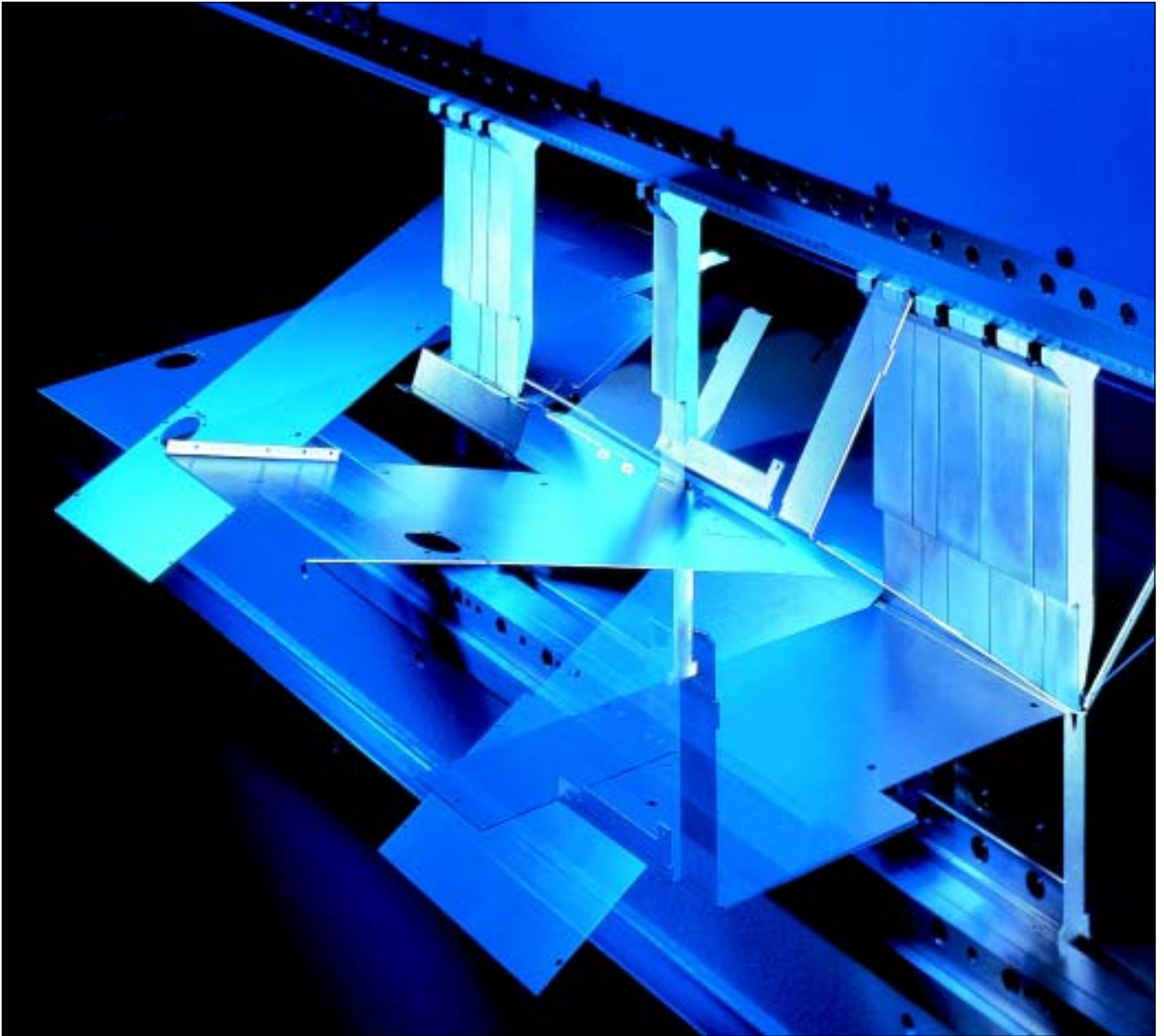


TRUMPF CNC Press Brakes



Increased Profitability in Bending
through efficient technology

TrumaBend V-Series

TRUMPF



Are you already a press-brake user?

If you are, you will know from experience...

... that with many press brakes, the workpiece moves with the upstroke of the lower beam. On TrumaBend downstroking press brakes, the workpiece always remains at the same working height and is therefore always firmly positioned against the back stop. Even with thin sheets this ensures a high degree of stop accuracy and dimensional accuracy.

... that the range of parts which can be processed is often restricted – as a result of the structure of the machine. With the new TrumaBend V Series press brakes, multiple tasks can be performed. They offer a long stroke, very generous bend space and very large effective tool height.

... that slow stroke or positioning speeds lead to reduced productivity. TrumaBend press brakes achieve impressively fast operating movements in all axes.

... that industrial safety is often inadequately assured. TrumaBend is a safe machine. There is no need for the user to reach across the “tool plane” danger area to make horizontal adjustments to the back stop fingers.

So, if you aim to achieve a significant increase in quality, flexibility, productivity and safety in press braking the new TrumaBend V Series is just what you are looking for.



*Minimise assembly times and unit costs,
maximise user friendliness and quality,
gain added benefits from TRUMPF services:
TrumaBend V Series.*

Do you require a press brake as a compatible addition...

... to your existing range of machines, to help you produce accurate functional parts more quickly and more cost-effectively than on your existing equipment?

■ If you do, TrumaBend CNC press brakes are the perfect solution for you, because they ensure high productivity, flexibility and profitability in return for your investment.

Low space requirement and optimum price/performance ratio guarantee that your purchasing decision will be a success.

■ TrumaBend CNC press brakes are ideally suited for the forming of chassis, panels, brackets, and many other types of components.

■ TrumaBend presses are perfect in fields requiring the accurate production of parts with small radii and short flanges using coining or air bending processes.

The alternative: TrumaBend V Series



The comprehensive standard machine package comprises:

- Downstroking concept with two cylinders Y1/Y2
- Electro-hydraulic ram drive with proportional valve technology
- Ram stroke measuring system based on glass scales, with deflection compensation
- Advanced block hydraulics
- Spherical suspension and inclination of top beam
- Multiple axis CNC back gauge in X and R
- Innovative, safe adjustment of back gauge fingers from front
- Self-centring, upper tool retainer
- Hardened lower tool holder
- Programme controlled lower tool adjustment (I-axis)
- Front mounted control elements on control panel
- Rapid, easy shop floor programming

Superior CNC back gauge system



Impressive bend space through the innovative back gauge system

Large bend space through innovative back gauge design

- Maximum range of parts can be made on the machine
- Minimum handling and non-productive time even with Z folds. Abnormal contours do not necessitate turning the part
- Increased accuracy, especially with 'Z' shapes because the bend edges are closer to the folding edge and bend tolerances are therefore not accumulated
- Three-level backgauge fingers provide a large stop range in X coupled with sheet support

CNC back gauge: maximum flexibility and productivity for large scale production

- Setting up time is negligible for the X and R axes because depth and height of fingers are freely programmable (Z₁/Z₂ axis optional)
- High dynamics and rapid positioning speeds
- The X travel speed, adapted for the machining task, is freely programmable

Exemplary safety features and user friendliness

- Easy, safe front adjustment of back gauge fingers
- No need for the user to reach through the "tool plane"
- Manual adjustments, when changing jobs (if necessary) are always made from the front of the machine
- No additional tools are needed for releasing and clamping the back gauge fingers, this process is fully automated (patent pending)

Optimum control for every application

- Programming is possible directly at the machine or externally via PC – with an identical user interface
- A wide range of machine control options: from simple dialogue control without graphic function to colour graphic control with convenient user interface, calculation and simulation of bend sequences
- All essential control elements are front-mounted: minimum adjustment and setting up times
- NC Program transfer to the machine is possible via data cable, diskette or network (option)



Left:
Safe adjustment of back gauge fingers
Right:
Simple programming, safe control

No contradiction in terms: Accuracy and Speed

High degree of repeatability via CNC crowning

- Compensation of elastic deflection differential of bed and beam
- Uniformity of angle and straightness along the complete length of the bend
- With controlled inclination of the beam the crowning can even be shifted off-centre
- CNC Crowning (Option) is ideal for the accurate production of repeat batches of long components

Rapid tool change systems save time and money

- Self-centring die-clamping system removes the need for return stroke after every tool change
- Upper tools can be rotated, thereby saving costs by reducing the number of tools and tool changes
- Hydraulic tool clamping (optional) for added productivity
- All tool segments are of standardised height – 100 mm – and capable of rapid exchange
- Use of segmented tools leads to greater flexibility and savings in setting up time
- Multiple set-up stations enable time saving through reduced work handling
- Head and shoulder support of top tools ensures accurate working even with large tools and high off-centre loads
- Hardened lower tool holder guarantees long-term accuracy

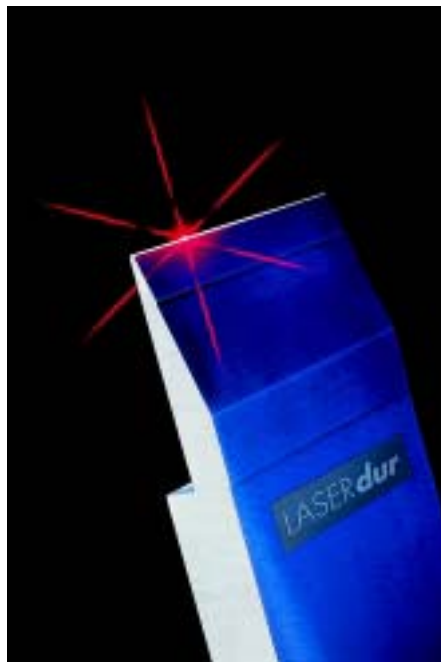
TRUMPF Laserdur® Press Braking Tools Precision, Versatility, and Longevity

- Wear-resistant and durable, because all working radii are laser hardened (58-60 HRC)
- All standard tools conform to specifications for quenched and drawn tool steel (42CrMo4)
- Comprehensive standard range in stock



Fast and safe tool change

To be expected from TRUMPF: Laser hardened tools

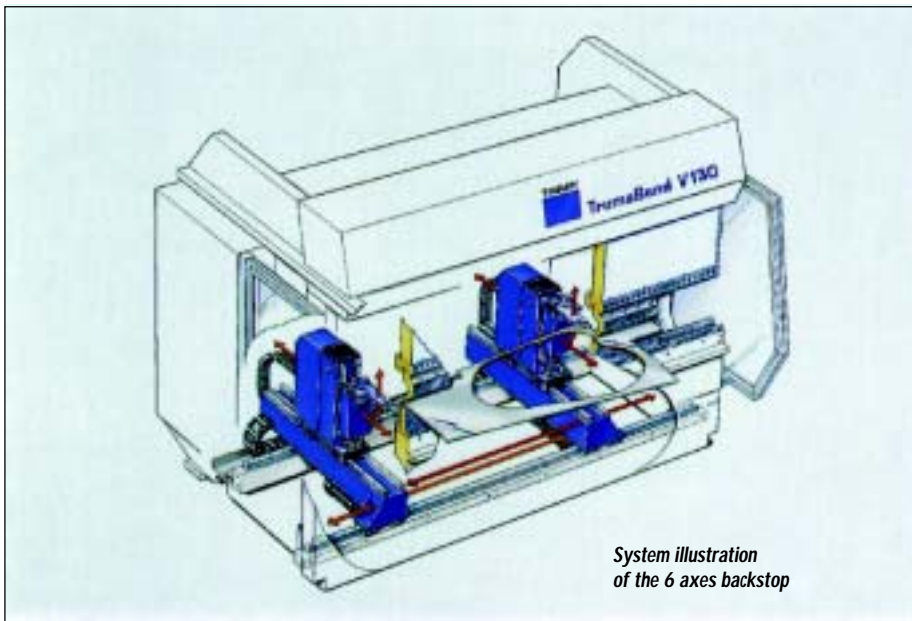


Unsurpassed: TRUMPF Laserdur® Press Brake Tools



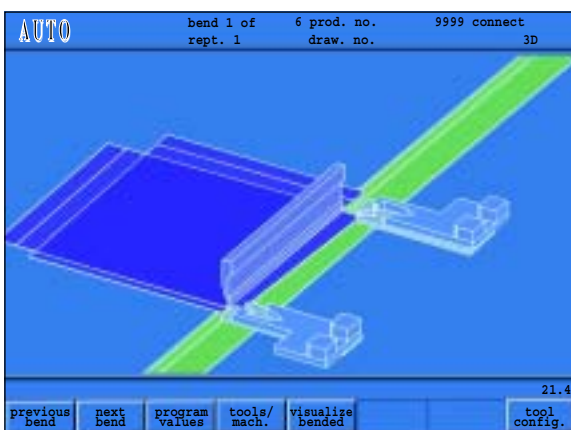
Comfortable: self-centering punch holder

Options which pay for themselves



6-axes Backgauge

- System fingers have versatile stop geometry
- Ideal for bend lines which are angled to the stop edge
- For parallel, short stop edges which are offset relative to each other in X
- For greater parts versatility, even higher parts precision and shorter setup times
- Stop fingers are located on two motion units which move completely independently of each other
- The stop fingers can therefore be positioned at any position in the 3D work envelope
- A holding device (option) is available as a support for large thin workpieces



Simple programming on the 6 axes backstop with the 3D colour graphics control and additional Teach-In possibility:
The stop fingers are automatically positioned even on complex parts geometry.



Automatic Front Supports

- The electro mechanical operating principle guarantees an even and highly precise workpiece support through each phase of the bending operation
- Bend angle and speed are calculated by CNC; a separate program is not necessary
- Available in both 1 and 2 arm versions, bending arms may be activated individually
- Numerous table support variations for the widest range of requirements
- An example of superior operator friendliness and practicality: a side stop is integrated into the table support
- Avoidance of a counter bend ("broken back") effect on long, thin sheets
- For asymmetrical parts or long, thin strips
- Easier for the operator when working large, heavy parts

TrumaBend V-Series: The Choice is Yours

	TrumaBend V50	TrumaBend V85	TrumaBend V85 S	TrumaBend V130
Tonnage	500 kN	850 kN	850 kN	1300 kN
Stroke	215 mm	215 mm (365 mm)	215 mm (365 mm)	215 mm (365 mm)
Max. bed-press beam distance (D')	482 mm	482 mm (632 mm)	482 mm (632 mm)	482 mm (632 mm)
Eff. open height (D)	385 mm	385 mm (535 mm)	385 mm (535 mm)	385 mm (535 mm)
Inclination of beam	±10 mm	±10 mm	±10 mm	±10 mm
Bending length (A)	1275 mm	2050 mm	2550 mm	3060 mm
Distance between side frames (B)	1040 mm	1750 mm	2260 mm	2690 mm
Throat (C)	410 mm	410 mm	410 mm	410 mm
Width of bed	100 mm	120 mm	120 mm	120 mm
Operating height* (E)	1050 mm	1050 mm	1050 mm	1050 mm
Max. Distance in X	860 mm (1000 mm)	860 mm (1000 mm)	860 mm (1000 mm)	860 mm (1000 mm)
Travel in X axis	600 mm	600 mm	600 mm	600 mm
Speed of travel in X	500 mm/s	500 mm/s	500 mm/s	500 mm/s
Travel R axis	250 mm	250 mm	250 mm	250 mm
Speed of travel in R	300 mm/s	300 mm/s	300 mm/s	300 mm/s
Y rapid speed	200 mm/s	200 mm/s	200 mm/s	200 mm/s
Y operating speed	1–10 mm/s	1–10 mm/s	1–10 mm/s	1–10 mm/s
Y return speed	135 mm/s	135 mm/s	135 mm/s	135 mm/s
Drive motor	5,5 kW	7,5 kW (11 kW)	11 kW	15 kW (18,5 kW)
Oil Capacity (approx.)	80 l	200 l	200 l	250 l
Weight (approx.)	4750 kg	7750 kg (8900 kg)	8600 kg (9800 kg)	11250 kg (12950 kg)
Dimensions (L x T)	1930 x 2030 mm	2680 x 2100 mm	3190 x 2100 mm	3640 x 2210 mm
Dimensions (H)	2375 mm	2375 mm (2885 mm)	2375 mm (2885 mm)	2375 mm (2885 mm)

The values given in brackets apply to versions with an increased insertion height and stroke



Angle Sensor ACB®

The key to efficient bending is an angle sensor which not only measures but also automatically regulates the angle to the desired value.

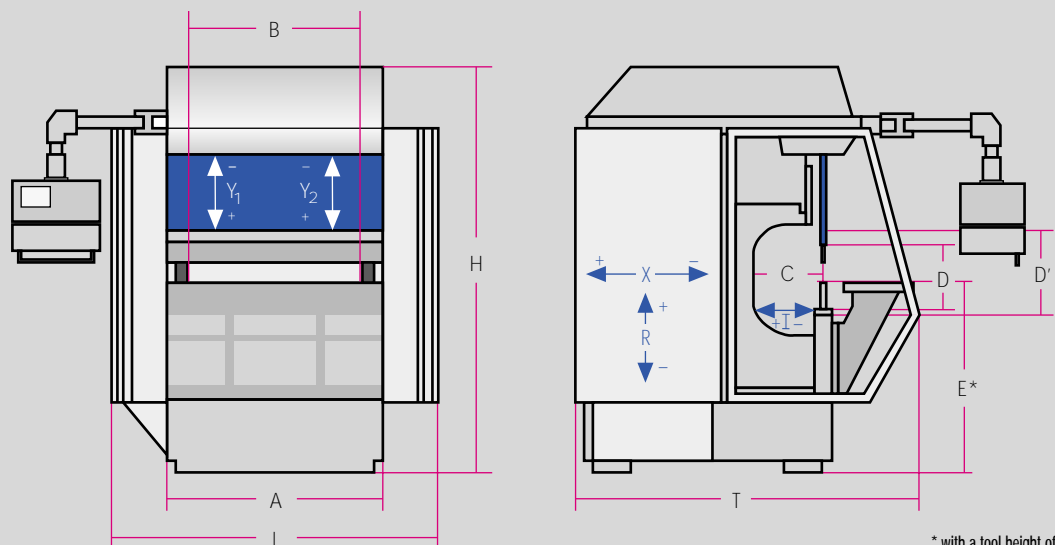
The TRUMPF developed ACB® Angle Sensor (patent issued) can do both:

It measures and regulates during the bending process itself. Every angle is correct right from the very start. Time-consuming and costly trial runs are a thing of the past. The system automatically compensates for the springback angle, which varies with the material and its characteristics.

The TRUMPF bending software ToPs 600 provides optimum support for using the ACB® angle sensor on TrumaBend press brakes. ToPs 600 calculates the bend sequences and creates the necessary setup plans. ToPs 600, of course, also determines the ideal position of the sensor tool. This considerably facilitates and speeds up setup work on press brakes.

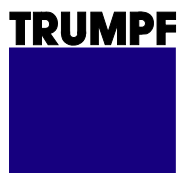
	TrumaBend V 170	TrumaBend V 200	TrumaBend V 230	TrumaBend V 320
Tonnage	1700 kN	2000 kN	2300 kN	3200 kN
Stroke	365 mm	365 mm	365 mm	365 mm
Max. bed-press beam distance (D')	632 mm	632 mm	632 mm	632 mm
Eff. open height (D)	535 mm	535 mm	535 mm	535 mm
Inclination of beam	±10 mm	±10 mm	±10 mm	±10 mm
Bending length (A)	4080 mm	4080 mm	3060 mm	4080 mm
Distance between side frames (B)	3680 mm	3680 mm	2690 mm	3680 mm
Throat (C)	410 mm	410 mm	410 mm	410 mm
Width of bed	200 mm	200 mm	200 mm	200 mm
Operating height* (E)	1050 mm	1050 mm	1050 mm	1050 mm
Max. Distance in X	860 mm (1000 mm)	860 mm (1000 mm)	860 mm (1000 mm)	860 mm (1000 mm)
Travel in X axis	600 mm	600 mm	600 mm	600 mm
Speed of travel in X	500 mm/s	500 mm/s	500 mm/s	500 mm/s
Travel R axis	250 mm	250 mm	250 mm	250 mm
Speed of travel in R	300 mm/s	300 mm/s	300 mm/s	300 mm/s
Y rapid speed	200 mm/s	200 mm/s	200 mm/s	150 mm/s
Y operating speed	1–10 mm/s	1–10 mm/s	1–10 mm/s	1–10 mm/s
Y return speed	135 mm/s	135 mm/s	135 mm/s	135 mm/s
Drive motor	22 kW	22 kW	30 kW	37 kW
Oil capacity (approx.)	350 l	350 l	400 l	500 l
Weight (approx.)	18000 kg	18000 kg	18210 kg	24500 kg
Dimensions (L x T)	4630 x 2210 mm	4630 x 2210 mm	3660 x 2310 mm	4650 x 2310 mm
Dimensions (H)	2885 mm	2885 mm	3095 mm	3095 mm

Machine layout



* with a tool height of 100 mm

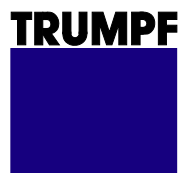
TRUMPF is certified in accordance with DIN ISO 9001



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