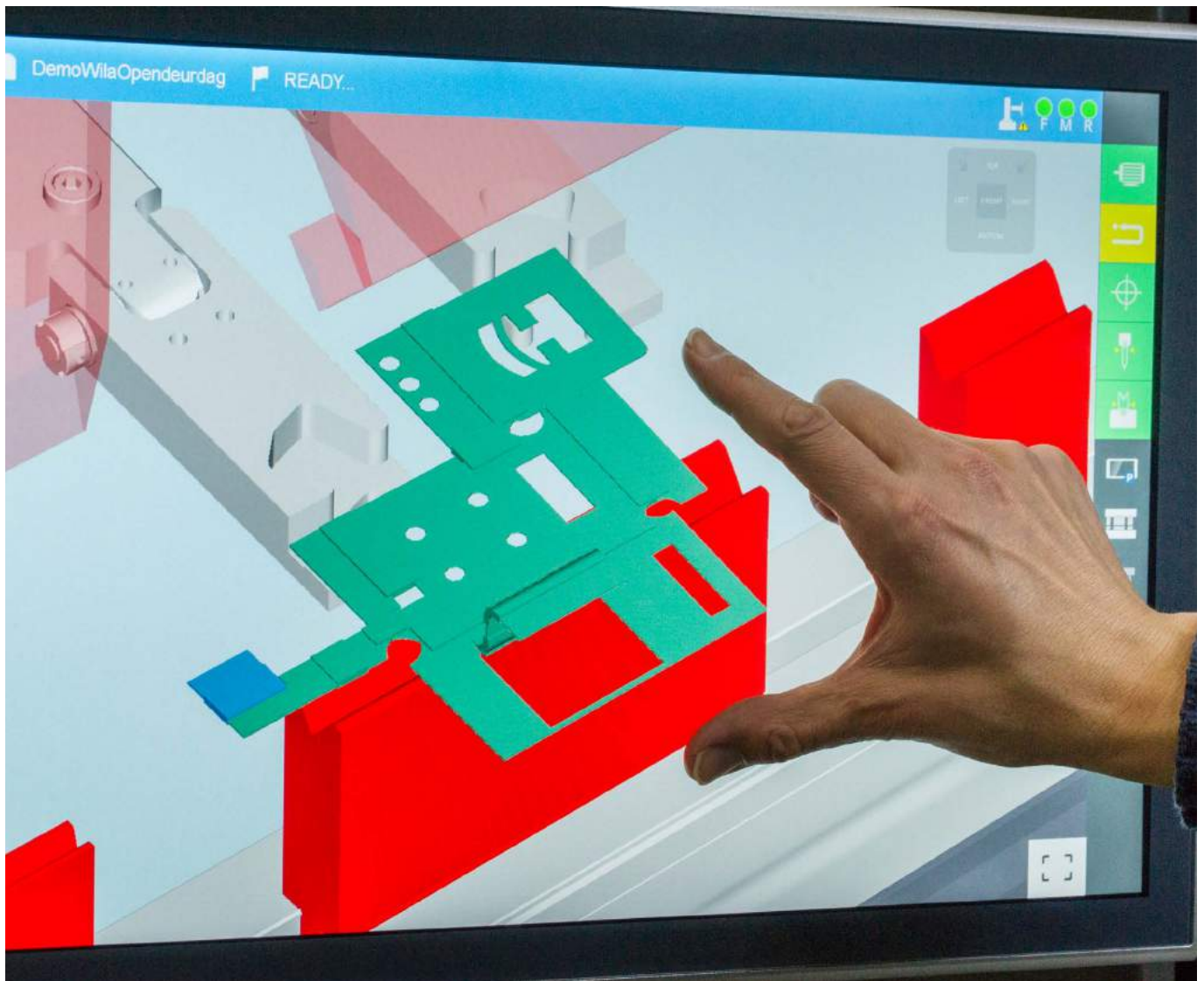


## FastBEND-2D MT Premium



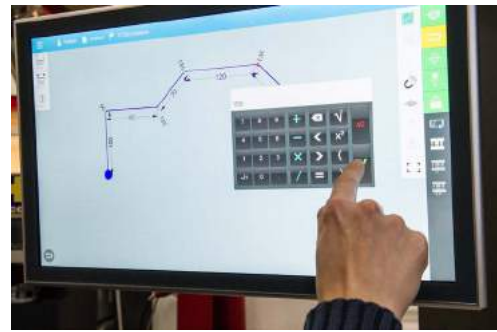
FastBEND-2D MT Premium  
*High-performance  
press brake control with  
2D software and 3D visualization*

# FastBEND-2D MT Premium

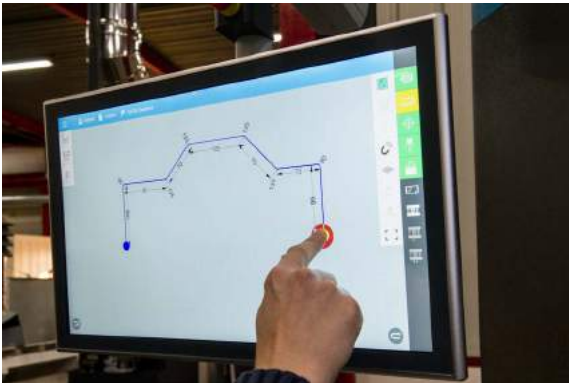
## Next-generation bending

The FastBEND-2D MT Premium control sets a new standard in the market for flexible, intuitive, reliable and high precision sheet metal bending.

Driven by state-of-the-art PC-based hardware, the system allows for very fast data processing and highly accurate calculation of the optimal bending programs for hydraulic CNC press brakes.



## Intuitive Multi Touch control with multitasking



The application of Multi Touch technology reduces the number of keyboard- and button actions to an absolute minimum. The innovative Smart Draft, Design/Bending Sequence Multitasking, Step Previewer and Combined Icons features allow the operator a straightforward, intuitive control of the entire production cycle.

### MAIN FEATURES

- 21,5" multi color Multi Touch screen
- Design and Bending Sequence Calculation in Multitasking Mode
- Standard 2D/3D visualisation
- Automatic or manual bending
- Automatic double bends solution
- Fast Design mode
- Execution of generated 2D-programs
- Editable graphical tool database
- Editable material database
- Automatic/ Programmable retraction
- False bend solution
- Auto tool search
- Real time bend sequence calculation
- metric or imperial measure input
- USB interface
- Network + offline functions
- Multi-language support
- Remote diagnostics



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# Integrated work piece preparation:

The Bend Manager 2D MT software on the control is designed to control the press brake and to execute manually created or automatically generated programs.

The generation of programs can be done by means of offline software or directly on the CNC control on the machine.

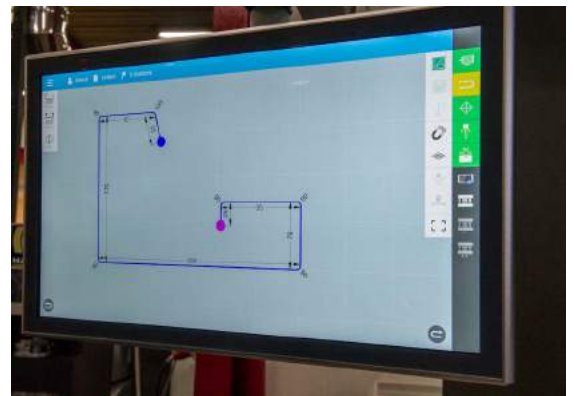
Full integration on the control : the concept of the work piece (drawing), tool assignment, bending sequence construction, back gauge settings and finally the generation of the CNC-program.

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# Bend Manager 2D MT features:

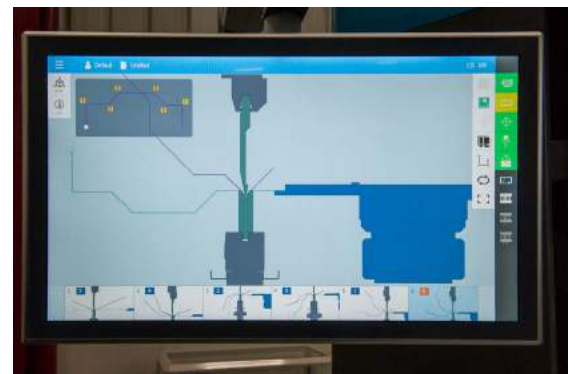
## Profile design concepts :

- Multiple drawing methods :
- Smart Draft
- Point to Point
- with or without adjustable background grid
- Insert line segment at start/end/within profile
- Zoom on drawing
- Display of dimensions during drawing
- Measure functions
- Line segment/angle adjustment to fit certain variable dimensions
- Messages concerning tools during drawing
- Select tools during drawing
- Bending sequence info during drawing
- HalfBegin & HalfEnd function for arcs
- Automatic tool search
- Automatic hemming solutions



## Bending sequence & back gauge setting :

- Display actual bending sequence search
- Real time search for ALL solutions
- Saving of 3 "best" sequences
- Score for bending sequence (parameters : collisions, safety zone for fingers, sheet manipulations, cycle time)
- Score for gauging quality
- Select alternative bending sequence
- Extensive solution search for arcs (e.g. 180° arc)
- Retraction taken into account during solution search
- Automatic retraction calculation
- Move finger over adjustable distance
- Bending step overview with swap function
- Calculation of stretched length
- Estimated bending cycle calculation
- Bending sequence simulation video



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# Program management

Work piece programs can be stored, copied, moved, renamed, and deleted on the internal flash card.

However it's also possible to load programs via USB or via network. Programs can be selected via the program menu, or via barcode scanner

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# Tooling management

All higher-range-controls set a new standard in tooling management, making the implementation of tools in bending software what it should be : limitless in every respect.

The editable tool database creates a simple and easy management of the tooling.

There's really no restriction to the number and types of tools that can be imported into the software, as long as the tool remains compatible with the used machine.

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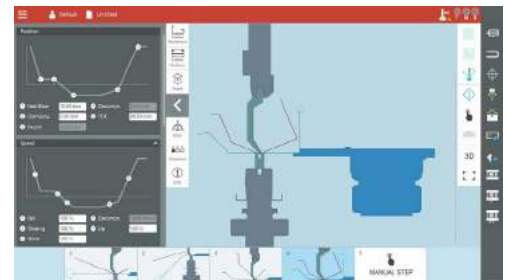


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# Graphic beam movement visualisation

Extremely easy to change beam movement settings by means of the graphical input fields.

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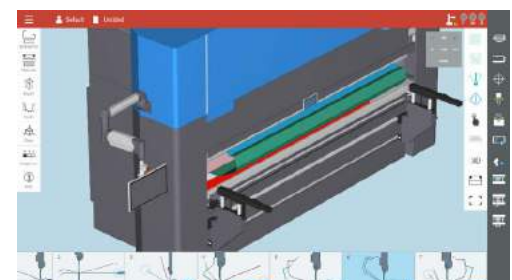


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# Connection

The FastBEND-2D MT Premium can easily be connected to any new or existing network, resulting in easy data transfer (programs) and machine monitoring between the control and one or multiple PCs. Access to the control is possible from anywhere in the network.

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# 3D visualisation

Bending sequence visualisation in 2D or 3D.

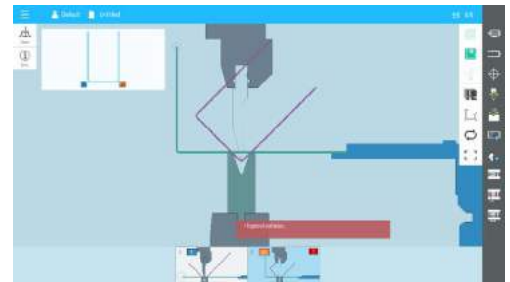
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## Real Time solution calculation

Real time bending solution calculation during building up the work piece design.

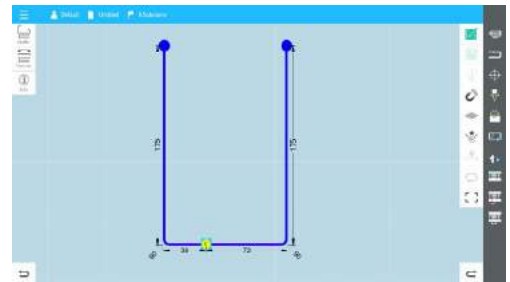
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## Visualization

Collision indication with clear text message information.

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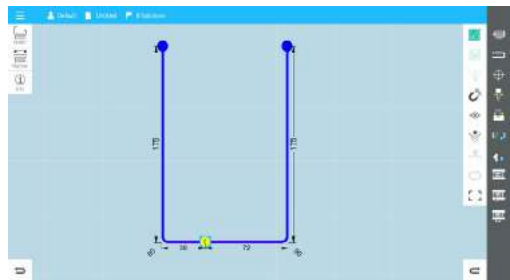
## False Bend Solution

FastBEND-2D MT Premium is able to handle false bend steps, this in order to avoid workpiece collisions.

False bends can be inserted automatically by the controller or manually by the operator.

Adjustable offset false bend.

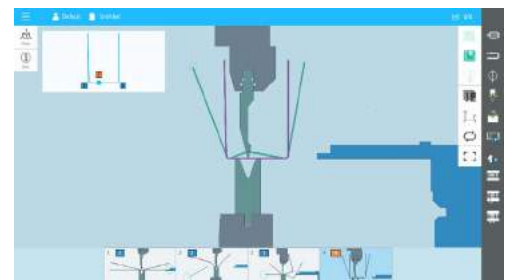
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## False Bend Solution

Bending solution with false bend insertion.

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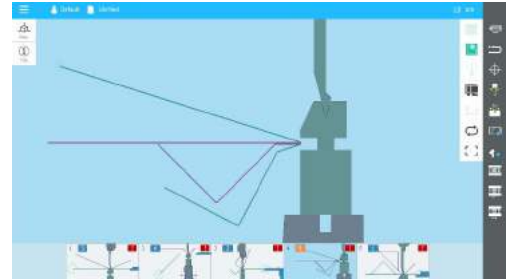




# Detailed specifications

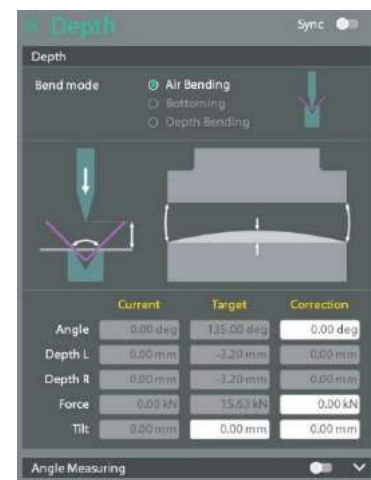
## Hardware

- High-performance, PC-based hardware, Microsoft Windows® 7 Embedded
- 21,5" Multi Touch control panel
- 1920 x 1080 pixels
- Extensive video memory
- 16GB Cfast card, SLC flash, extended temperature range
- Memory extension to 4GB DDR3L RAM
- DVI/USB extended interface
- Aluminium Housing with glass front, protection class IP65
- Depth axis servo system for direct servo valve control
- DC single axis back gauge control
- Incorporated proportional valve drive
- Pump activation and emergency stop integrated on the control panel
- Full integration of light curtain on control panel
- Integrated parking position keys for peripheral axis



## General control functions

- Automatic or manual bending
- Extensive program management (Hard disk, USB and network)
- Drawing of 2D workpieces
- 2D-program execution
- Network between control and PC or other machines
- Programming bending angle, depth or pressure
- Automatic calculation of required force
- Manual Angle Correction or Automatic Angle Correction via optional angle measurement system
- Manual adjustment of Top Dead Centre (TDC), speed changeover point, dwell time, delay, back gauge retraction, clamping point, auto-up with sync function with intelligent copy feature
- Editable graphical tool database
- Editable material database
- Import and editing of tools
- Graphical Axis-page
- Program-info page
- Programmable BeamTilt
- Programmable CNC-controlled anti-deflection
- Jogging
- Multiple counters (control time, pump time, steps, workpieces, ...)
- Metric or Imperial
- Programmable limits
- Tool height calibration mode
- Programmable finger height adjustment
- Angle measuring interface
- Stretched length calculation
- Manual step insertion
- Integrated optical guard features
- Automatic hemming step insertion
- Auto tool search
- Automatic double bend feature
- False bend



## Other features

- Up to 16 controlled axes
- Parameters
- Diagnostics and service routines
- Language support (including simplified Chinese)
- Manual (English or native language)
- Lifelong servicing

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# Electrical specifications

(specs based on Y1Y2XRZ1Z2 configuration ; specs may vary in case of extended axes)

(extendable up to 128 axis)

- **Power supply** : 24V DC  $\pm 25\%$
  - **28 digital inputs** (24V DC  $\pm 25\%$ )  
(some are pre-set by PLC function)
    - down-command
    - back gauge limits
    - reference back gauge
    - Monitoring hydraulic valves
    - etc.
  - **28 digital outputs** (24V DC / 1A)  
(some are pre-set by PLC function)
    - enable DC back gauge
    - hydraulic valves
    - pneumatic finger control
    - anti-deflection control
    - hydro unit eco control
    - etc.
  - **6 proportional outputs**
    - 4 proportional hydraulic valves for position control (current for direct valve control)
    - 2 proportional hydraulic valve current for pressure control (bending/crowning)
  - **8 analog inputs** (0 -> 5 V DC)  
(pre-set by PLC function)
    - hydraulic pressure sensor
    - anti-deflection position
    - mains monitoring
    - etc.
  - **4 analog outputs**
    - speed control DC back gauge (0V ->  $\pm 10V$ )
  - **6 incremental encoder inputs**
  - (5 -> 24V DC / 100 kHz)
  - **Encoder specifications**
    - open collector / depth axis / +5V power supply
    - push / pull (back gauge) / 5V or 12V power supply
    - no symmetric channels required (A-B-Ref)
    - 1 repulse per revolution/length
  - **Electrical connections**
    - easy plug connection
    - according to attached connector layout
    - no special tools or connectors required
  - **CAN bus for extended axis or functions**
  - **Pre-configured for HOERBIGER**
  - **Easy Control open loop system**
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**FastBEND-2D MT Premium**  
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press brake control with  
2D software and 3D visualization*