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**EHRT**

**Bending Machine  
EB 30 Professional**

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# Bending Machine EB 30 Professional

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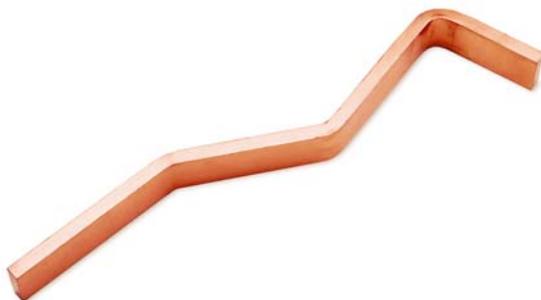
The EHRT EB 30 Professional is made for high loads in industrial operations. Long wear and unrivalled accuracy characterize this machine.

The EB 30 Professional is an exceedingly powerful CNC bending machine with spring back compensation. It is able to bend single pieces as well as small batches with the same precision and efficiency as series-produced parts. A bending accuracy of  $\pm 0.2^\circ$  starting from the first work piece is achieved due to calculated spring back compensation and the use of electronic tools. The latest SV version supports an operation speed of up to 60 mm/s. Tools are changed quickly by using the simple plug-in system.



## Work Pieces

With a bending force of 300 kN, the EB 30 Professional is able to bend materials of up to 160x20 mm (copper). The hydraulic cylinders are located under the working face to allow for a maximum amount of work space. Special bending tools render even complex bends possible.



## CNC Stop

The EB 30 Professional features a CNC stop with a traverse path of approximately 1500 mm. Additional extensions are available on request. The bending software PowerBend accurately calculates the flat length as well as the stop position and transfers the results directly to the CNC control unit. High production accuracy is assured.



## On-Going Development

This line was developed by incorporating many customer requests plus our own 40 years of experience in the bending machine industry. This machine is our most ergonomic machine to date.



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# Bending Technology

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## Angular Measurement

Our measuring accuracy is 0.1°. This is attained by using bending prisms with electronic angular measurement technology. The computer then calculates the required final stroke. The spring back of every bend is compensated regardless of material type. Our high angle accuracy of +/- 0.2° is achieved instantly with the first work piece. No adjustments are required. Material waste amounts will drop considerably. Even inconsistencies within a single piece of material are automatically adjusted.

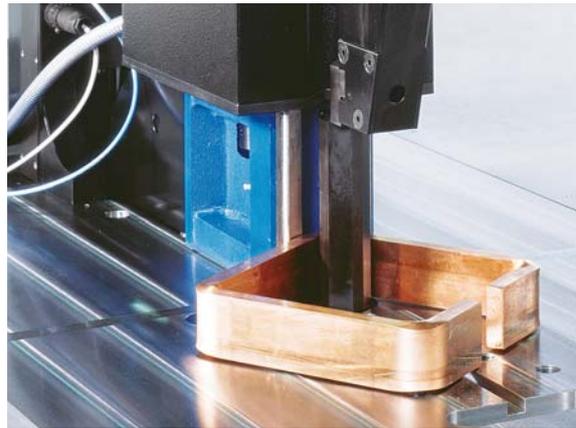


## Stroke Measurement

If the bending prisms with integrated angular measurement cannot be used due to their size, bending prisms without angular measurements can be used. Perhaps the distance between two bends is too short. In such cases the control unit can be switched from angular to stroke measurement. This method allows the selection of the bending ram distance. Setting accuracy is +/- 0.1 mm. A final stroke is usually not required.

## U-Bending System

For tight and narrow U-bends, the bending tool can be turned around and moves toward the operator. The stroke movement is then performed by the bending prism. Bends with openings from 40 mm and an accuracy of 0.2° are possible.



## Edgewise Bending

Special bending tools that include electronic angular measurement allow a high bending accuracy even when bending on edge is required.



## Angle Specification by Stroke Curve

The stroke system also enables the user to specify an angle from which the stroke is calculated by using stored stroke functions. Bending accuracy in that case is dependent upon material properties such as thickness, hardness, etc. These properties may differ from one piece of material to another.

# Bending Software PowerBend

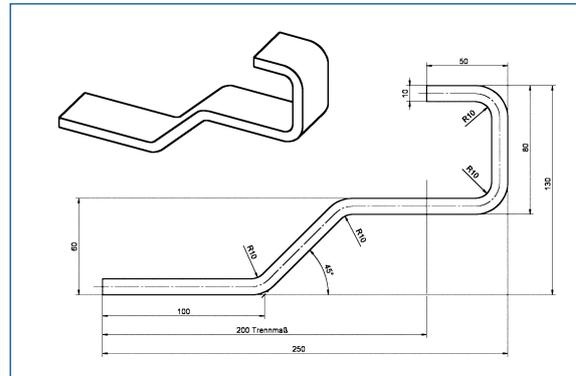
## Easy Handling

The Microsoft Windows® based software, PowerBend, is easy to learn since there are no CNC programming skills required. Training is accomplished smoothly. All necessary inputs are prompted and displayed on the screen. Inputs can be corrected at any time and minimum distances are checked instantly to guard against improper inputs. The operator is allowed to use outside, inside, center line, and radius dimensions. Software can be switched between mm and inches.



## Calculated Values

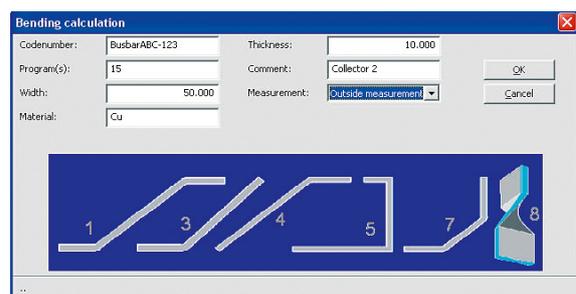
The PowerBend software automatically calculates the flat length of each part being bent and determines the exact position of the side stop. Up to 15 bends can be calculated for one work piece.



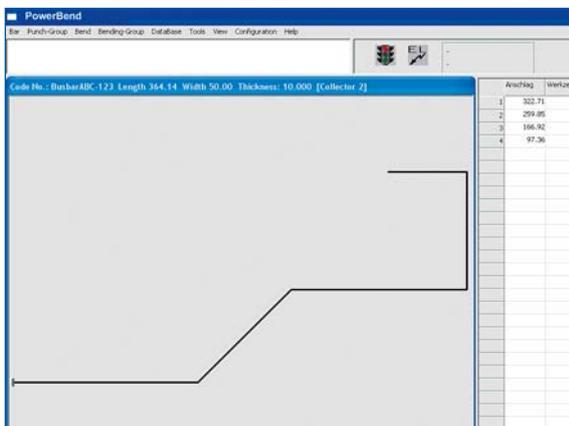
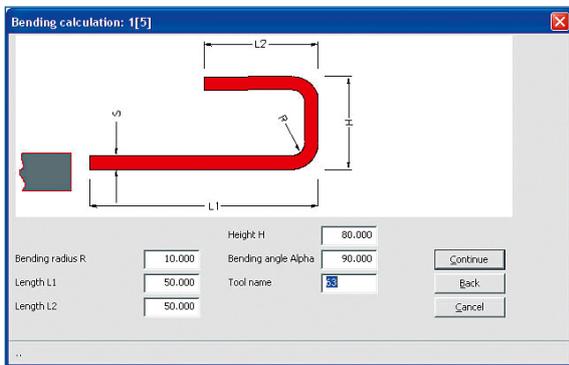
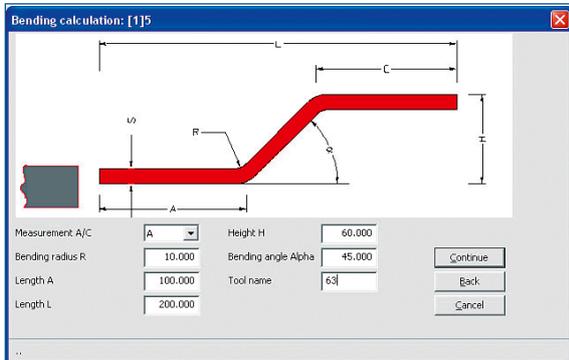
## Programming example

The software offers 6 different bending elements, which can be combined with one another.

For example, this 4-bend sample is split into 2 bending operations. The first operation is a Z-bend (bending operation no.1) and the second operation is a U-bend (bending operation no.5). The dividing line (see illustration) can be placed at any position. The software then asks for all necessary values and checks all figures, allowing errors to be corrected immediately. These figures are used to calculate the developed length and the side stop position. A graphic of the bend work piece is then shown.



# Bending Software PowerBend



## Networking

It is possible to network with other EHRT machines and offline work stations. A simple transfer of parts programmed offline increases the productivity of the machine.

## Parallel bars

PowerBend offers a very easy solution for calculating parallel bars. The required distance between bars and the new name for the parallel bar is input. PowerBend automatically does a new calculation of the geometry, the developed length and the new side stop position.



## Program Storage

The program for each work piece can be stored as alphanumeric names up to 24 digits. The database allows storage of up to 200,000 different parts which can be located easily using the search and sort options. Networking with other EHRT machines and external workstation is easy. Parts can be programmed externally and quickly transferred which increases the overall productivity of the machine.

Code No.	Comment	Length	Width	Last change	Flaps
130	RHOMBUS_1	203.20	101.60	06/05/2002	0x0n
131	Rockwell1	814.95	38.10	11/12/2003	X00
132	Rockwell2	810.95	38.10	11/12/2003	X00
133	testM18_2	461.40	100.00	07/05/2002	X00
134	Mechtronik	1275.72	100.00	10/02/2003	X00
135	abcd 300-2	400.00	200.00	21/08/1999	0x0
136	abcd 300..	400.00	200.00	21/08/1999	0x0
137	ABB_gindow	287.90	100.00	17/02/2003	X00
138	ABCD 12345a	250.00	100.00	27/12/1999	0x0
139	RA.torsion1	620.70	38.10	02/02/2004	X00
140	RA.torsion2	620.32	38.10	02/02/2004	X00
141	Rockwell2.1	830.73	6.35	02/02/2004	X00
142	Rockwell2.2	646.51	6.35	11/12/2003	X00
143	Rockwell2.3	749.45	6.35	02/02/2004	X00
144	73296-104-02 DXF	76.20	183.13	15/04/2004	0x0
145	73296-105-07 DXF	496.37	127.00	29/04/2004	0x0

Software languages: German, English, Russian, French, Finnish. Other languages on request.

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## Technical Data EB 30 Professional

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Press Capacity	300 KN	
Bending System	Hydraulic	
Hydraulic Pressure	300 bar	
Bending Accuracy	0.2°	
Work Pieces	max. 160 x 20mm	6.3" x 0.79"
Rapid Movement	50 mm/s	1.97"/s
Inching	10 mm/s	0.4"/s
Stroke max.	200 mm	7.9"
Return Stroke	adjustable	
Working Height	975 mm	38.4"
Electrical Standards	according to VDE	
Electrical Connected Load	7.5 KW	
Side Stop	digital DC servomotor with recirculating ball screw	
Control Unit	industrial PC running Windows XP or higher	
Software	PowerBend	
Finishing	RAL 5010 Gentian Blue	
Doors and Coverings	RAL 7035 Light Grey	
Safety Installations	all danger zones are secured according to CE standards	

*Subject to change without prior notice.*

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