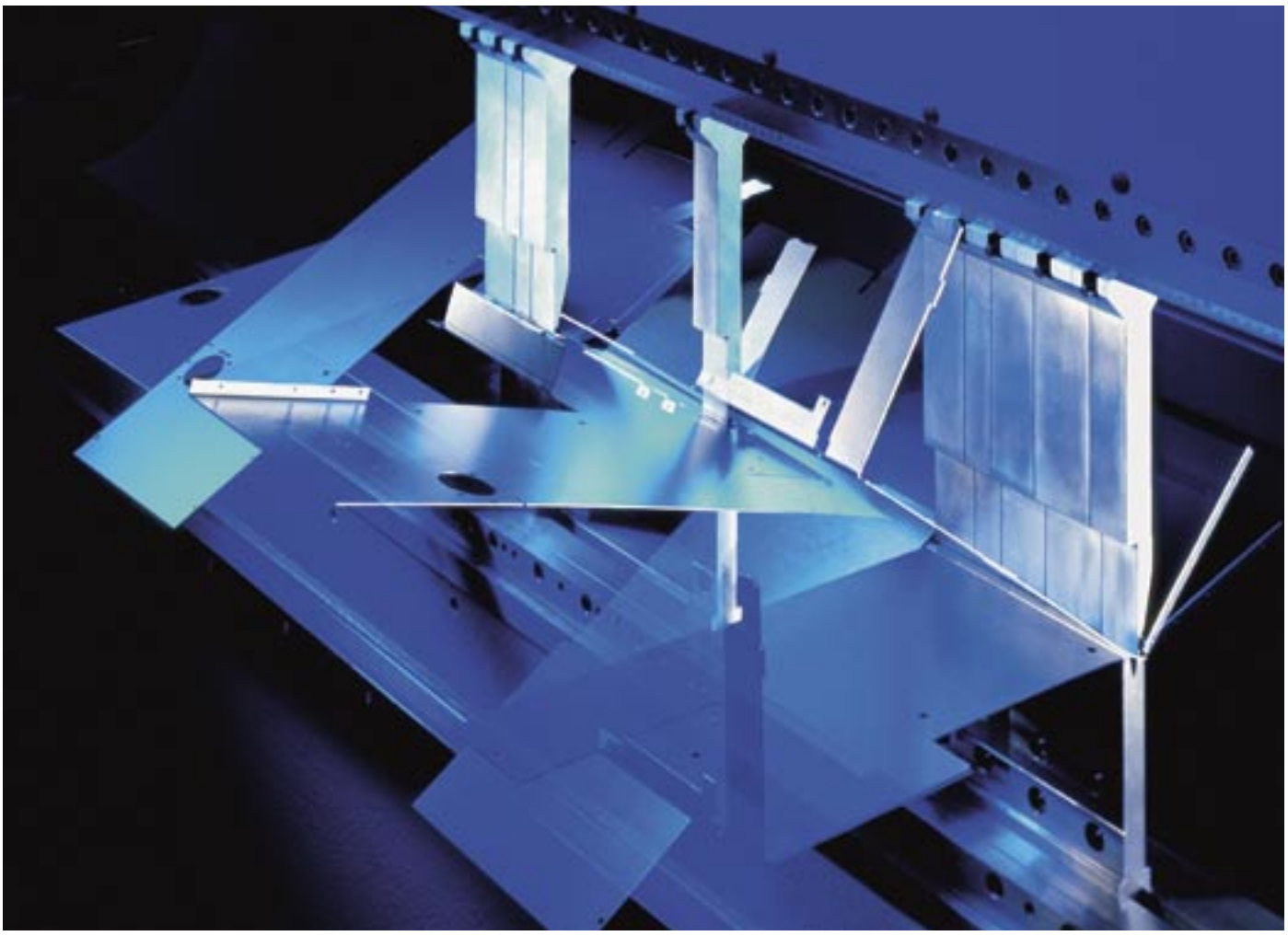
# TRUMPF CNC Press Brakes

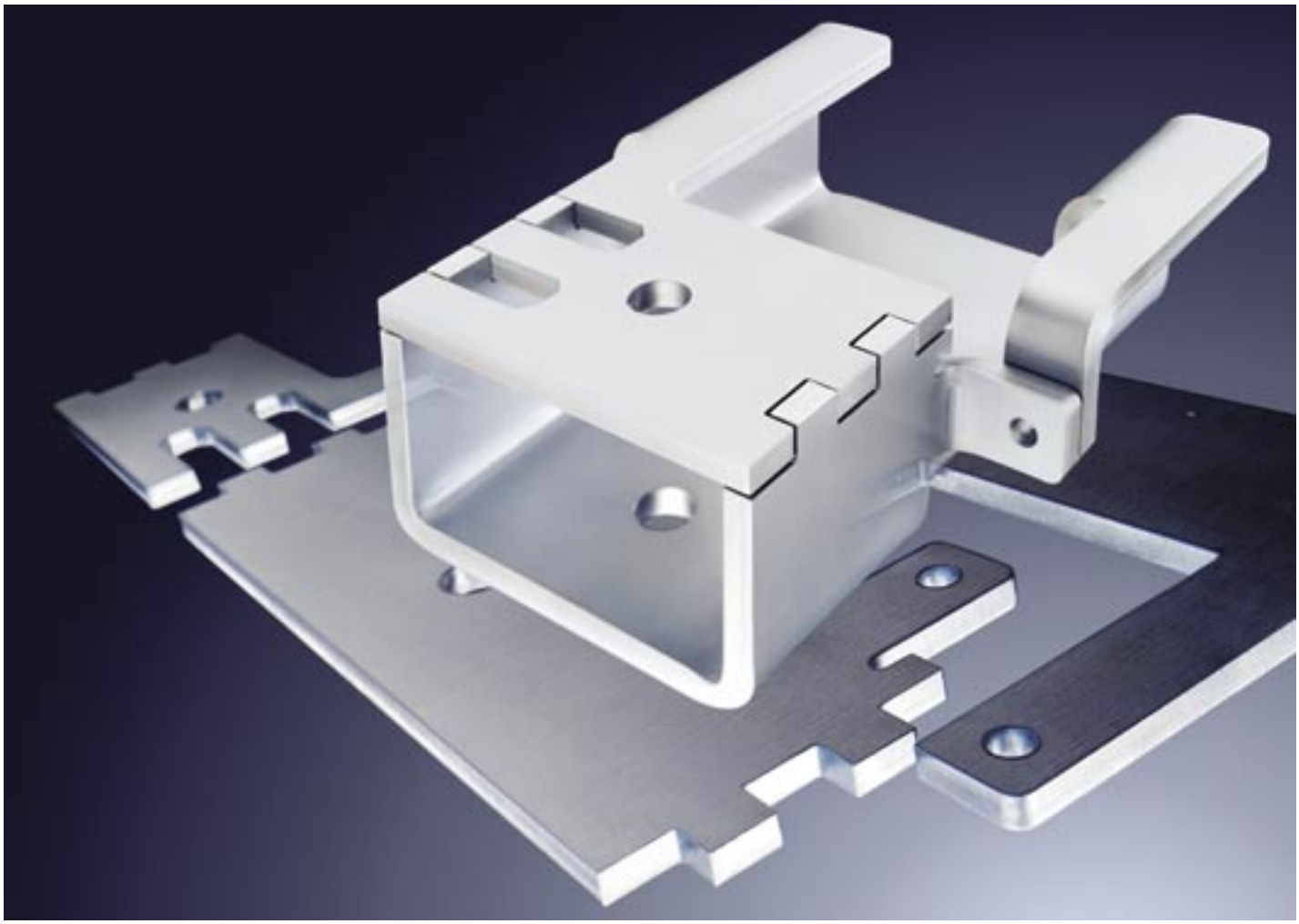


## Increased Profitability in Bending Through Efficient Technology

## TrumaBend V Series

TRUMPF

# Are you already a press brake user?



**If you are, you'll 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 flange accuracy and angle accuracy.
- … that the range of parts which can be processed is often restricted – as a result of the machine design. With the new TrumaBend V Series press brakes, multiple tasks can be performed. They offer a long stroke, very generous bend space and an especially large effective tool height.
- … that low stroke or positioning speeds lead to reduced productivity. TrumaBend press brakes achieve remarkably fast operating movements in all axes.
- … that assurance of industrial safety is often inadequate. TrumaBend is a safe machine. There is no need for the user to reach across the dangerous "tool plane" area to make horizontal adjustments to the back stop fingers.

**If you aim to achieve a significant increase in quality, flexibility, productivity and safety in bending, the new TrumaBend V Series is just what you're looking for.**

**Or do you require a press brake as a compatible addition....**

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

- If you do, TrumaBend CNC press brakes are the perfect solution. They ensure high productivity, flexibility and profitability in return for your investment. Low space requirement and optimum price/performance ratio guarantee a successful purchasing decision.
- TrumaBend CNC press brakes are ideally suited for use in job shops, car body construction, electrotechnical device construction, plant engineering and many other areas of application.
- TrumaBend press brakes are perfect wherever parts with small radii and short flanges need to be produced accurately through coining or air bending.

# Your First Choice: TrumaBend V Series


**The comprehensive standard machine package features:**

- 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
- Two back gauge finger support surfaces
- Self-centering upper tool holder
- Hardened lower tool holder
- Program controlled lower tool adjustment (I-axis)
- Quick and easy shop floor programming
- TRUMPF e-shop: online replacement parts service

# Superior CNC Back Gauge System

## 2 and 4 axis back gauge

- Set up time is negligible for the X and R axes because depth and height of fingers are programmable (Z1/Z2 axis optional)
- Superior dynamics and fast positioning speeds
- All CNC back gauge axes speeds are programmable per bend

## 5 axis back gauge (X5)

- Programmable corrections for tapered flanges
- Optimally suited for products with minimal offset in X
- 3D finger with side-stop for complex and angled bends
- X2 axis programmable ±2.9 inches relative to X

## 6 axis back gauge

- Ideal for bend lines angled to the stop edge
- For flanges that are offset relative to X
- Greater part versatility, increased part precision and shorter setup times
- Stop fingers are located on two motion units and move completely independent of each other
- The stop fingers can be positioned to any dimension in the 3D work envelope

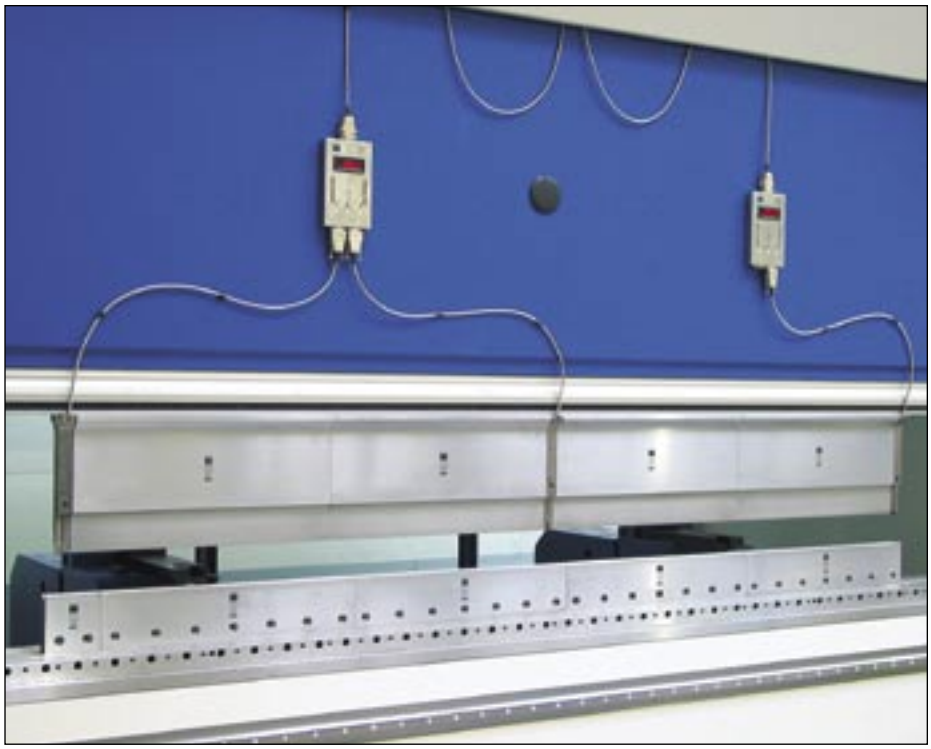
# Accuracy and Speed: No Contradiction in Terms

### Significant repeatability with CNC crowning

- Angle uniformity and straightness along the complete length of the bend
- With controlled beam inclination crowning can be shifted off-center

### Angle Sensor ACB

- Measures and regulates during the bending process
- Higher quality: the bending angle is correct from the start and conforms to strict standards
- Supported by TRUMPF's bending software ToPs 600
- Lower cost: reduced set up and positioning times, rework is no longer required
- Higher productivity: increased part production per time unit

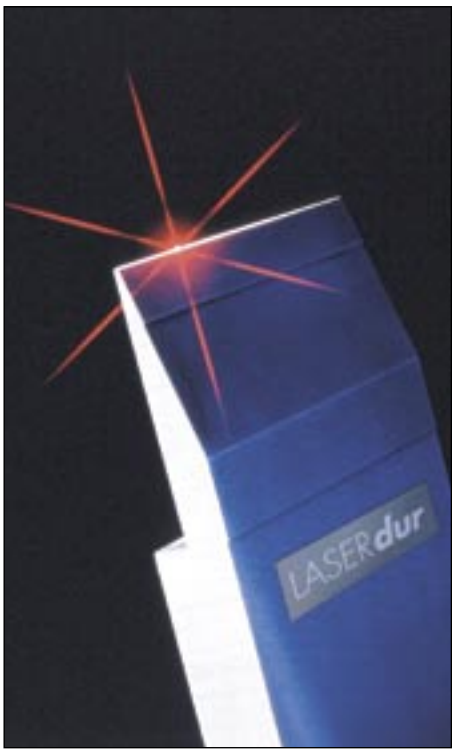


# Quick Change Tools Save Time and Money

- Self-centering and seating of the upper tool holder eliminates the need for return stroke after every tool change
- Upper tools can be rotated reducing the number of tools and tool changes
- Hydraulic tool clamping (optional) for added productivity
- All tool segments are of standard width – up to 4 inches – and can be quickly exchanged
- Use of segmented tools results in greater flexibility and reduced set up time
- Multiple tool stations reduce work handling and save time
- Head and shoulder support of top tools: ensures accuracy even with large tools and high off-center loads

### TRUMPF Laser*dur* Press Brake Tools Precision, Versatility and Longevity

- Wear-resistant and durable: all working radii are laser hardened (60-62 HRC)
- All standard tools conform to specifications for quenched and drawn tool steel (42CrMo4)
- Comprehensive standard range of tools in stock

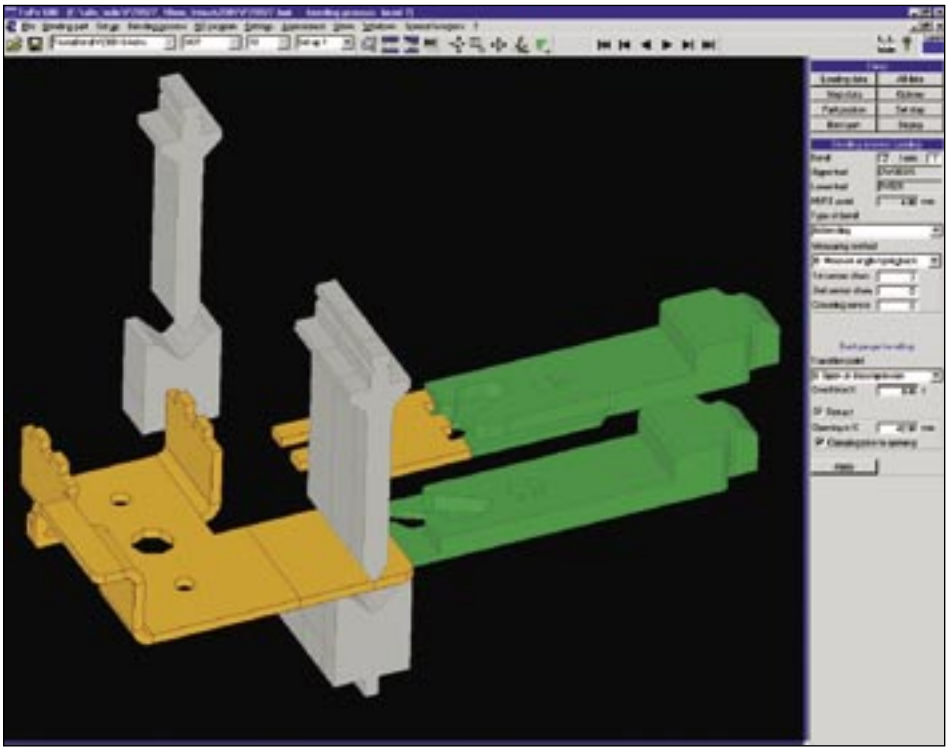


# Control

### The Optimal Control for every Application

- Programming at the machine or externally by PC
- NC Program transfer to the machine by data cable, diskette, network or USB
- Minimal adjustment and set up times
- PDF document display (e.g. set up plans) right at the control
- Optional 3D visualization and programming

# Integrated Know-How



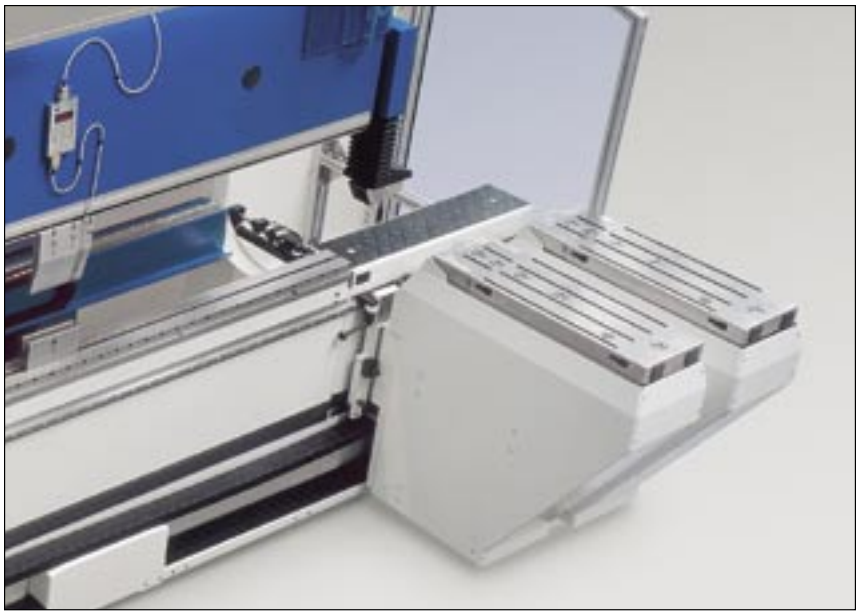
ToPs 600 is a technology oriented programming system that fully supports operation of the TrumaBend V Series:

- From the 6-axis back gauge to the ACB angle sensor
- Offline programming
- Automatic bend sequence calculation
- Set up plans tailored to workshop needs
- Complete bending process simulation

# Options

### Bending Aid

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



# Technical Data

| Machine | TrumaBend V50 | TrumaBend V85 | TrumaBend V85S | TrumaBend V130 |
|---|---|---|---|---|
| Tonnage | 56 tons | 95 tons | 95 tons | 144 tons |
| Stroke | 8.5 in. | 8.5 (14) in. | 8.5 (14) in. | 8.5 (14) in. |
| Max. bed-press beam distance (D') | 19 in. | 19 (25) in. | 19 (25) in. | 19 (25) in. |
| Eff. open height (D) | 15 in. | 15 (21) in. | 15 (21) in. | 15 (21) in. |
| Inclination of beam | ± .4 in. | ± .4 in. | ± .4 in. | ± .4 in. |
| Bending length (A) | 50 in. | 81 in. | 100 in. | 120 in. |
| Distance between side frames (B) | 41 in. | 69 in. | 89 in. | 106 in. |
| Throat (C) | 16 in. | 16 in. | 16 in. | 16 in. |
| Width of bed | 4 in. | 4.75 in. | 4.75 in. | 4.75 in. |
| Operating height (E*) | 41 in. | 41 in. | 41 in. | 41 in. |
| Max. Distance in X | 33.5 in. | 33.5 in. | 33.5 in. | 33.5 in. |
| Travel in X axis | 23.6 in. | 23.6 in. | 23.6 in. | 23.6 in. |
| Max. speed of X axis[1] | 1200 ipm | 1200 ipm | 1200 ipm | 1200 ipm |
| Travel R axis | 9.8 in. | 9.8 in. | 9.8 in. | 9.8 in. |
| Max. speed of R axis[1] | 710 ipm | 710 ipm | 710 ipm | 710 ipm |
| Max. speed of Z axis[1] | 1900 ipm | 1900 ipm | 1900 ipm | 1900 ipm |
| Y rapid speed | 472 ipm | 472 ipm | 472 ipm | 472 ipm |
| Y operating speed | 2-24 ipm | 2-24 ipm | 2-24 ipm | 2-24 ipm |
| Y return speed | 320 ipm | 320 ipm | 320 ipm | 320 ipm |
| Drive motor | 7.5 HP | 15 HP | 15 HP | 25 HP |
| Oil capacity (approx.) | 21 gal. | 53 gal. | 53 gal. | 66 gal. |
| Weight (approx.) | 10,450 lbs. | 17,085 lbs. | 18,960 lbs. | 24,800 lbs. |
| Dimensions (LxD) | 76 x 80 in. | 106 x 83 in. | 126 x 83 in. | 144 x 87 in. |
| Dimensions (H) | 94 in. | 94 in. (114 in.) | 94 in. (114 in.) | 94 in. (114 in.) |

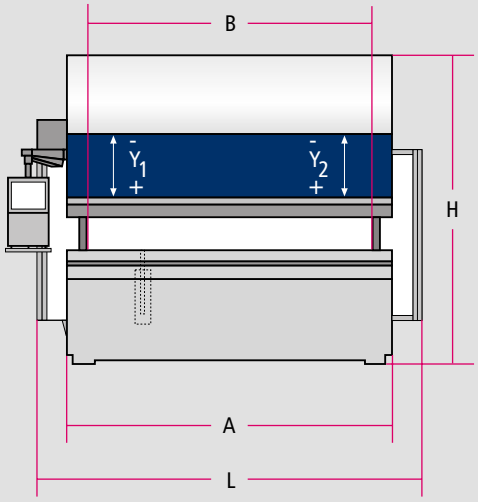
[1] Speed of travel is programmable
Values in brackets apply to version with an increased insertion height and stroke (options)

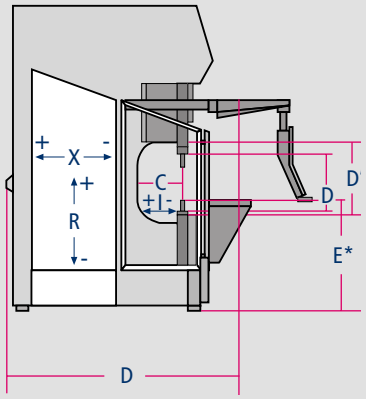
# Technical Data

| Machine | TrumaBend V170 | TrumaBend V200 | TrumaBend V230 | TrumaBend V320 |
|---|---|---|---|---|
| Tonnage | 190 tons | 220 tons | 257 tons | 357 tons |
| Stroke | 14 in. | 14 in. | 14 in. | 14 in. |
| Max. bed-press beam distance (D) | 25 in. | 25 in. | 25 in. | 25 in. |
| Eff. open height (D) | 21 in. | 21 in. | 21 in. | 21 in. |
| Inclination of beam | ± .4 in. | ± .4 in. | ± .4 in. | ± .4 in. |
| Bending length (A) | 160 in. | 160 in. | 120 in. | 160 in. |
| Distance between side frames (B) | 145 in. | 145 in. | 106 in. | 145 in. |
| Throat (C) | 16 in. | 16 in. | 16 in. | 16 in. |
| Width of bed | 8 in. | 8 in. | 8 in. | 8 in. |
| Operating height (E*) | 41 in. | 41 in. | 41 in. | 41 in. |
| Max. distance in X | 33.5 (39) in. | 33.5 (39) in. | 33.5 (39) in. | 33.5 (39) in. |
| Travel in X axis | 23.6 in. | 23.6 in. | 23.6 in. | 23.6 in. |
| Max. speed of X axis[1] | 1200 ipm | 1200 ipm | 1200 ipm | 1200 ipm |
| Travel R axis | 9.8 in. | 9.8 in. | 9.8 in. | 9.8 in. |
| Max. speed of R axis[1] | 710 ipm | 710 ipm | 710 ipm | 710 ipm |
| Max. speed of Z axis[1] | 1900 ipm | 1900 ipm | 1900 ipm | 1900 ipm |
| Y rapid speed | 472 ipm | 472 ipm | 472 ipm | 354 ipm |
| Y operating speed | 2-24 ipm | 2-24 ipm | 2-24 ipm | 2-24 ipm |
| Y return speed | 320 ipm | 320 ipm | 320 ipm | 320 ipm |
| Drive motor | 30 HP | 30 HP | 40 HP | 50 HP |
| Oil capacity (approx.) | 93 gal. | 93 gal. | 105 gal. | 133 gal. |
| Weight (approx.) | 39,600 lbs. | 39,600 lbs. | 40,145 lbs. | 53,900 lbs. |
| Dimensions (LxD) | 182 x 87 in. | 182 x 87 in. | 144 x 91 in. | 183 x 91 in. |
| Dimensions (H) | 114 in. | 114 in. | 122 in. | 122 in. |

[1] Speed of travel is programmable
Values in brackets apply to version with an increased insertion height and stroke (options)

## Machine Layout




*at a tool height of 4 inches

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TRUMPF is certified in accordance with DIN ISO 9001
IDENT-No. 131983-9/03 – Subject to change