

A detailed close-up photograph of a metal bending process. The image shows a metal sheet being bent into a sharp angle. The metal has a brushed, industrial finish. In the foreground, a metal plate with a grid of circular holes is visible, likely part of a bending die or a workpiece. The lighting is dramatic, highlighting the sharp edges and the texture of the metal. A white text box is overlaid on the top left of the image.

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. Innovative milestones include the ACB angle measuring system, patented 4-cylinder drive technology, and the machine control TASC 6000. TRUMPF leads the field in programming convenience and ease of operation. TruBend machines are above all renowned for their flexibility, finished part quality, and a high cost-benefit ratio. Moreover, TRUMPF can meet all of your additional requirements – for tools, automation and software – from a single source. More than 15,000 press brakes in operation around the world prove TRUMPF's claim to excellence every day.

TruBend: Benefits at a glance.

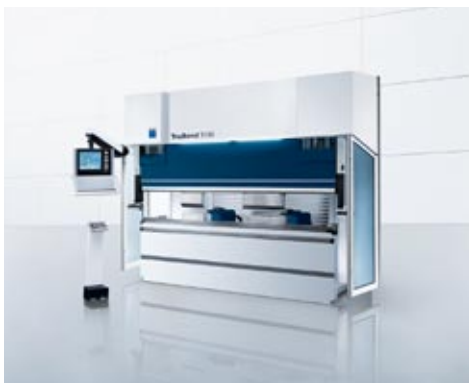
- 1 The right machine for every part geometry.
- 2 Cost-effective bending thanks to high productivity.
- 3 Parts of the highest quality.
- 4 Single source for all requirements, including top-quality tools.
- 5 Ease of operation and ergonomic design.



TruBend Series 3000

Economical basic machine.

The right choice for users who value TRUMPF quality, simple operating procedures, and an affordable price.



TruBend Series 5000

Productive jack of all trades.

High productivity throughout, from programming and tool setup 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.
- Wide variety of equipment options for back gauges, controls, and handling accessories.
- Choice of air bending, bottom bending, and precision-angle bending with ACB.

efficiency+

Our twofold objective is to work cost-efficiently and responsibly at the same time – our efforts to make sustainable use of resources underscore this objective.

- On-Demand Drive: main drive runs only during bending process to reduce energy consumption and noise emission.
- Modern hydraulic oil to eliminate the need for frequent oil changes.
- Innovative flow manufacturing to economize resources when assembling TruBend machines.
- ACB to automatically control bending angles and minimize rejects.

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-speed axis travel.
- Minimum tool setup time.
- Automatic tool clamping systems – compatible with other tool brands.
- Intelligently designed safety systems.

Top-quality parts.

With TruBend machines, you achieve precise results every time.

- Precision guaranteed by heat-treated, stable machine frame.
- Optimal press-force transfer using patented 4-cylinder drive concept.
- Identical angle over the entire length of the bend thanks to integrated CNC crowning.

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.
- Remote operation with Mobile Control.
- Simple, vertical tool loading.

Single source for all requirements.

TRUMPF develops and manufactures bending machines, bending tools and automation solutions – making interface problems a thing of the past.

- TRUMPF LASERdur quality tools – also made to order.
- Highly advanced machine controls.
- Customized automation solutions.
- TRUMPF software and services.



Bending support in the TruBend Series 5000.



LED lighting used in the TruBend Series 7000.



Lower tool holder system for the TruBend Series 5000.



Footrest available with the TruBend Series 7000.

TruBend Series 3000

TruBend Series 3000: Benefits at a glance.

- 1 Cost-efficient, even when operated at low capacity.
- 2 Configurable to your specific requirements.
- 3 Simple-to-operate, well-designed controls.
- 4 High positioning accuracy due to 4-cylinder drive.
- 5 Choice of tool clamping systems.



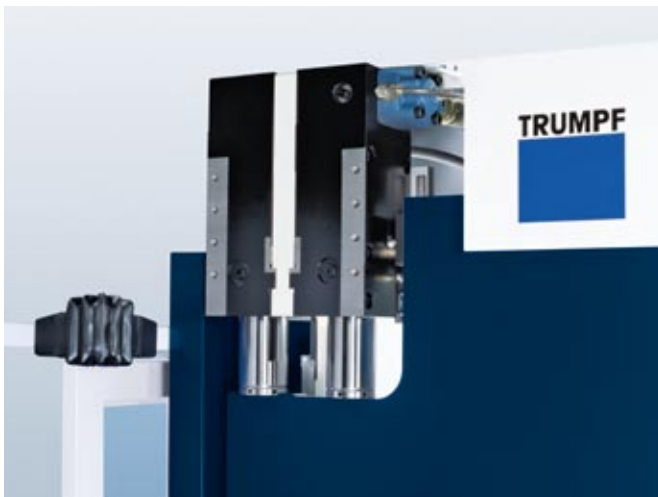
We offer a variety of different back gauge systems.

Economical basic machine.

The TruBend Series 3000 can either be your entry into precision bending with TRUMPF technology or it can expand your high-end machinery to include a flexible auxiliary machine. At an affordable price, it offers precise results, the best safety standards, and is very easy to operate – even for first time users. Your profitability is assured, even when operating at low capacity.

Well positioned.

The back gauge ensures that the metal blank is always positioned accurately. You can select from a variety of equipment options, depending on the type of parts you manufacture. In the standard version, TruBend Series 3000 machines are equipped with a 2-axis back gauge. As an option, this can be upgraded to 4 or 5 axes, enabling you to process almost any complex part geometry.



Patented 4-cylinder drive system.

Precisely bent parts.

The flat-front design of the patented 4-cylinder drive system provides generous edge clearance in the operating zone. Because the bending force is applied simultaneously at numerous points along the length of the workpiece, the ram is highly resistant to buckling. In combination with automatic crowning, you have the best possible conditions for achieving a precise result over the whole length of the bend.

Compatible with many tool brands.

The TruBend Series 3000 allows you to choose from different tool clamping systems to suit your particular application. If necessary, other tool brands can be accommodated without requiring an adapter. As a result, you can save money by continuing to use your existing tools when you switch to a TRUMPF machine.



Segmented manual clamp with hexagon socket.



Quick Clamp – Segmented manual quick clamp.



Pneumatic clamp of one piece.



Segmented pneumatic clamp.

TRUMPF

TruBend 3120



Technical data			
	TruBend 3066	TruBend 3120	TruBend 3180
Press force	660 kN	1200 kN	1800 kN
Bending length	2080 mm	3110 mm	4140 mm
Width between columns	1750 mm	2690 mm	3680 mm
Maximum table/beam distance	432 mm	432 mm	432 mm
Usable installation height	347 mm	347 mm	347 mm
Throat	420 mm	420 mm	420 mm
Operating height ^[1]	1000 mm	1000 mm	1000 mm
Inclination of beam	± 3 mm	± 3 mm	± 3 mm
Speeds^[2]			
Y rapid	200 mm/s	200 mm/s	200 mm/s
Y working	10 bis 20 ^[3] mm/s	10 bis 18 ^[3] mm/s	10 bis 15 ^[3] mm/s
Y return traverse speed	180 mm/s	180 mm/s	180 mm/s
X axis	500 mm/s	500 mm/s	500 mm/s
R axis	250 mm/s	250 mm/s	250 mm/s
Z axis	1000 mm/s	1000 mm/s	1000 mm/s
Precision			
Y axis position accuracy	0.01 mm	0.01 mm	0.01 mm
X axis position accuracy	0.05 mm	0.05 mm	0.05 mm
R axis position accuracy	0.1 mm	0.1 mm	0.1 mm
Working range			
Y axis stroke	200 mm	200 mm	200 mm
Travel Path X axis	600 mm	600 mm	600 mm
Max. gauge area in X	880 mm	880 mm	880 mm
Travel Path R axis	320 mm	320 mm	320 mm
Control			
	T 3000	T 3000	T 3000
Connection values			
Connected load	14.5 kVA	23 kVA	23 kVA
Oil capacity (approx.)	ca. 100 l	ca. 200 l	ca. 250 l
Dimensions and weight			
Length x Width	2600 x 1750 mm	3600 x 1750 mm	4610 x 2000 mm
Height	2330 mm	2330 mm	2330 mm
Weight	5400 kg	8300 kg	13200 kg

^[1] For tools with an effective height of 100 mm. May vary according to the size of the tool support.

^[2] Speeds freely programmable.

^[3] Depending on selected lower tool opening and application.
May vary in accordance with local regulations.

TruBend Series 5000

TruBend Series 5000:
Benefits at a glance.

- 1 Handles the widest range of parts in its class.
- 2 Maximum precision.
- 3 Dynamic axis positioning.
- 4 ACB: precise angles from the very first part.
- 5 Intuitive programming and machine controls.

Productive jack of all trades.

The TruBend Series 5000 is TRUMPF's best-selling bending machine. Its strong point is its outstanding productivity – at every stage of the process, from programming and tool setup to the actual bending operation.

Built for maximum precision.

The high precision obtained when parts are produced on a TruBend Series 5000 machine is attributable to its heat-treated machine frame, industry-proven 4-cylinder drive system, and CNC crowning.

Optical tool setup and positioning aid.

A line of red LEDs indicates the position at which the bending tool needs to be installed – with millimeter-scale precision. The optical positioning aid indicates the station at which the next bending operation is required.



Mobile Control enables the operator to control machine functions remotely, without having to move from place to place.



Optical tool setup and positioning aid.

ACB – precise angles from the very first part.

The user-friendly, patented ACB (Automatically Controlled Bending) angle measuring system guarantees bending-angle precision:

- Equipped with up to 8 angle sensors.
- Ability to process short leg lengths.
- 3-point angle feedback control for long parts.



Guaranteed precision with ACB.

Dynamic positioning with multiaxis back gauges.

A variety of back gauge systems are available to suit different part geometries and levels of complexity. In the standard version, TruBend Series 5000 machines are equipped with a 2-axis back gauge. This can be upgraded to 4 or 5 axes as an option. There is even a 6-axis version, in which each back gauge finger can be set independently. This makes the 6-axis back gauge the ultimate choice for flexible manufacturing.



Dynamic back gauges.

Intuitive programming and machine controls.

TRUMPF's Advanced Specialized Control, or TASC 6000, enables you to operate the machine using a mouse, keyboard or touch screen, as desired. Representing the latest generation in control systems, the interactive user interface simplifies programming and guides the operator throughout the process with intuitive, safe instructions. It only takes a few steps to input the numerical or CAD data for the part and generate the corresponding program. A 3-D animated display allows the bending process to be monitored in-line.



User-friendly TASC 6000 control unit.



Technical data

	TruBend 5050	TruBend 5085	TruBend 5130	TruBend 5170	TruBend 5230	TruBend 5320
Press force	500 kN	850 kN	1300 kN	1700 kN	2300 kN	3200 kN
Bending length	1275 mm	2210/2720 ^[1] mm	3230 mm	3230/4250 ^[1] mm	3230/4250 ^[1] mm	4420 mm
Width between columns	1040 mm	1750/2260 ^[1] mm	2690 mm	2690/3680 ^[1] mm	2690/3680 ^[1] mm	3680 mm
Maximum table/beam distance	505 mm	505/735 ^[1] mm	505/735 ^[1] mm	735 mm	735 mm	735 mm
Usable installation height	385 mm	385/615 ^[1] mm	385/615 ^[1] mm	615 mm	615 mm	615 mm
Throat	420 mm	420 mm	420 mm	420 mm	420 mm	420 mm
Operating height ^[2]	1085 – 1105 mm	1095 – 1115 mm	1095 – 1115 mm	1095 – 1115 mm	1095 – 1115 mm	1110 – 1130 mm
Inclination of beam	± 10 mm	± 10 mm	± 10 mm	± 10 mm	± 10 mm	± 10 mm

Speeds^[3]

Y rapid	220 mm/s	220 mm/s	220 mm/s	220 mm/s	220 mm/s	220 mm/s
Y working	10 to 20 ^[4] mm/s	10 to 20 ^[4] mm/s	10 to 20 ^[4] mm/s	10 to 15 ^[4] mm/s	10 to 15 ^[4] mm/s	10 to 15 ^[4] mm/s
Y return traverse speed	220 mm/s	220 mm/s	220 mm/s	220 mm/s	220 mm/s	220 mm/s
X axis	1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s
R axis	330 mm/s	330 mm/s	330 mm/s	330 mm/s	330 mm/s	330 mm/s
Z axis	1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s	1000 mm/s

Precision

Y axis position accuracy	0.005 mm	0.005 mm	0.005 mm	0.005 mm	0.005 mm	0.005 mm
X axis position accuracy	0,04 mm	0,04 mm	0,04 mm	0,04 mm	0,04 mm	0,04 mm
R axis position accuracy	0,08 mm	0,08 mm	0,08 mm	0,08 mm	0,08 mm	0,08 mm

Working range

Y axis stroke	215 mm	215/445 ^[1] mm	215/445 ^[1] mm	445 mm	445 mm	445 mm
Travel path X axis	600 mm	600 mm	600 mm	600 mm	600 mm	600 mm
Max. gauge area in X	860 mm	860 mm	860 mm	860 mm	860 mm	860 mm
Travel path R axis	250 mm	250 mm	250 mm	250 mm	250 mm	250 mm

Control

	TASC 6000	TASC 6000	TASC 6000	TASC 6000	TASC 6000	TASC 6000
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Connection values

Connected load	10 kVA	17 kVA	24 kVA	28 kVA	42 kVA	42 kVA
Oil capacity (approx.)	ca. 90 l	ca. 120 l	ca. 220 l	ca. 220 l	ca. 330 l	ca. 420 l

Dimensions and weight

Length x Width	2190 x 1740 mm	3110 x 1740 mm 3620 x 1740 mm ^[1]	4070 x 1740 mm	4250 x 1865 mm 5240 x 1865 mm ^[1]	4270 x 1955 mm 5260 x 1955 mm ^[1]	5300 x 1955 mm
Height	2375 mm	2375/2835 ^[1] mm	2375/2835 ^[1] mm	3000 mm	3200 mm	3200 mm
Weight	4900 kg	7300/7800 ^[1] kg 8200 ^[1] /8600 ^[1] kg	10200/10900 ^[1] kg	12000/16000 ^[1] kg	16000/19500 ^[1] kg	22400 kg

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

^[2] For tools with an effective height of 100 mm. May vary according to the size of the tool support.

^[3] Speeds freely programmable.

^[4] Depending on selected lower tool opening and application.

May vary in accordance with local regulations.

TruBend Series 7000

TruBend Series 7000:
Benefits at a glance.

- 1 Outstanding productivity.
- 2 Maximized, multi-axis dynamics.
- 3 Engineered for maximum comfort.
- 4 Low energy consumption.
- 5 Reduced footprint.

Maximum comfort:

- Variable supports for standing and seated operation.
- Adjustable foot and arm rests.
- Screen with personalizable viewing angle.
- Simple touch-screen control.
- Heat-free LED lighting.
- Laser projector for exact positioning of bending line.
- Practical document shelf.



Working without fatigue at the TruBend Series 7000.

Ergonomic high-speed machine.

The TruBend Series 7000 is a perfect example of the coordinated interaction between operator and machine. You can be sure of achieving outstanding productivity at every stage of the process thanks to its high speed and acceleration, and the optimized working environment provided by its ergonomic features. It is a particularly cost-effective solution for bending small- and medium-sized parts.

Certified ergonomic quality.

Human factor engineering played a significant role in the conceptual design of the TruBend Series 7000. As a result, the machines are a pleasure to use, operators can work quickly and efficiently, and part quality is consistently high. It is the first press brake to be awarded a quality certificate specifically for its ergonomic design.

Outstanding productivity.

The gearless, direct-drive motor delivers high torque even when rotating at low speed – the optimum requirements for achieving a high press force coupled with a high throughput rate. This extremely energy-efficient electric motor helps you to reduce energy costs.

Maximized, multiaxis dynamics.

The time required to bend small parts depends only partly on the operating speed of the ram. An even more important factor is the acceleration of the back gauges. To enable them to be positioned more rapidly, they are built to a special design using a lightweight, stable carbon-fiber material. The machine can operate much faster because the mass it has to move is significantly lower. The system is available with either 3 or 6 axes.

Better quality assurance.

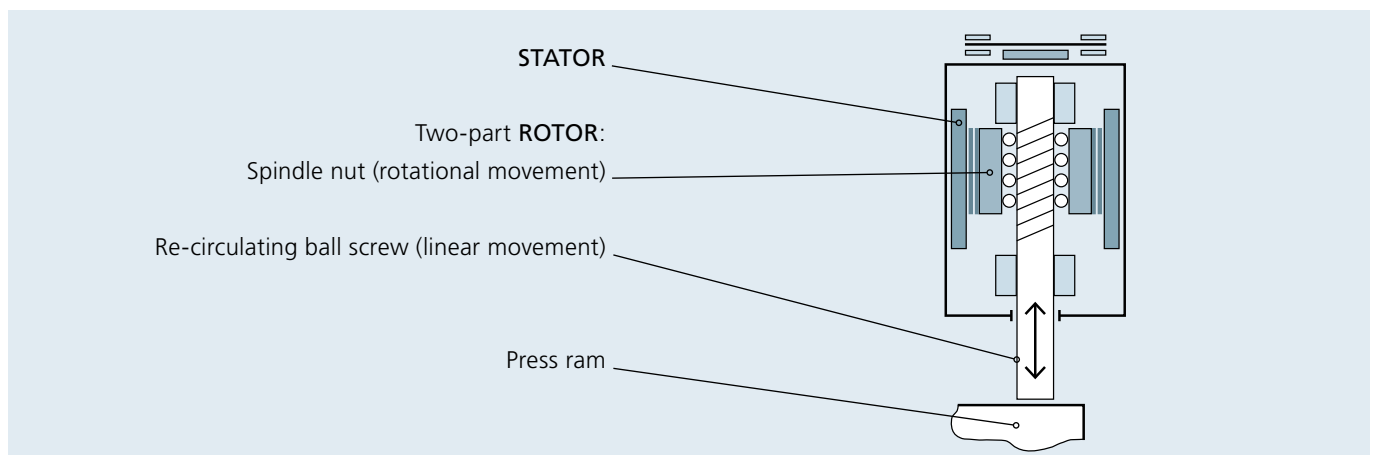
An integrated bending line laser projects a line of light onto the surface of the sheet metal, indicating precisely where it will be bent and enabling the operator to verify that the workpiece is in the correct position.



The user-friendly touch screen with intuitive menus can be tilted to avoid reflections.



The integrated bending line laser ensures spot-on positioning.



Structure of the torque motor.



Technical data		
	TruBend 7018	TruBend 7036
Press force	180 kN	360 kN
Bending length	510 mm	1020 mm
Width between columns	422 mm	932 mm
Maximum table/beam distance	420 mm	420 mm
Usable installation height	295 mm	295 mm
Throat	150 mm	150 mm
Operating height ^[1]	1150 mm	1150 mm
Speeds^[2]		
Y rapid	220 mm/s	220 mm/s
Y working	10 to 25 ^[3] mm/s	10 to 25 ^[3] mm/s
Y return traverse speed	220 mm/s	220 mm/s
X axis	1000 mm/s	1000 mm/s
R axis	330 mm/s	330 mm/s
Z axis	1000 mm/s	1000 mm/s
Precision		
Y axis position accuracy	0.002 mm	0.002 mm
X axis position accuracy	0.02 mm	0.02 mm
R axis position accuracy	0.02 mm	0.02 mm
Working range		
Y axis stroke	120 mm	120 mm
Travel path X axis	235 mm	235 mm
Max. gauge area in X	500 mm	500 mm
Travel path R axis	75 mm	75 mm
Control	TASC 6000	TASC 6000
Connection values		
Connected load	5 kVA	6 kVA
Dimensions and weight		
Length x Width	1295 x 1320 mm	1805 x 1330 mm
Height	2380 mm	2380 mm
Weight	1800 kg	2600 kg

^[1] For dies with a height of 100 mm.

^[2] Speeds freely programmable.

^[3] Depending on selected lower tool opening and application.

May vary in accordance with local regulations.

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 light-weight back gauges 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 set-up position and at the right height, so the operator is optimally assisted. No time is lost looking for and transporting tools anymore, and set-up times are reduced to a minimum. This will save you 60 percent time with every tool set-up operation.

Bending tools.

Tailored to your requirements.

TRUMPF bending tools 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.

TRUMPF bending tools 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.

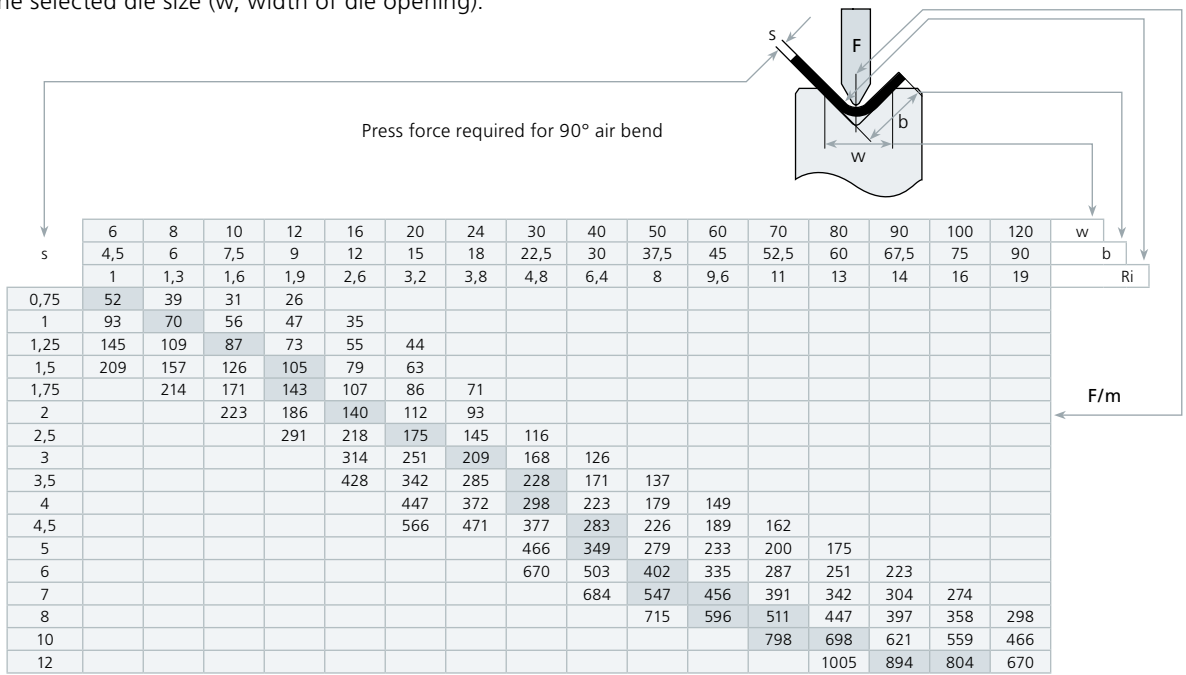
Press force calculator.

Calculation charts also available as app at www.trumpf-machines.com/bendguide.

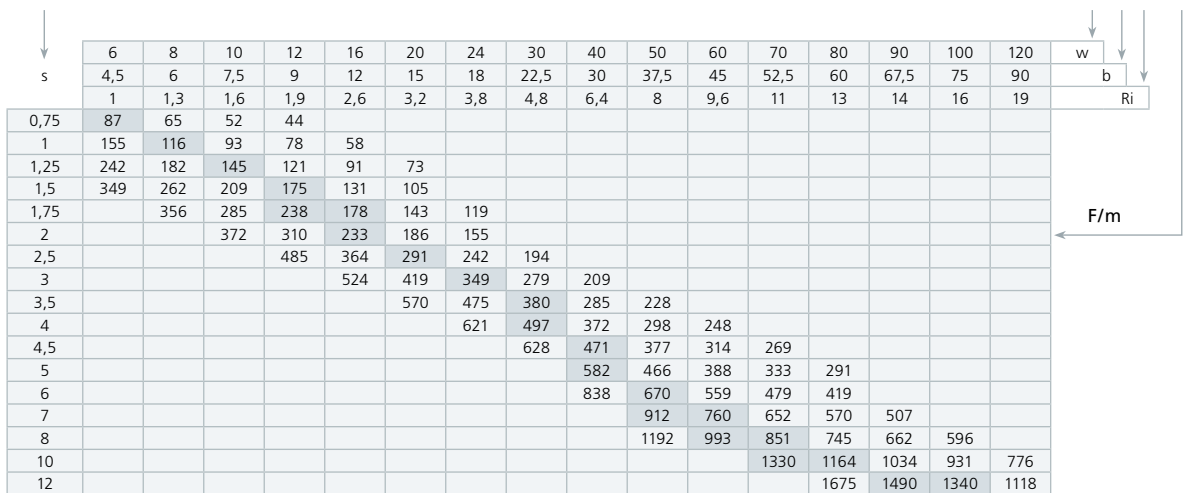


The charts allow you to simply read off the required bending force (F) for a part measuring 1 m in length. The necessary force varies as a function of the sheet thickness (s, vertical scale) and the selected width of the die opening (w, horizontal scale). The tables also show the minimum leg length (b)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

Mild steel
400 N/mm²



Stainless steel
700 N/mm²



F in kN
s, w, b, Ri in mm
= optimum die opening

Software:

Programmed for success.

TruTops Bend:
Offline programming during machine operation.

TruTops Bend improves the productivity of your manufacturing operations by allowing you to create programs while your press brake is in use. The database includes shortening factors and algorithms for tool selection and the calculation of complete bending sequences. This allows you to benefit from TRUMPF's bending expertise and ensures that you will obtain best-quality results right from the very first part.

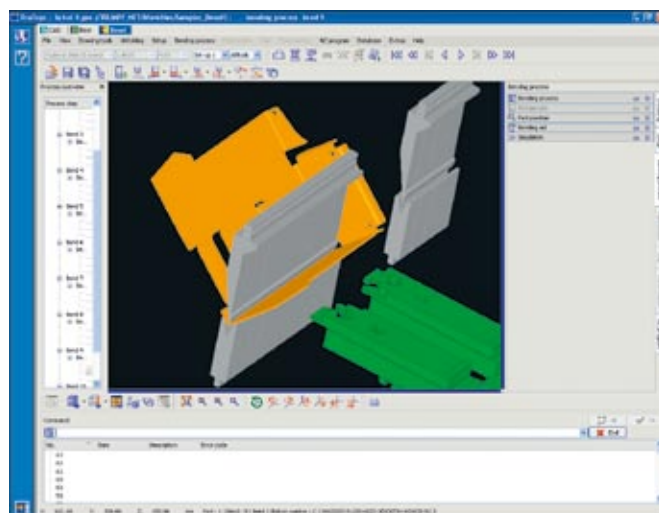
A detailed setup plan tells you which tools need to be installed, what parts will be produced, and how they will be stacked on

pallets. Simulation functions guarantee high process reliability and help to avoid tooling conflicts. Naturally, you can also use TruTops Bend to program a TruBend Cell – in the same programming environment.

The function Autorun automatically compiles your bending programs, for instance overnight, taking care to limit the number of tool changes to a minimum. In this way, you reduce setup time and save costs.

TruTops Bend:
The benefits it offers.

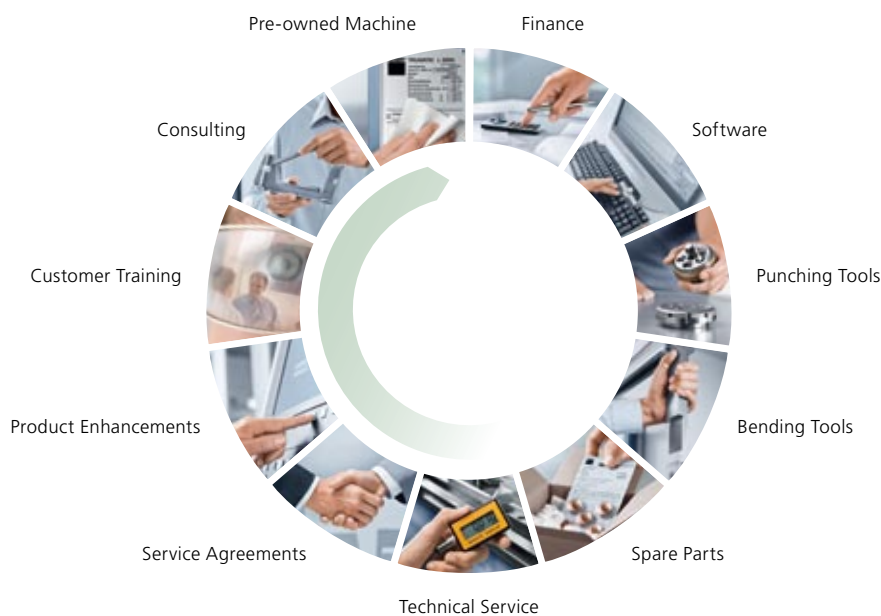
- High productivity through offline programming during operation.
- Integrated knowledge leading to excellent bending results.
- Autorun to save programming time.
- A single program for press brake and bending cell.
- BendCalculation to simplify the calculation of offers.



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. And, thanks to TRUMPF's award-winning spare parts logistics, all parts can be shipped to you in the shortest time possible. TRUMPF Leasing 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 best usability 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.



You can find out more about our services at www.trumpf-machines.com/services

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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