

# fast, flexible and innovative

**User Friendliness in Demand**  
 A machine is always only as good as even its ease/difficulty of use. A tiltable and swivel-mounted control panel makes it possible for even tall employees to do ergonomic work as short. Even in the case of our in-house software DS3000, we have paid special attention to user friendliness. Naturally, in the component database, radius adjustment values have been stored for complete automatic determination of optimum bending radii. Bending programs can be directly stored in the machine or at an external PC work place and shown in a live demo immediately. Thus, any conflicts can simply be determined and resolved in the preliminary stages. For the actual bending process, the user only needs to select and start the appropriate program.

And if at all there should still be any query about operating the software, our in-house software support team shall gladly assist you.



The DS 3000 Controller for Our Double Folder Models

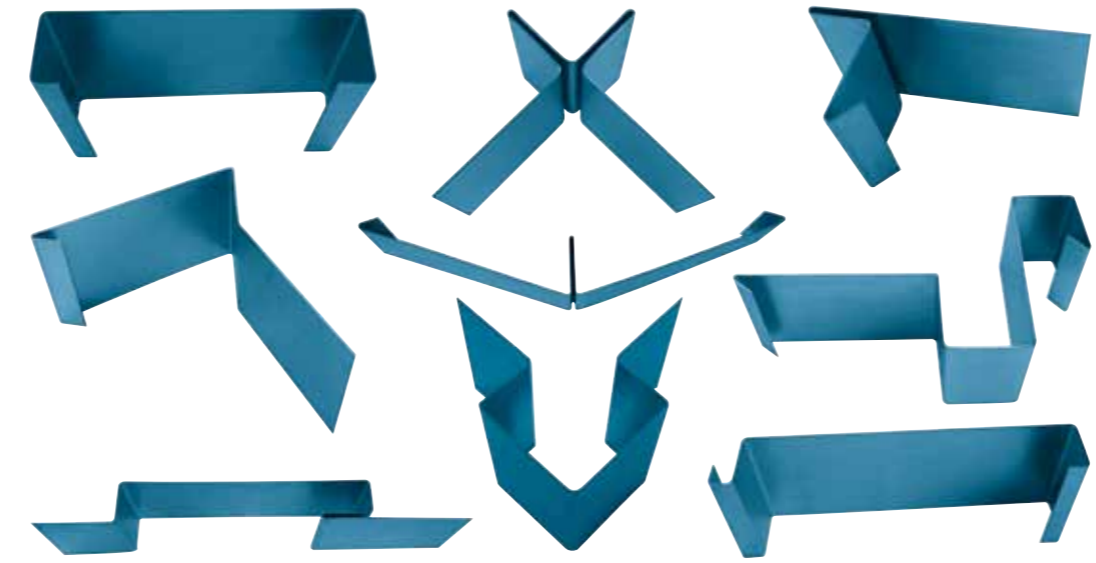
**Technical Data**

Model	TD 125	TD 150	TD 200
Standard Working Lengths	3.2 m / 4.2 m / 6.4 m / 8.2 m / 10.0 m / 12.0 m (10' 6"/13' 9"/21'/27'/32'/40')		
Standard Throat Depth	1250 mm (49.2")		
Max. Bending Capacity	1.25 mm (18ga)	1.50 mm (16ga)	2.00 mm (14ga)
Bending Flange Width	12 mm + 8 mm additional rail (.472" +.315" rail)		
Max. Bending Angle	143°		
Bending Speed	3.5 s for bending flange cycle of 143°		
Bending Accuracy	± 0,5°		

- Options**  
 Following are the options available for the TD model series:
- Longitudinal slit with double guide for the highest of precision
  - Customised roll forming tool for special profiles
  - Individual customised gripper fingers for changing
  - Stop fingers for very low supporting surfaces of the plate of 5 - 24 mm (.196" - .945")
  - Conical back gauge in fully automatic operation
  - Aluminium spherical supporting table in the machine
  - Individual, custom-tailored bending beam geometry
  - Yet sturdier bending and clamping beams made of Hardox 400 1200 N/mm<sup>2</sup> (174KSI)
  - Additional stand assembly for better bending stability, allowing for the sheet metal machine to be converted to an industrial machine without considerable capital expenditure

## Milestones of the Thalmann Maschinenbau AG

- **1948** Establishment of the company by Otto Thalmann †
- **1961** Patenting of the first long bending machine for the sheet metal forming business
- **1962** Market entrance in Austria and Germany
- **1965** Market entrance in Scandinavian market
- **1973** First deliveries to Australia
- **1974** Establishment of the Thalmann Konstruktionen AG
- **1978** Introduction to the market of the successful and strongest product line THAKO for 2-3 mm sheet metal
- **1981** Introduction to market of the product line PICO up to 1.5 mm sheet metal
- **1987** Receipt of the Bavarian State award (gold medal) for outstanding handcraft achievements relating to the THAKO 30 - 6.2 m
- **1987** Assignment of the GS label for industrial safety
- **1990** Introduction of the riser model QUIK on the market
- **1991** Name change to Thalmann Maschinenbau AG headquartered in Frauenfeld
- **1994** Handover of the company to Otto Thalmann's four sons Peter, Rolf, Ruedi and Kurt
- **1994** Introduction to market of the MAGNUM model with world exclusive wedge cut technology
- **1995** CE-certified Machine delivered for the first time
- **1996** First steps in the Asian markets
- **1997** Certification according to SN EN ISO 9001:2000
- **1998** Delivery of the world-longest folding machine of 18.2 m
- **1999** Establishment and participation in the OMK GmbH company for the production of luggage scanners
- **2003** Delivery of the first Double Bender TC-300
- **2006** Expansion in the USA/CAN market
- **2007** Introduction to the market of the ZR product line as replacement for the PICO series
- **2009** Facelift ZR-Model
- **2009** New control software with CAM and DXF Import
- **2010** Introduction of the TD model into the market



# THALMANN

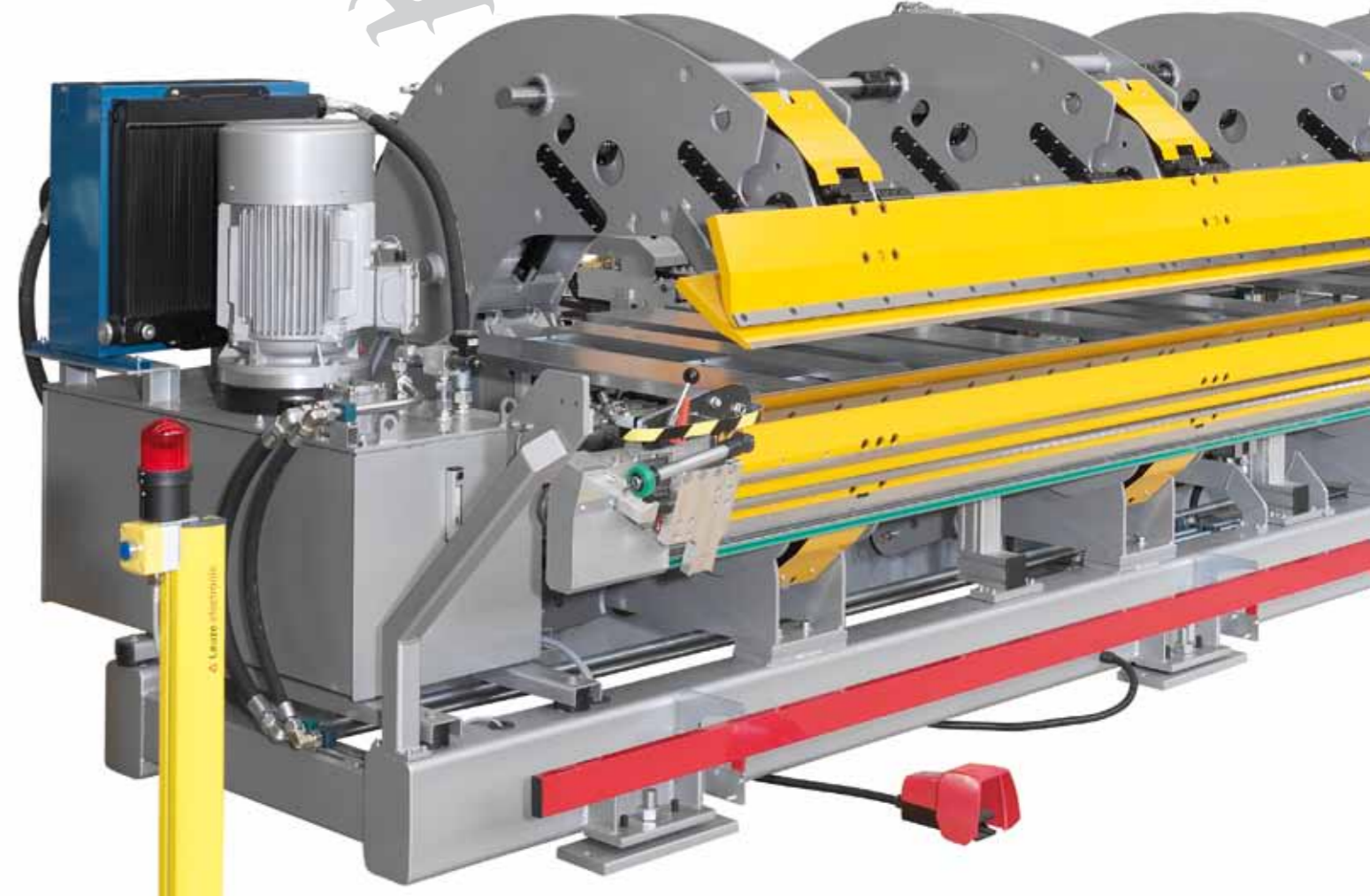
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# THALMANN



TD Double Bender Model



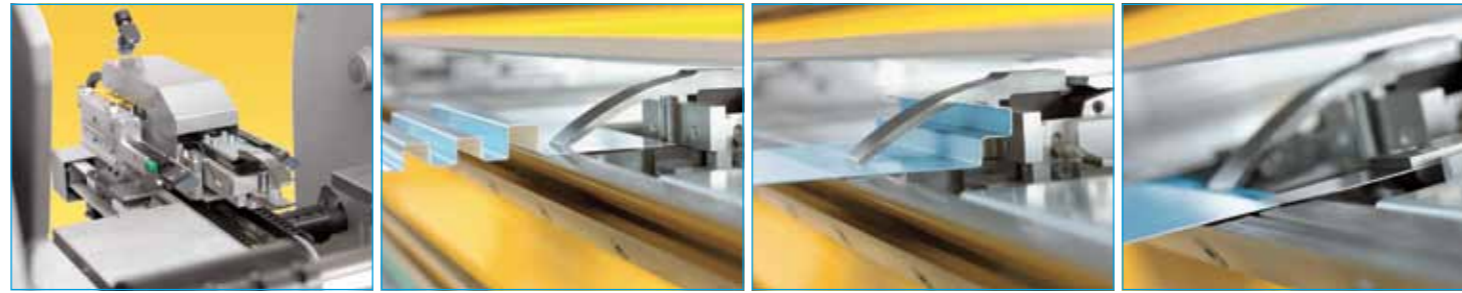
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# TD Double Bender – precise, fast, flexible and innovative



Longitudinal slitter with double guide for the highest of precision

Customised roll forming tool for special profiles



Individual customised gripper fingers for changing – Stop fingers for very low supporting surfaces of the plate of 5 - 24 mm (.196" - .945")



The clever beam geometry provides unrivalled flexibility

Individual, custom-tailored bending beam geometry

Laser monitoring of the clamping area for optimal accident prevention

Aluminium spherical supporting table for easy handling of materials

Now, the TD double benders also harness the advantages of double bending for large-scale operations of sheet metal, façade construction, and general bending with an economic yet top quality system – one bending flange above and one below enable bending from top down as well as from bottom up without having to rotate or turn the machined sheets. This facilitates the bending process and increases output. In this manner, the double benders are convincing with their precision, speed and flexibility as well as reliability and with a very wide spectrum of fabricable profiles.

## Maximum Precision

Maximum precision is taken care of by our unique Thalmann drive shaft technology. A mechanical control system synchronises all mechanical axes using a massive steel shaft and maintains constant operating pressure over the entire bearing length. This results in extremely precise bending – in case of profiles with 60 and more bends for e.g., the deviation from one side to the other is 2 mm (.08") at the most, that is a max. of 0.04 mm (.0016") per bend. The double bender achieves an accuracy of  $\pm 0.5^\circ$  for a max bending angle of up to  $143^\circ$  and

requires only an astounding three seconds back and forth, thanks to the heavy duty hydraulics! Incidentally, outside the bending cycles an automatic unpressurised rotary operation helps save precious energy.

## High Flexibility

Many slick features of the double bender facilitate manufacturing of profiles, which is not possible with other machines – the folding beams tilt to  $15^\circ$  directly increase clearance

around the bent component and thus provide more flexibility for the portable bending solutions. A genuine competitive edge for the user. Thanks to the folding beams of 12 mm (.472") width with 8 mm (.315") removable extra rails, narrow Z bends are possible. The automatic gripper system can securely hold all types of sheets from the very narrow 24 mm (.945") width sheet to the commercial 1250 mm (49.2") width coil. We provide special gripper fingers designed for individual profiles on request. In order that even special profiles can be securely gripped and quickly manufactured, the gripper

fingers are designed so that changeover is easy and quick. With optional gauge fingers, close gauging of 5 mm (.196") can be achieved. A special profile flange support provides a lot of free space in the machine.

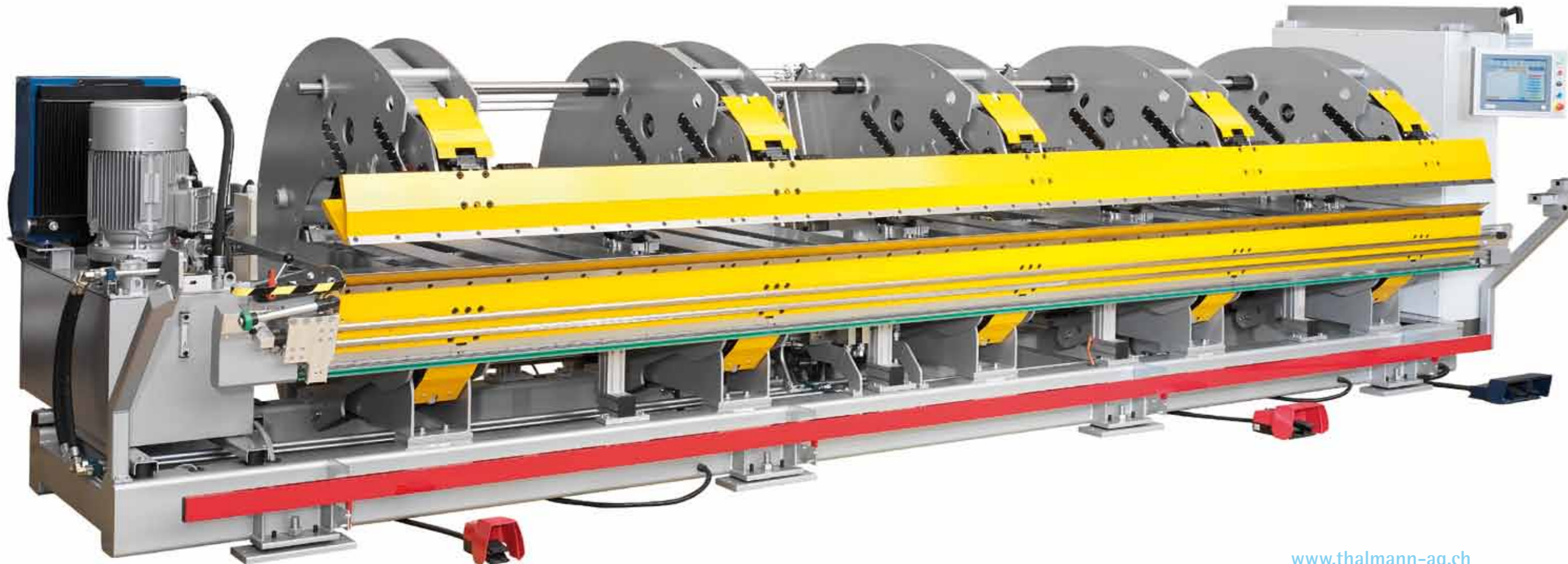
## Reliability and High Durability

At Thalmann Quality is written in bold letters. Our drive shaft technology, which is a tried and tested concept in the aircraft industry, also contributes to this. The uniform distribution of force along the entire bearing length takes care of a balanced load of all axes, even when only short sheet metals are machined. Excessive wearing of individual axes is thus prevented and the overall durability of the machine is increased. Other carefully selected components contribute to this, like for e.g. the hardened bolts of the bending flange bearing, the sturdy synchronous shaft or the maintenance-free, specially designed material for high edge pressures of the swing arm bearing. Even in case of the proportional valve technique and the control components, special attention is of course given to premium quality.

The massive robot welded construction of the stands and the bionic application of force using near-natural vertical alignment (elliptical-radii) guarantee stand units that are free of cracks for the entire life of the machine. Softly adjusted axle movements during bending additionally reduce wearing as also noise. Thanks to the "low-noise hydraulics", the sound level at the control panel is only 65 dB. The hydraulic system has been designed for three-shift-operation. Last but not the least, the high in-house production rate speaks for the quality of the double bender – approx. 80 percent of the parts are manufactured at Thalmann. And if in case there is any repair work at all, we offer a delivery guarantee for spare parts over decades!

## But safety

Undoubtedly, the safety of the user while swing folding should be warranted. This is possible if safety appliances are not only available but are also simple to use. Hence for the TD series, the concept of safety was intentionally handled simply so that there could be no manipulation of the safety appliances. A safety light barrier and a laser barrier for the clamping beam and the cutter or roll-forming unit are part of the safety concept. The rule "Safety while Controlling" is given as much importance as are the specifications of the prescribed safety equipment as per the latest EU machinery directive.



[www.thalmann-ag.ch](http://www.thalmann-ag.ch)

