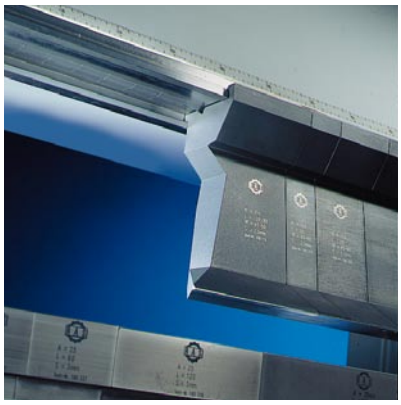
"J" shape backgauge left (optional)



"U" shape backgauge (optional)

FLEXIbend

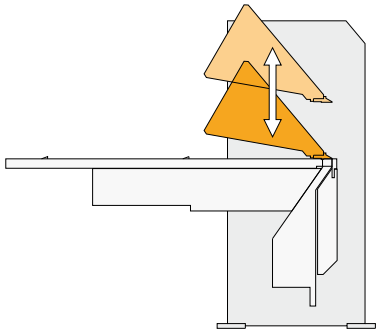
Just What Makes The FLEXIbend So … Flexible?!



Automatic upper beam tool clamping system

The Upper Clamping Beam

First, you will realize an abundance of free space in front of the beam. Equally generous free areas behind the beam let your operators see the tools when folding large parts from the rear. The upper beam opens to 300 mm (11.81”). The open and closed stroke position is programmable to any dimension so that you can create a virtual endless array of hems. Additionally, the upper beam automatically clamps the tools: goat’s foot tools for boxes and pans, sharp tools for profiles, and radius tools for special applications.

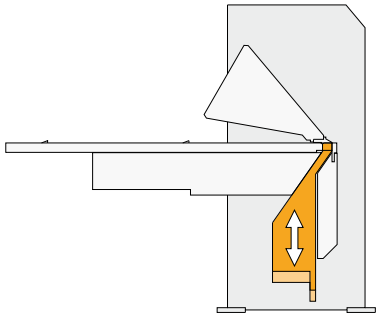


Programmable upper beam position during clamping and unloading

Segmented folding beam tools for flexibility in any situation

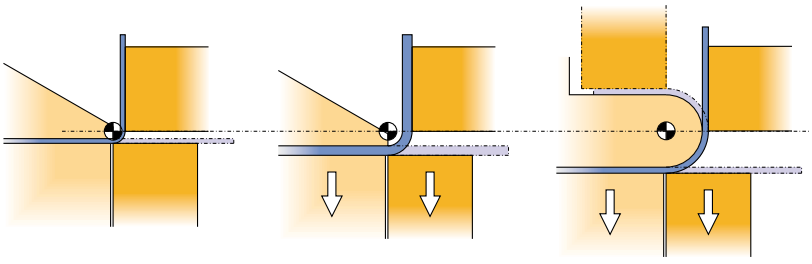
The Lower Beam

Due to its deep box configuration the lower beam is designed for maximum resistance to deflection and for torsion free rigidity. This means high precision parts and longer machine life. The lower beam automatically adjusts for changes in material thickness, optimum bend radii and radius tool capabilities.



Extreme resistance to deflection and torsion due to deep box design

Segmented lower beam tooling for reverse flanges of up to 40 mm (1.575")



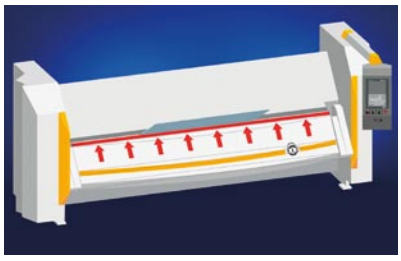
Automatic folding beam and lower beam adjustment: indispensable for perfect radii, precision parts and longer machine life

FLEXIbend

Clean and accessible stored tools: the tool carriage

The Folding Beam

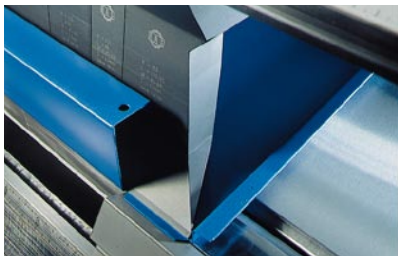
The folding beam is unique as it automatically clamps the segmented folding beam tools. With its lightning fast 90 degree per second movement and its automatic material thickness adjustment, you invest in productivity and flexibility!
The optional intelligent crowning system uses sensors to measure the actual beam deflection. The intelligent crowning system automatically compensates for any folding beam deflection. Without a need for test bends or programming, this system always creates straight parts whether you bend thick or thin material. The system works with mild steel or stainless, folds short or long flanges, runs the part in the center of the machine or on one side.



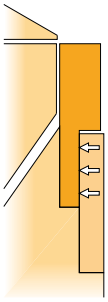
Intelligent crowning system

The RAS Tooling System

The high tensile strength and precision ground upper beam tools will snap-on and automatically clamp in the integrated tool seat. No other tool system offers so much free space for all imaginable folding geometries. Handy tool segments of maximum 200 mm (7.874“) length make it extremely simple to change tools.



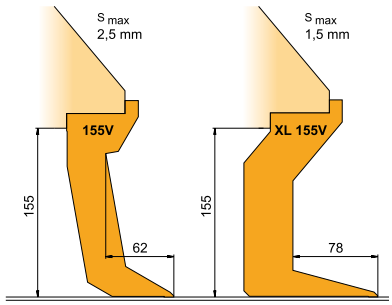
Large free space for flexible part design

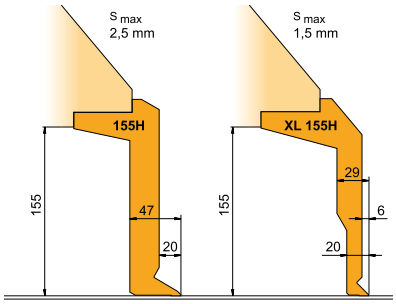


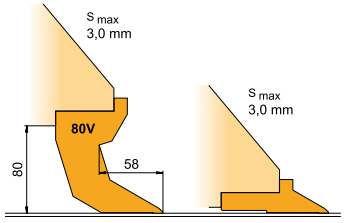
The high tensile strength folding beam tools are also segmented for maximum flexibility. And: All tools are attached automatically!

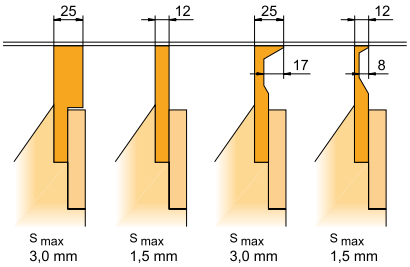
If the “standard” free spaces are still not enough, RAS offers the XL tools for the upper and folding beam. With maximum free space in front or behind the tools, the FLEXIbend breaks through into a new age of folding flexibility.

The lower beam tooling is also segmented to allow reverse flanges to be accommodated.



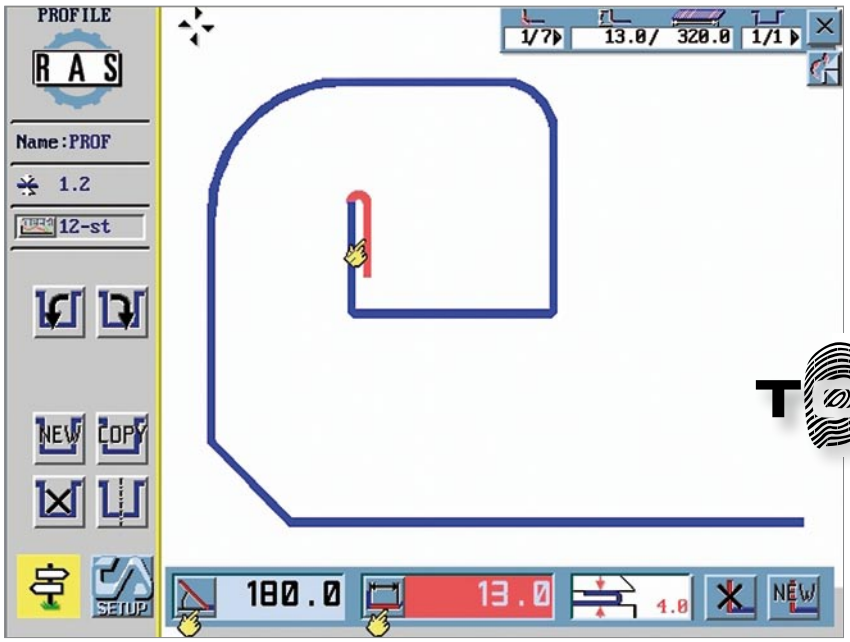






FLEXIbend

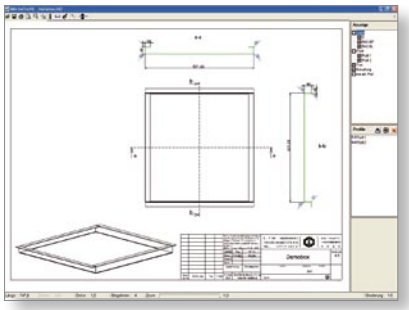
Automatic programming



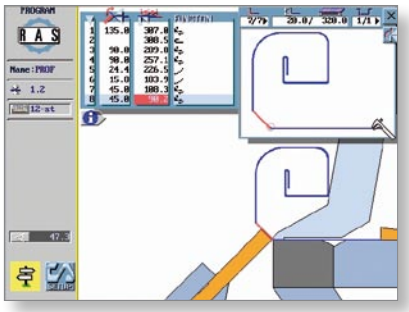
Pictures become Parts!

If you program on the shop floor, your finger can be used as a pencil. Simply paint a flange and size it to the right dimension and angle.

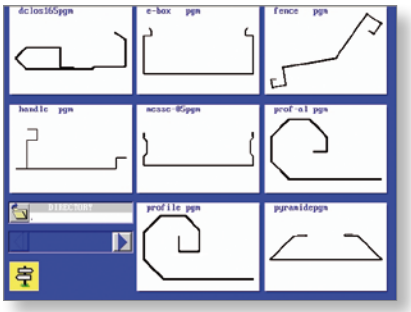
TOUCH & More



If you program in the office, you can use the offline software on your PC. There, you can also draw the shape of your parts, or you can import a part graphic using the RAS dxf converter.

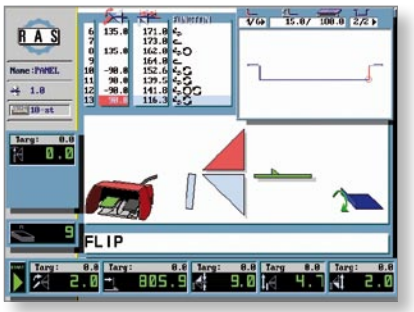


The CADalyzer calculates several folding sequences and for most parts automatically creates a program. The simulation shows the program, the finished part and the actual bend sequence.

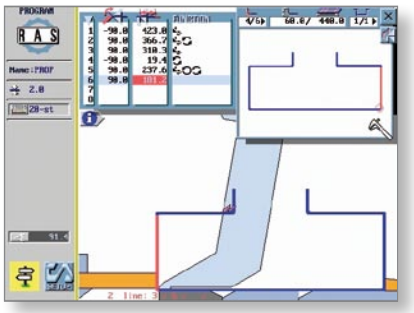


Locate a part program stored in the RAM or on USB memory visually in the easy to use program library. To create a part icon the Touch&More offers a photo function.

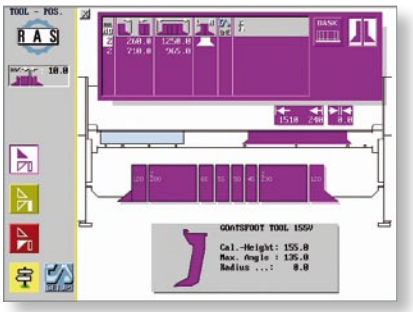
FLEXIbend



After the program is started, the graphic shows the operator which foot pedal he needs to press. Operator instructions such as „Flip“ or „Paint up“ allow even inexperienced operators to produce perfect parts.



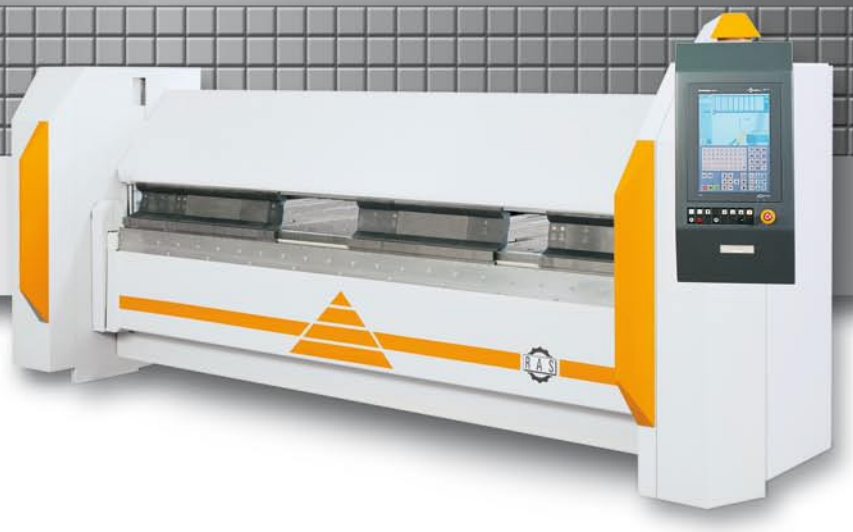
If a collision has been analyzed, the control displays this situation graphically. Technology tables consider material springback. The calculated blank dimensions are automatically corrected by the bend allowance, used for the radii.



The setup instruction displays which tool segments are required for the length of the part. This information is available for the upper beam, the folding beam and the lower beam. For easy setup, the Touch&More graphically displays the tool shape.

If someone operates the machine occasionally, he can use the EasyGo operation. Simply enter an angle, a backstop dimension and the material thickness and you are ready to go. If you want to bend “by eye” just press the push buttons in the Special menu and start each machine movement separately.

FLEXIbend



Folding system

Technical Data		RAS 73.40		RAS 73.30
Sheet Thickness max. (Mild Steel)	2.5 mm	13 ga.	3 mm	11 ga.
Working Length	4060 mm	159.8"	3200 mm	125.9"
Backgauge Depth (Standard)	10 – 1550 mm	0.4" – 61"	10 – 1550 mm	0.4" – 61"
Backgauge Accuracy	+/- 0.1 mm	+/- 0.004"	+/- 0.1 mm	+/- 0.004"
Upper Beam Open Height max.	300 mm	11.81"	300 mm	11.81"
CNC Folding Beam Adjustment max.	80 mm	3.15"	80 mm	3.15"
CNC Lower Beam Adjustment max.	80 mm	3.15"	80 mm	3.15"
Working Height	900 mm	35.43"	900 mm	35.43"
Machine Length	5155 mm	203"	4295 mm	169"
Machine Width	2225 mm	87.6"	2225 mm	87.6"
Machine Height	1775 mm	70"	1775 mm	70"
Machine Weight about	5300 kg	11,685 lbs.	4300 kg	9,480 lbs
Air Pressure	5 bar	72.5 PSI	5 bar	72.5 PSI
Drive Power Upper Beam	4.0 kW	5.5 hp	4.0 kW	5.5 hp
Drive Power Folding Beam	4.0 kW	5.5 hp	4.0 kW	5.5 hp
Speeds				
Folding Beam Speed	90 deg/s	90 deg/s	90 deg/s	90 deg/s
Upper Beam Speed	40 mm/s	1.575"/s	40 mm/s	1.575"/s
Backgauge Speed 10 – 1550 mm (0.4" – 61")	1.9 s	1.9 s	1.9 s	1.9 s

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

10/2009