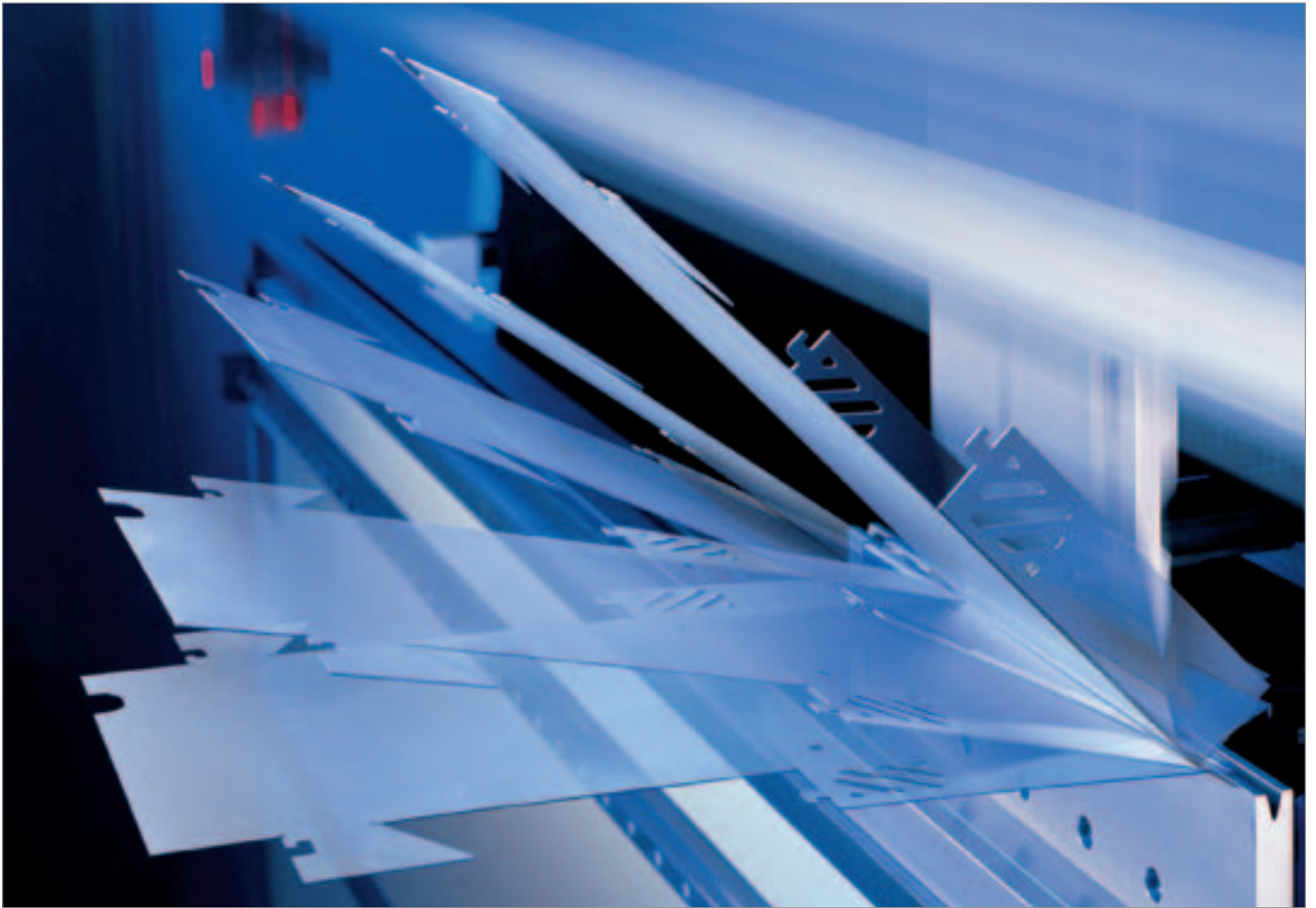


TRUMPF Press Brakes



Modern Technology
Means Profitability

TrumaBend V-Series



Technology for the Future

Quality, flexibility and productivity are the requirements you need to fulfill on a daily basis in production, and your sheet metal fabrication is geared towards them.

Press brakes from TRUMPF enhance your production optimally. The TrumaBend V series meets all the requirements.

Innovative mechanical engineering with TRUMPF precision – the use of new drives has reduced cycle times on the TrumaBend V-Series by up to 30 percent.

Rapid speed both up and down at 220 mm/s – but TRUMPF offers even more!

The striking new design of the pressure cylinders is the biggest change on the TrumaBend V-Series in relation to the existing machine series. Instead of two voluminous cylinders it now has four flat ones. These allow a large amount of available working space in front of the machine, while optimally transferring the press force. These are the best preconditions for orders with unusually large or thick sheets, or long bends with tight angles.

The machine frame is exposed to hardly any thermal load, and guarantees best workpiece quality from the first to the last bending operation.

The interplay of the finely adjustable servomotors, the travel path of the press beam measured in the center, temperature-independent forming compensation and alignment with the ACB angle sensor all function with hundred-percent reliability – so however large the batch size, constant quality is a matter of course.

The large number of available bending tools enables numerous different geometries, accompanied by pressure-mark-free processing without refinishing. Design products with large metallic surfaces can be included in production without a problem.

Optimized Work Steps: TRUMPF Control

The newly developed TRUMPF control optimizes work sequences. It is self-explanatory, and introduces the user to the program in short, easily comprehensible steps. The machine can be very quickly reset for a new order – making it even more flexible.

The TRUMPF control is also an open system. It can be linked with production control systems, enabling integration of the TrumaBend V-Series into networked production sequences.

Accessibility and Space Requirements

In the new design of the TrumaBend V-Series, special attention was paid to space requirements. Doors have been replaced by a space-saving roller cover, enabling unlimited access to the machine area and making the footprint still smaller.

This design also created useful storage spaces and areas that can be used individually.





Four Cylinders Cool Technology for Perfect Precision



Modern Four-Cylinder Drive Concept

Two cylinders on each side of the TrumaBend V-Series transfer pressure onto the beam quickly, precisely and evenly. The four cylinders also sharply increase precision.

The much larger cylinder surface encourages hydraulic oil cooling, which means that thermal influence on the machine frame is almost entirely ruled out.

The contact surface between the cylinder and the machine frame has also been minimized, so that hardly any heat can be transferred here either.

A further benefit of four-cylinder technology is the slim design of the TrumaBend. The cover on the press beam is narrow, creating a large bending area – ideal for processing tight angles on projecting sheets.

Lower Tool Clamping Secure Grip



Lower Tool Clamping

Tool fixing problems are now a thing of the past. Hydraulic tool-clamping via pistons enables even the smallest of dies to be automatically held, firmly and securely. They are secured from the front every 15 mm, ensuring that disruptive contours are prevented. The entire lower tool clamping has a pneumatic, two-position fixing option as standard.

If desired, the lower tool clamping can be moved electrically by the machine control, enabling special tools, for example, to be integrated with the greatest of ease.

ACB Angle Sensor

The Short Cut to the Right Angle

Regulated Angles

The proven ACB angle sensor measures and regulates the bending angle. The new TrumaBend V-Series can run up to 8 angle sensors – a big advantage with particularly long bends, or multiple bending stations on one machine. Data transfer takes place via a contact strip in the press beam, located directly above the clamp. The display then appears on the machine control.



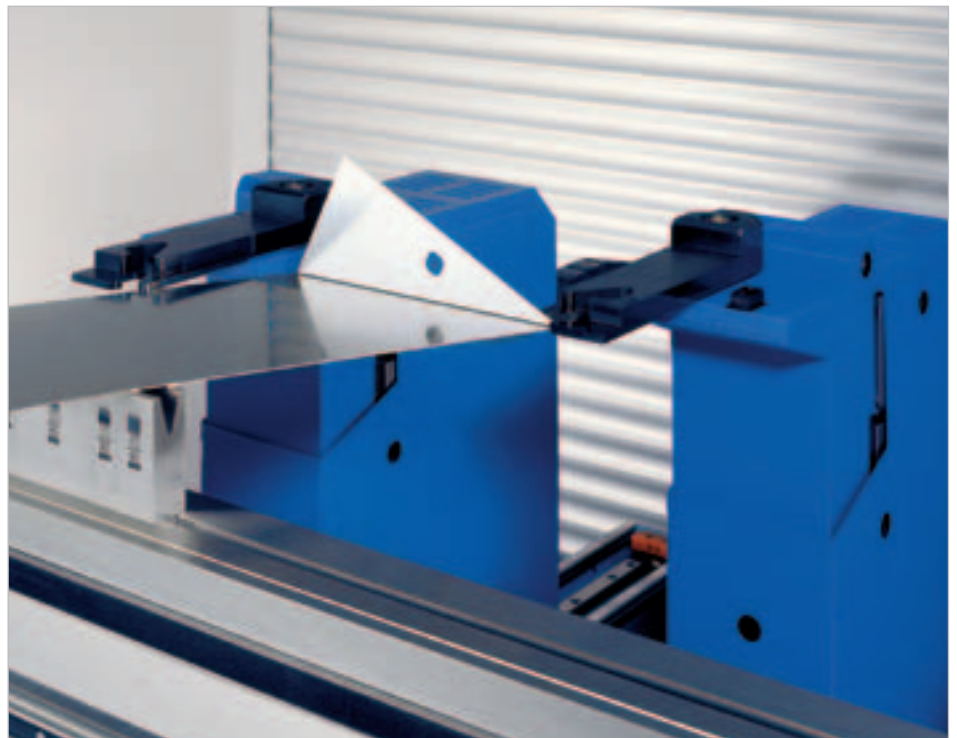
Backgauge

Systematic Part Variety

Proven Backgauge System

The new TrumaBend V-Series still features a large variety of backgauges, all of them freely programmable via the control. The machine comes with the 2-axis backgauge as standard.

The 4-, 5- and 6-axes backgauges are available as options, and fulfill almost every requirement where complex bending operations are concerned. They are ready for operation as soon as the machine starts. Referencing of the axes (searching for zero point) at start-up is no longer required.



TRUMPF Control Operation Made Easy

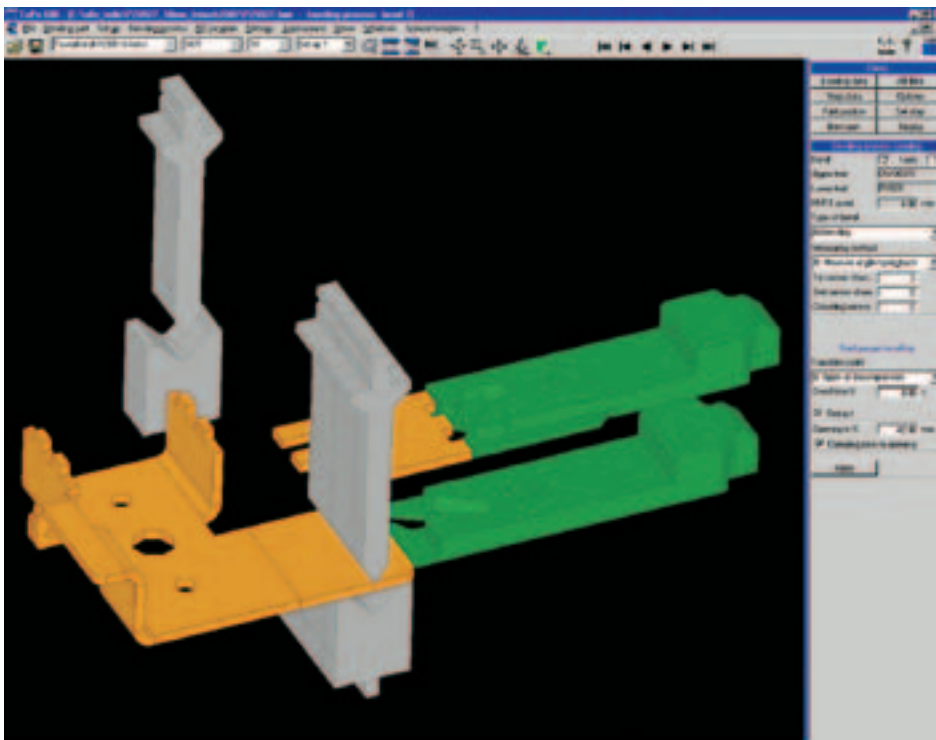


Simple, fast and clearly laid out: a control concept that sets new standards.

One highlight is the graphic-interactive user interface. The ergonomic operator console with its touchscreen is perfectly adapted to production.

Bending geometries, workpiece and technology data, tool selection – the dialog-based software guides the user intuitively and clearly through the bending program. Graphic visualization makes programming easy and comprehensible for the user. All the important parameters for the bending program are logically arranged and immediately recognizable.

ToPs 600 Smooth Integration with the Machine Control



ToPs 600

ToPs 600 is the technology-based program that fully supports operation of the Truma-Bend V-Series, from the 6-axis backgauge to the ACB angle sensor and the BendMaster. ToPs automatically suggests the bend sequences, generates setup plans and can simulate the entire bending process.

Programming with ToPs can be done anywhere: on the PC, parallel to production, or directly at the machine control – the data are taken over and processed in the new control. Programming and machine control have merged together.

E-Shop online

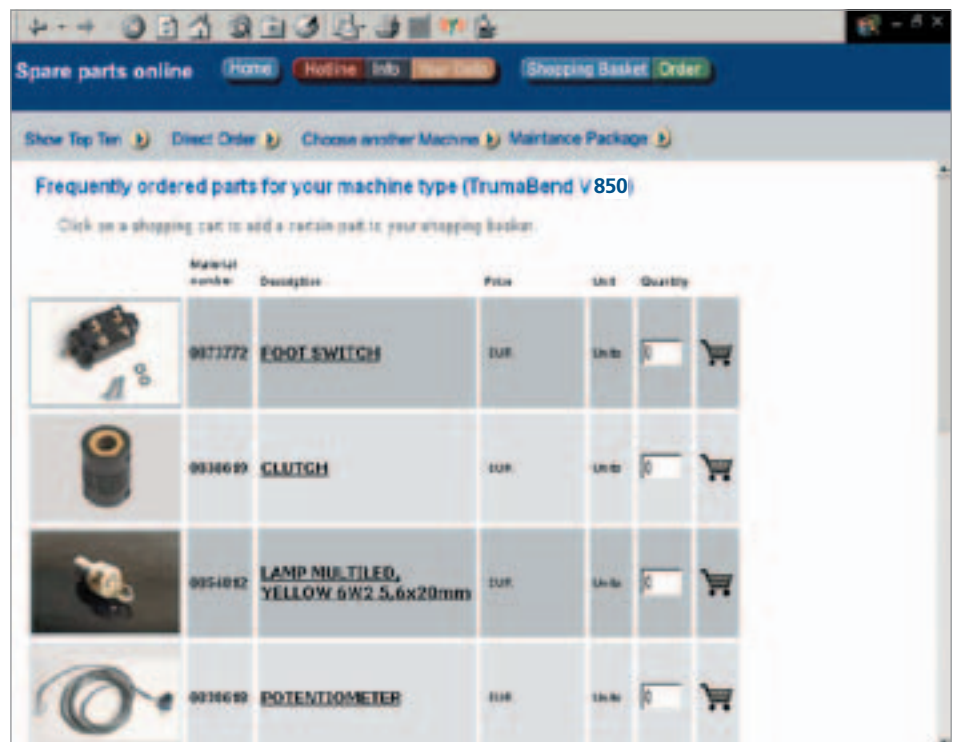
Ordering Bending Tools and Spares

Need a bending tool, or a spare part? No problem!

Ordering can be done directly from the machine control via the integrated modem, the Internet and the TRUMPF E-Shop. TRUMPF provides the shop exactly where it is needed. The advantages are obvious:

- Orders of bending tools and replacement parts can be made 24 hours a day, seven days a week.
- Orders can be generated and archived, and then called up again whenever necessary.
- The price is always the latest one.
- Perfect order management without paper or fax.

The shop not only processes orders in this way, but also provides support with all organizational issues relating to order management.



TrumaBend + TRUMPF BendMaster

A Profitable Team

BendMaster (optional)

The TRUMPF BendMaster automates the bending process, further increasing the flexibility of the TrumaBend V-Series. It is suitable for use with both large and small batch sizes, as well as heavy, light or complex components.

The basis of this is the holistic machine design – the bending machine and the BendMaster are both operated by just one control, and jointly programmed with ToPs 600.



Flexibility

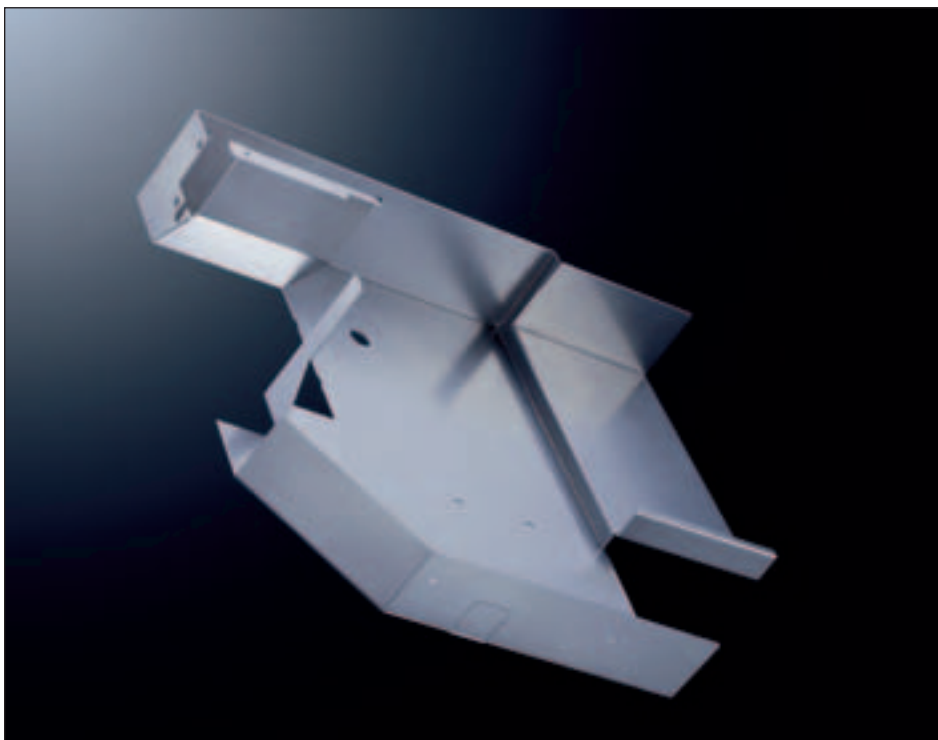
Sample Applications



Automotive Engineering

In automobiles and agricultural vehicles, structural components are subjected to an extreme degree of stress, and need to withstand dynamically alternating loads. The metal required here has to be especially thick, and as tensile as possible.

Support for a turnip-harvesting machine
Material: 6 mm sheet steel
No. of bends: 13



Plant Engineering

Plant engineering and maximum flexibility go hand in hand. The range of possibilities – e.g. flanges, assembly angles, folds etc. – is enormous. The menu-guided user interface on the TrumaBend V-Series enables you to prepare quickly changing tasks rapidly and optimally – right at the machine.

Cover for the motion unit of a TRUMATIC L 3050
Material: 1.5 mm aluminum
No. of bends: 13

Flexibility

Sample Applications

Design and Architecture

Stainless steel is a popular material in furniture production, and also in designer packaging. The requirements are bends free of pressure marks, precise flanges, and minimal bending radii. The broad working area and the large number of bending tools on the TrumaBend V-Series open up all kinds of creative opportunities.

Exhaust hood
Material: 1 mm stainless steel
Subassembly



Electronic Housing Construction

Batch sizes in electronic housing construction are large, and they have to be absolutely constant with regard to quality and dimensional accuracy.

The extremely low thermal load of the TrumaBend V-Series, combined with its measuring systems, guarantees optimal workpiece quality – whatever the batch size.

Housing
Material: 1 mm galvanized steel plate
No. of bends: 18



Technical Data

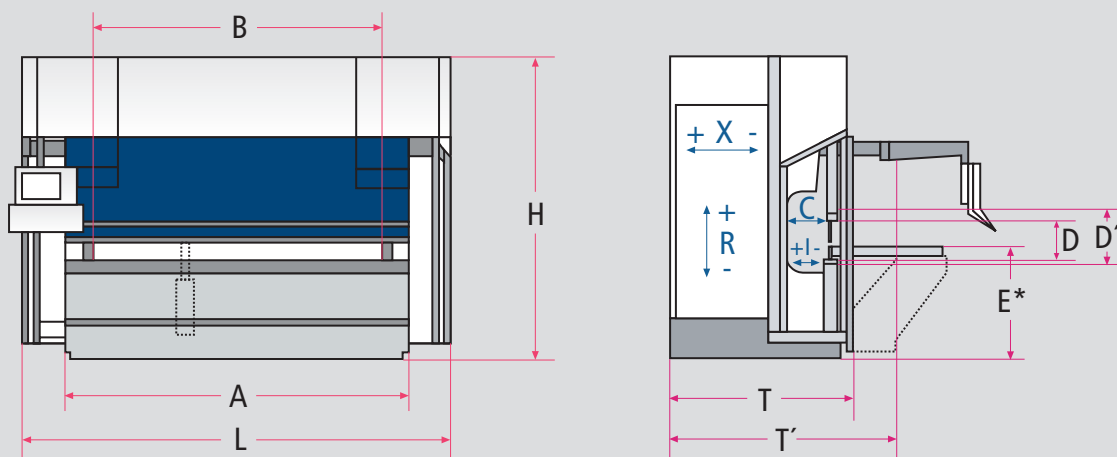
Machine	TrumaBend V500	TrumaBend V850	TrumaBend V850S	TrumaBend V1300
Tonnage	500 kN	850 kN	850 kN	1300 kN
Stroke	215 mm	215 mm (445 mm)	215 mm (445 mm)	215 mm (445 mm)
Max. bed-press beam distance (D')	505 mm	505 mm (735 mm)	505 mm (735 mm)	505 mm (735 mm)
Effective open height (D)	385 mm	385 mm (615 mm)	385 mm (615 mm)	385 mm (615 mm)
Inclination of beam	±10 mm	±10 mm	±10 mm	±10 mm
Bending length (A)	1275 mm	2210 mm	2720 mm	3230 mm
Distance between side frames (B)	1040 mm	1750 mm	2260 mm	2690 mm
Throat (C)	420 mm	420 mm	420 mm	420 mm
Width of bed	100 mm	120 mm	120 mm	120 mm
Operating height (E ²)	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
Max. speed of travel in X ¹	1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s
Travel R axis	250 mm	250 mm	250 mm	250 mm
Max. speed of travel in R ¹	330 mm/s	330 mm/s	330 mm/s	330 mm/s
Max. speed of travel in Z ¹	1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s
Y rapid speed ¹	220 mm/s	220 mm/s	220 mm/s	220 mm/s
Y press speed ¹	0.1-10 mm/s	0.1-10 mm/s	0.1-10 mm/s	0.1-10 mm/s
Y return speed ¹	220 mm/s	220 mm/s	220 mm/s	220 mm/s
Drive motor	5.5 kW	9.2 kW	9.2 kW	15 kW
Oil capacity (approx.)	90 l	120 l	120 l	220 l
Weight (approx.)	4900 kg	7300 kg (7800 kg)	8200 kg (8600 kg)	10200 kg (10900 kg)
Dimensions (L x T)	2190 x 1740 mm	3110 x 1740 mm	3620 x 1740 mm	4070 x 1740 mm
Dimension (T')	1930 mm	1930 mm	1930 mm	1930 mm
Dimension (H)	2375 mm	2375 mm (2835 mm)	2375 mm (2835 mm)	2375 mm (2835 mm)

¹ Speed of travel is freely programmable

² incl. standard lower tool height 100 mm

The values given in brackets apply to larger versions (options)

Machine Layout



*at a tool height of 100 mm

TrumaBend V1700	TrumaBend V1700S	TrumaBend V2300	TrumaBend V2300S	TrumaBend V3200
1700 kN	1700 kN	2300 kN	2300 kN	3200 kN
445 mm	445 mm	445 mm	445 mm	445 mm
735 mm	735 mm	735 mm	735 mm	735 mm
615 mm	615 mm	615 mm	615 mm	615 mm
±10 mm	±10 mm	±10 mm	±10 mm	±10 mm
3230 mm	4250 mm	3230 mm	4250 mm	4420 mm
2690 mm	3680 mm	2690 mm	3680 mm	3680 mm
420 mm	420 mm	420 mm	420 mm	420 mm
120 mm	180 mm	180 mm	180 mm	200 mm
1050 mm	1050 mm	1050 mm	1050 mm	1050 mm
860 mm (1000 mm)	860 mm (1000 mm)	860 mm (1000 mm)	860 mm (1000 mm)	860 mm (1000 mm)
600 mm	600 mm	600 mm	600 mm	600 mm
1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s
250 mm	250 mm	250 mm	250 mm	250 mm
330 mm/s	330 mm/s	330 mm/s	330 mm/s	330 mm/s
1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s
220 mm/s	220 mm/s	220 mm/s	220 mm/s	220 mm/s
0.1-10 mm/s	0.1-10 mm/s	0.1-10 mm/s	0.1-10 mm/s	0.1-10 mm/s
220 mm/s	220 mm/s	220 mm/s	220 mm/s	220 mm/s
18,5 kW	18,5 kW	30 kW	30 kW	30 kW
220 l	220 l	330 l	420 l	420 l
12000 kg	16000 kg	16000 kg	19500 kg	22400 kg
4250 x 1865 mm	5240 x 1865 mm	4270 x 1955 mm	5260 x 1955 mm	5300 x 1955 mm
2030 mm	2030 mm	2120 mm	2120 mm	2130 mm
3000 mm	3000 mm	3200 mm	3200 mm	3200 mm

TRUMPF is certified in accordance with DIN EN ISO 9001 and VDA 6.4

TRUMPF



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