

TruBend:

More bending
freedom.

The best bending solutions.

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TruBend machines incorporate a wealth of experience in press brake technology coupled with pioneering innovations. They enable you to fabricate parts in any format, from the simplest to the most complex, precisely and cost-effective.

TRUMPF has been designing and manufacturing press brakes since 1989. Among the most important developments are the ACB angle measuring system, patented 4-cylinder drive technology, machine control unit and operator ergonomics with innovative details such as the MagicShoe. TRUMPF leads the field in programming convenience and ease of operation. TruBend machines are renowned above all for their flexibility, finished part quality, and high cost-benefit ratio. Moreover, TRUMPF can meet all of your additional requirements – for tools, automation and software – from a single source. Designed for years of continuous operation at full capacity, TRUMPF press brakes are favored by industrial customers the world over.

TruBend: Benefits at a glance.

- 1 The right machine for every part geometry.
- 2 Cost-effective bending thanks to high productivity.
- 3 Parts of the highest quality.
- 4 Single source for all requirements, including top-quality tools.
- 5 Ease of operation and ergonomic design.

Visit us on YouTube.
www.youtube.com/trumpftube





TruBend Series 3000

Economical standard machine.

The right choice for users who value TRUMPF quality, simple operating procedures, and a favorable cost-performance ratio.



TruBend Series 5000

Productive jack of all trades.

High productivity throughout, from programming and tool set-up to the bending process. The TruBend Series 5000 is capable of performing bending work on a wide range of parts, always with the greatest precision.



TruBend Series 7000

Ergonomic high-speed machine.

Incorporating innovative features for high-speed bending of small and larger parts under optimized working conditions.

Why TruBend is better.



Precise results whatever the format.

The right machine for every part geometry.

TruBend bending machines enable you to process parts of any geometry economically and with high-quality results. The advantages for your business include:

- Wide choice of machine configurations.
- Numerous press forces and working lengths.
- Choice of air bending, bottom bending, and precision-angle bending.
- Exact positioning thanks to 2-, 3-, 4-, 5- or 6-axis backgauge systems.



The BendGuard can easily be pushed to the rear making it possible to load from the side.



Cost-effective bending thanks to high productivity.

TruBend machines enable you to minimize your cost per part. Several factors contribute to this cost-saving effect:

- High axis and working speeds.
- Minimum tool setup time.
- Automatic tool clamping systems.
- Energy-efficient drives.
- BendGuard: Maximum speed and optimum safety.



The MobileControl reduces the need to walk around.



The OCB accelerates angle measurement.

Top-quality parts.

With TruBend machines, you achieve precise results every time.

- The stable machine frame guarantees precision.
- Precise angles every time thanks to integrated CNC crowning.
- Precise results thanks to ingenious angle measuring systems.

Ease of operation and ergonomic design.

The interaction between operator and machine is a decisive factor in bending. That is why TruBend machines are designed with the operator in mind, to lighten the workload:

- Individually selectable control settings.
- User-friendly man-machine interface.
- Ergonomic bending supports and consoles.
- Less walking due to the MobileControl.
- Simple, vertical tool loading.
- Revolutionary easy stroke triggering thanks to the MagicShoe.

Single source for all requirements.

TRUMPF does not only develop and produce press brakes. We also provide:

- TRUMPF LASERdur quality tools.
- Highly advanced machine controls.
- Customized automation solutions.
- TRUMPF software and services.



The footrest increases operator ergonomics.



LED lighting ensures optimal visibility.



2D code scanner facilitates program selection.



Efficient consultation thanks to provision of teleservices.

TruBend Series 5000

TruBend Series 5000:
Benefits at a glance.

- 1 Unrivalled productivity.
- 2 Full application freedom.
- 3 All-round user-friendliness.
- 4 Exact results.
- 5 Cutting-edge control.



Flexible production thanks to the 6-axis backgauge.

Productive jack of all trades.

The TruBend Series 5000 is TRUMPF's most successful bending machine worldwide. High productivity throughout, from programming and tool setup to the bending process. Innovative features such as the lower tool displacement rail and the 6-axis backgauge give you complete freedom of application.



Optimal part precision due to 4-cylinder drive technology.

Operator in focus.

The third generation of the TruBend Series 5000 has a great many innovative features to make an operator's everyday work easier. These include a revolutionary control concept that can be used easily and intuitively, as well as all kinds of novel ergonomic solutions, such as the MagicShoe.

Precision is its strong point.

The TruBend Series 5000 achieves the optimal part precision and angle accuracy starting from the very first part thanks to, among other things:

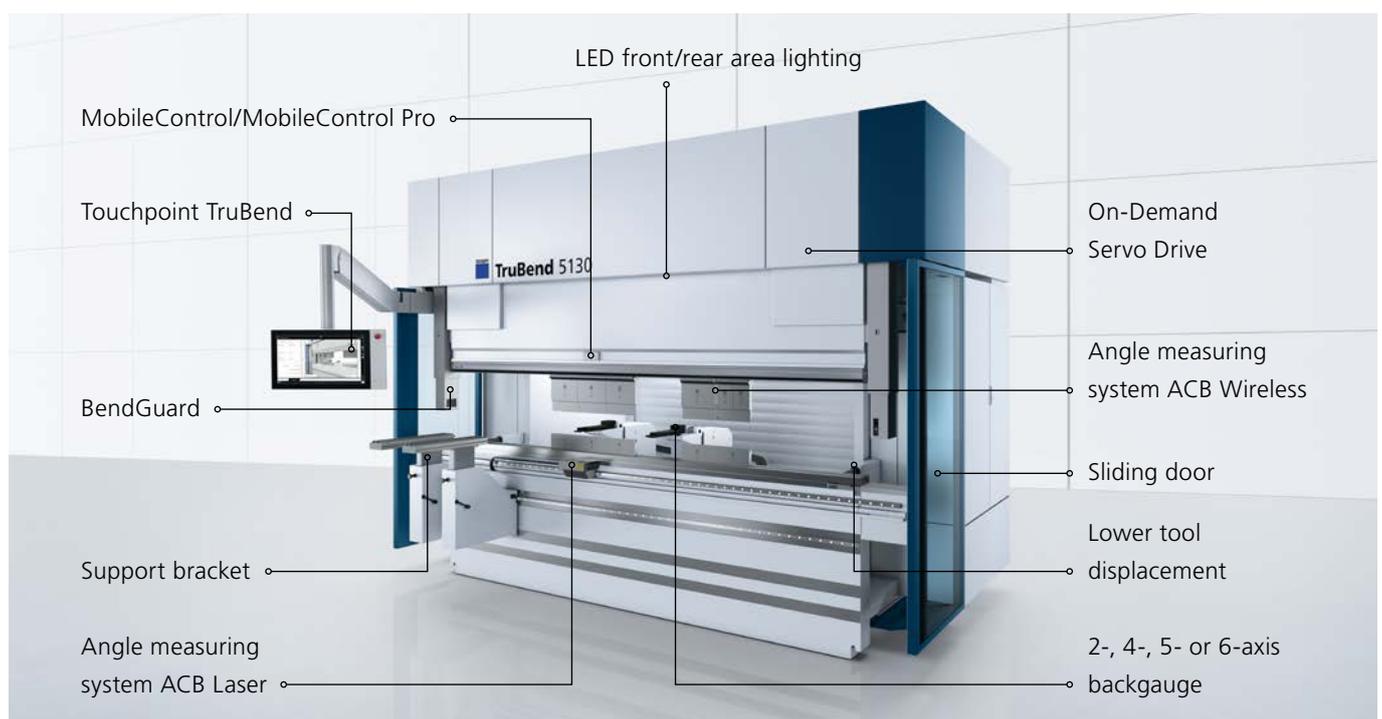
- 4-cylinder drive technology.
- CNC-controlled crowning.
- Ingenious angle measuring systems.

Surprisingly quiet, convincingly fast.

Not only is the On-Demand Servo Drive extremely energy-efficient, but at 220 mm/s it is also particularly fast. What is more, the eco-friendly drive has another impressive feature: It is unusually quiet. It makes things easier for the operator by mastering all set tasks without generating distracting noise.

Flexibly positioned.

The lower tool clamping can be moved into a variety of positions in X direction. This allows you to use special lower tools whenever necessary, for instance to make folds or Z edges at one station – quickly and without the need for a new setup. Repositioning is also useful when removing parts.

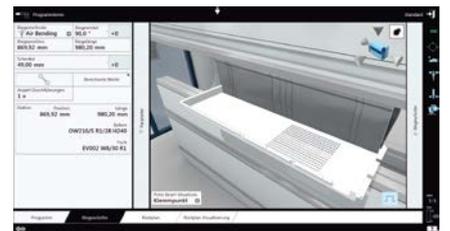


TruBend Series 5000

A dialog between man and machine.

TRUMPF has combined the advantages of state-of-the-art multi-touch technology with industrial control to make operating with Touchpoint TruBend remarkably simple.

- Intuitive operation just like that of a tablet or smartphone, even when wearing gloves.
- Displays concentrate on the essentials and make operation easier.
- Realistic 3D visualization complete with collision monitoring simplifies processing.
- The suitable solution for every application – no matter how simple or complex the component may be.
- The high-performance processor guarantees constant fast and reliable use in your everyday industrial operations.



Intuitive operation with the Touchpoint TruBend.

Walking less, doing more.

With MobileControl and MobileControl Pro you can control your machine from wherever you happen to be. This saves you from having to move from the control unit to the workstation, and as such it raises productivity. Each MobileControl unit features all the essential control functions. The MobileControl Pro modules also allow you to adjust the most important settings, such as correction values or the order of bending steps, directly at the machine. The MobileControl and MobileControl Pro modules enable you to work from anywhere along the work area.



Mobile operating units increase productivity.

Get off on the right foot.

Operators are the key to productive bending. And now their work is becoming easier thanks to a groundbreaking development: the MagicShoe. TRUMPF is presenting this ergonomic innovation as an alternative to the mechanical foot switch. The MagicShoe is equipped with smart sensors that initiate the stroke with a simple foot movement – no matter where the operator in front of the machine is standing. This makes the moving or dragging along of foot switches a thing of the past and leaves the area in front of the machine free.



The MagicShoe replaces the foot switch.

Bending assistance.

The bending aid provides valuable practical assistance for angles of up to 30° and includes an automatic height adjustment. It supports operators in bending especially heavy or large parts. There is a choice of either synthetic, brush or roller supports.

On good form.

Support brackets with infinite height adjustment make it easier to handle your parts. They can take loads of up to 200 kg and, just like the bending aid, are available with a choice of different supports.

Twice as bright.

With the Tool Indicator operators can work more productively. During setup, white LEDs show with millimeter precision exactly where bending tools are needed. And while bending, the optical positioning aid always lights up at the station where the next bending operation is done. The operators no longer have to consult the control unit.



The bending aid provides support for the processing of heavy or large blanks.



Robust consoles facilitate handling.

TruBend Series 5000

More room, more light, the best view.

Sideways sliding doors take up minimum space and create extra room around the machine for supplying sheet metal and for depositing bent parts. Since the doors are made of safety glass, they ensure both optimum protection and ideal lighting conditions in the work area.

This optimal illumination is further enhanced by LEDs found both in front of and inside the machine. These not only keep energy consumption low but also prevent the production of excess heat that would otherwise bother operators in their work.

Keeping an eye on sheet thicknesses.

Thickness Controlled Bending (TCB) is a straightforward function that compensates for variations in sheet thickness. Sensors in the machine detect the thickness of the next sheet and adjust the upper tool's plunge depth accordingly. This allows you to achieve angle quality regardless of the sheet thickness – without having to recalibrate or reprogram, and with no drop in productivity.

Straight ahead to precise angles.

Precise angles are essential for bending. Variations in material characteristics such as strength or springback can compromise precision. TRUMPF's solution is called ACB, which stands for Automatically Controlled Bending. Using the angle measuring systems from the ACB family means even the first part in a series turns out perfect. Sensors determine the actual angle together with the springback and guide the ram to achieve the desired angle.

TRUMPF offers two systems that complement each another perfectly. Depending on the application, the ideal system is deployed.



Sliding doors minimize space requirements.



LEDs provide optimal lighting conditions.



Optical angle measuring system ACB Laser.



Tactile angle measuring system ACB Wireless.

The right solution for every application.

ACB Laser.

The TRUMPF ACB Laser offers you a noncontact, optical system for measuring angles. A laser projects a line onto the sheet and a camera detects the angle. This involves putting two measuring units into position using CNC.

ACB Wireless.

The user-friendly ACB Wireless determines and adjusts angles with the help of sensor disks integrated into the upper tool. Their position is automatically detected by the system. The tool and the control unit communicate wirelessly with one another.

ACB Laser strengths	ACB Wireless strengths
<ul style="list-style-type: none"> ■ High speed. ■ High angle accuracy. ■ Applicable with different bending methods. 	
<ul style="list-style-type: none"> ■ Special fields of application: <ul style="list-style-type: none"> – Acute and open angles. – Thick sheets. – Large radii. ■ No setup effort. ■ Easy to use. ■ Use with special tools. ■ Maximum surface quality. 	<ul style="list-style-type: none"> ■ Special fields of application: <ul style="list-style-type: none"> – Short sides. – Reflective surfaces. – Internal flanges. ■ Quick station bending. ■ Fast Multi-point measurements. ■ No interference contours. ■ A inexpensive entry into angle measuring.



 **TruBend 5130**

Awards for TruBend 5130:



Technical data		
	TruBend 5130	TruBend 5170
Press force	1300 kN	1700 kN
Bending length	3230 mm	3230/4250 ^[1] mm
Width between columns	2690 mm	2690/3680 ^[1] mm
Maximum table/beam distance	735 mm	735 mm
Usable open height	615 mm	615 mm
Throat	420 mm	420 mm
Operating height ^[2]	1095 – 1115 mm	1095 – 1115 mm
Inclination of beam	± 10 mm	± 10 mm
Speeds^[3]		
Y rapid	220 mm/s	220 mm/s
Y working	max. 25 ^[4] mm/s	max. 25 ^[4] mm/s
Y return traverse speed	220 mm/s	220 mm/s
X axis ^[5]	1000/1750 mm/s	1000/1750 mm/s
R axis	330 mm/s	330 mm/s
Z axis ^[5]	1750/2500 mm/s	1750/2500 mm/s
Precision		
Y axis position accuracy	0.005 mm	0.005 mm
X axis position accuracy	0.04 mm	0.04 mm
R axis position accuracy	0.08 mm	0.08 mm
Working range		
Y axis stroke	445 mm	445 mm
Travel path X axis	600 mm	600 mm
Max. gauge area in X ^[5]	860/1000 mm	860/1000 mm
Travel path R axis	250 mm	250 mm
User interface	Touchpoint TruBend	Touchpoint TruBend
Connection values		
Connected load	17.5/42 ^[4] kVA	24/61 ^[4] kVA
Oil capacity	approx. 120 l	approx. 180 l/250 l ^[1]
Dimensions and weight^[6]		
Length x Width	3980 x 1900 mm	3980 x 1900 mm 4970 x 1900 ^[1] mm
Height	2835 mm	3000 mm
Weight	11800 kg	12500/16400 ^[1] kg

^[1] Second figure relates to extended version (optional).

^[2] With lower tool height 100 mm. Working height varies with the height of the installation material.

^[3] Speeds freely programmable.

^[4] With increased working speeds at maximum press force (option).

^[5] Depends on backgauge selected.

^[6] Data refer to basic machine without options.

Subject to alteration. Only specifications in our offer and order confirmation are binding.

TruBend Cell

Productive all-purpose bending cell.

TruBend Cell 5000 enables you to process parts cost-efficiently and achieve high productivity. The BendMaster relieves the operator of many onerous tasks, especially when processing large and heavy workpieces weighing up to 100 kg. The bulk of the work is handled by the machine – working around the clock, seven days a week, if necessary. You can always rely on our automated bending solutions to produce parts of a consistently high quality.



Innovative high-speed bending cell.

Ideally suited for the automatic bending of small parts, the TruBend Cell 7000 is the compact solution for fabricators looking to increase their productivity. The innovative bending units are a unique feature of the machine, with their lightweight backgauges and modern drive concept. All in all, the TruBend Cell 7000 is the fastest bending cell in its class.



ToolShuttle



The right tool always at hand.

The tool shuttle quickly and ergonomically sets up your tools and accommodates 160 linear meters of bending tools. The compact tool storage can directly supply up to two bending machines, with the transfer carriage transporting the tools to the machines.

The tools are stored in drawers and automatically provided. In the process the tools are provided in setup position and at the right height, so the operator is optimally assisted. No time is lost looking for and transporting tools anymore, and setup times are reduced to a minimum. This will save you 60% time with every tool setup operation.

Bending tools.

Tailored to your requirements.

Bending tools from TRUMPF enable you to meet any challenge, however complex it may be. They are backed by the extensive experience of our experts, who are always there to help you:

- Customized advice and tailored design solutions.
- Development and testing of application-specific systems.
- Fast availability.
- High precision and a long service life.
- A single source for machines and tools.



The LASERdur process used to harden the tools.



Everything you need from a single source.

Bending tools from TRUMPF live longer.

Precision and quality are the characteristics that count when manufacturing bending tools. Our unique LASERdur technique results in extremely hard-wearing tools. We use a laser hardening process to selectively strengthen tools in those areas that are most subject to wear.

Flexible standard tools.

We offer a range of over 150 punches and dies from which to choose those best suited to your application. And, you are free to decide whether you wish to order a complete set or compile your personal selection.

Custom-designed tools.

If your requirements are out of the ordinary, TRUMPF will develop a customized tool solution, just for you. To ensure that it meets the quality requirements for your parts, we will test the tools using the materials you specify and produce prototype parts for you to evaluate.

Measuring tools.

We can provide automeasuring tools based on our proven ACB system for almost every standard tool in our range. Sensor disks incorporated in the forming tool send back measurement data directly from the operating zone. With ACB, you can reproduce angles of the highest accuracy.

Press force calculator.

TRUMPF calculation table.

The charts allow you to simply read off the required bending force (F) for a part measuring 1 m in length. The necessary force varies as a function of the sheet thickness (s, vertical scale) and the selected width of the die opening (w, horizontal scale). The tables also show the minimum leg length (b) and the inside radius (Ri) associated with the selected die size (w, width of die opening).



Calculation table also available as app.

Mild steel 400 N/mm²

Press force required for 90° air bend

s	6	8	10	12	16	20	24	30	40	50	60	70	80	90	100	120	w	b	Ri
0.75	52	39	31	26															
1	93	70	56	47	35														
1.25	145	109	87	73	55	44													
1.5	209	157	126	105	79	63													
1.75		214	171	143	107	86	71												
2			223	186	140	112	93												
2.5				291	218	175	145	116											
3					314	251	209	168	126										
3.5					428	342	285	228	171	137									
4						447	372	298	223	179	149								
4.5						566	471	377	283	226	189	162							
5								466	349	279	233	200	175						
6								670	503	402	335	287	251	223					
7									684	547	456	391	342	304	274				
8										715	596	511	447	397	358	298			
10												798	698	621	559	466			
12													1005	894	804	670			

Stainless steel 700 N/mm²

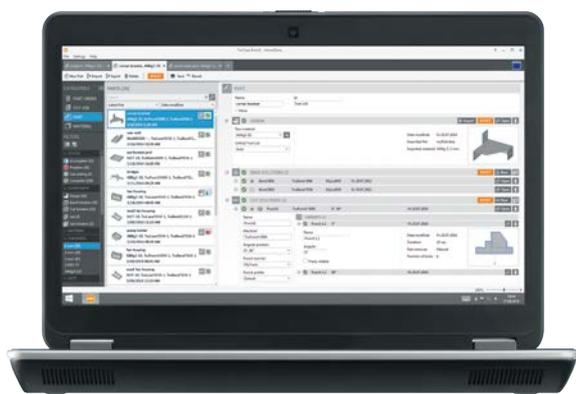
s	6	8	10	12	16	20	24	30	40	50	60	70	80	90	100	120	w	b	Ri
0.75	87	65	52	44															
1	155	116	93	78	58														
1.25	242	182	145	121	91	73													
1.5	349	262	209	175	131	105													
1.75		356	285	238	178	143	119												
2			372	310	233	186	155												
2.5				485	364	291	242	194											
3					524	419	349	279	209										
3.5						570	475	380	285	228									
4							621	497	372	298	248								
4.5								628	471	377	314	269							
5									582	466	388	333	291						
6									838	670	559	479	419						
7										912	760	652	570	507					
8										1192	993	851	745	662	596				
10												1330	1164	1034	931	776			
12													1675	1490	1340	1118			

F in kN
s, w, b, Ri in mm

= optimum die opening

Software:

Programmed for success.



TruTops Boost takes you faster than ever from the geometry to the NC program.

TRUMPF's TruTops Boost is the software solution for designing and programming laser, punching and bending machines that lets you increase your performance at the touch of a button. The software combines all order processing steps, from the geometry through to the completed NC program, in a single all-in-one solution. Its new operating philosophy guides you through the software in a simple, process-oriented manner while allowing you to keep an overview of your orders. Thanks to its numerous automated functions, the innovative Boost technology also makes you unbeatably fast. With it, you become more profitable and boost your business!

Talk to your TRUMPF contact to find out when TruTops Boost will be available to you. Until then, our TruTops Bend software can offer you optimum support. We recommend our TruTops Fab software as the ideal production control system for your requirements.

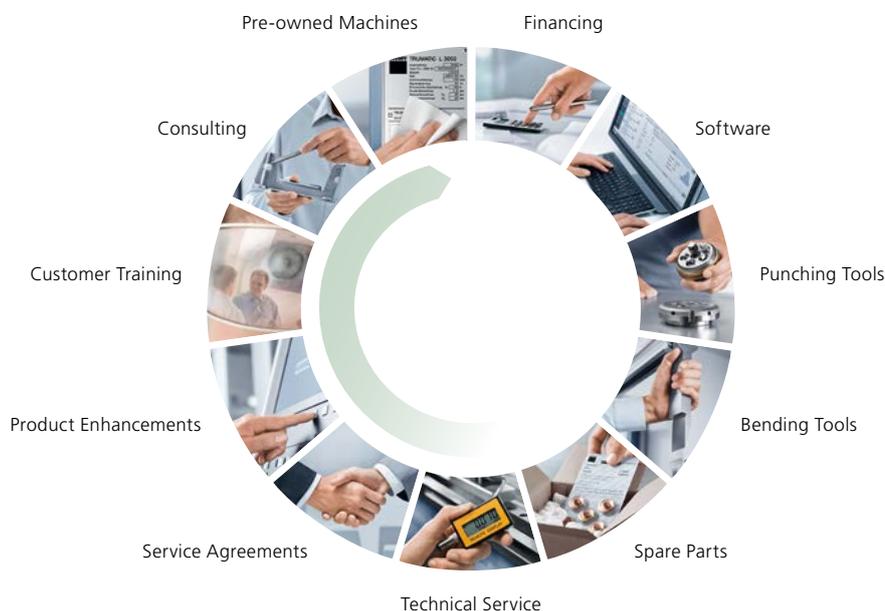
TruTops Boost: Your benefits at a glance.

- From geometry to NC program faster than ever before.
- Everything monitored: Single software solution for all order processes.
- Everything under control: Intuitive user interface supports flexible working.
- Everything faster: Boost technology with productive automated functions.
- Innovative Boost technology + new operating philosophy = TruTops Boost

TruServices:

Service like no other.

Throughout the lifecycle of your machine.



Regardless of the TRUMPF technology you use, you will always get the best service. Thanks to the award-winning spare parts logistics at TRUMPF, we guarantee the highest availability of spare parts and provide you with all the products in the shortest time. TRUMPF offers you individual financing solutions quickly and without a lot of paperwork. Our service technicians are highly trained and always available when you need them.

A Service Agreement is the ideal way of ensuring the highest availability of your machine. Should your requirements change, we have flexible upgrading options and technical innovations that will make your machine even better. Our broad range of training courses with experienced trainers and hands-on practice will also give you a head start in understanding and operating your machine.

The TRUMPF Group ranks among the world's leading manufacturers of production technology and industrial lasers. Technical and efficient solutions for our customers have been our focus since 1923. As a leading technology supplier, TRUMPF is a one-stop shop for all of your technology needs: machines, automation, storage technology and services.

TRUMPF is certified according to ISO 9001:2008
(for further information see www.trumpf.com/en/quality)

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