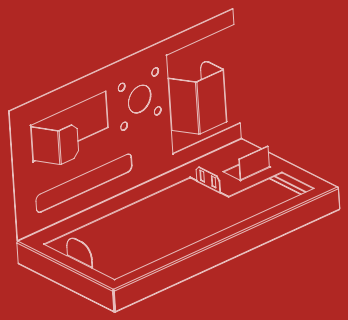
METALIX

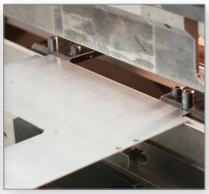
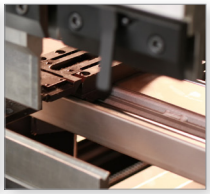
MBend

Offline 3D press brake simulation by Metalix



www.metalix.net

MBend is an application for programming and simulating CNC press brakes to maximize production resources.
MBend enables offline generation of bend sequences and tooling setups, with dynamic 3D simulation for checking collisions of the part with tools, fingers, and machine components.

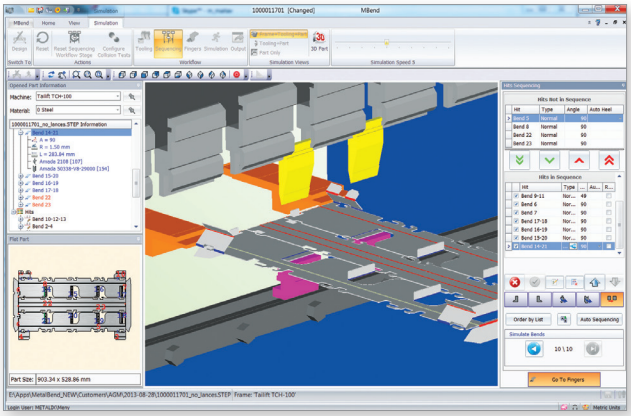
Features

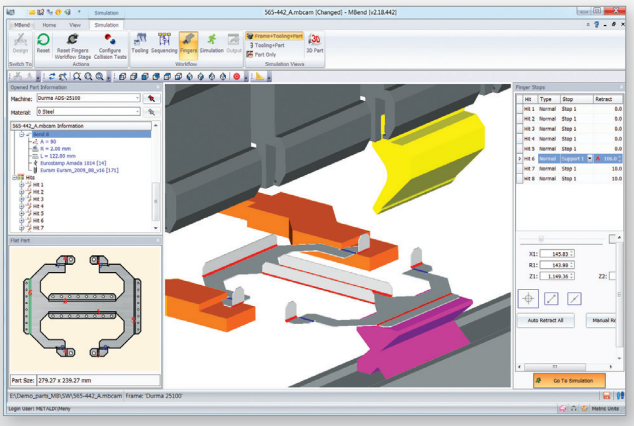
- Direct part transfer from SolidWorks, Solid Edge and Inventor
- Importing and unfolding of IGES and STEP 3D parts
- Automatic and manual tool selection based on material, machine, and tool properties
- Automatic and manual bend sequencing with collision detection
- Automatic and manual fingerstop positioning with graphic control of all axes
- Automatic retraction calculation
- 3D simulation of the bending process with collision detection
- Native NC generation enables direct loading of programs to the machine control
- Comprehensive Setup Reports for the machine operator including bend sequence, tooling, and bend-by-bend graphics

Advantages

MBend enhances your productivity:

- Faster design-to-production times with automated features
- Offline programming means minimal machine down-time
- Collision-less bend sequences mean reduced stock wastage
- MBend's tool library is compatible to available tooling, resulting in production-ready Setup Reports



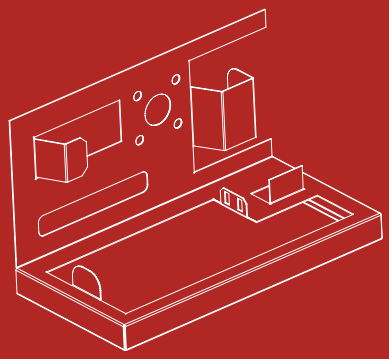


machine

CAD/CAM that speaks your language

MBend

Offline 3D press brake simulation by Metalix



www.metalix.net

Efficient Tool Selection

Based on:

- Availability of tool geometry and segments
- Bend radius
- Maximum force
- Collision avoidance

Full support for hemming:

- Default hemming tools for automatic selection
- Default and editable pre-bend angle

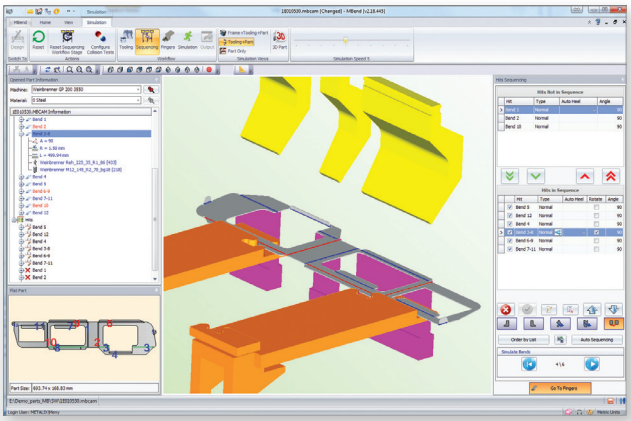
Bend Sequence Selection

MBend automatically calculates multiple bend sequences, taking into consideration:

- Collision avoidance
- Tool segment availability
- Heel tools for over-hanging flanges

Full manual control:

- Split bends into partial bends
- Drag-and-drop sequence changes for single and multiple bends



Fingerstop Positioning

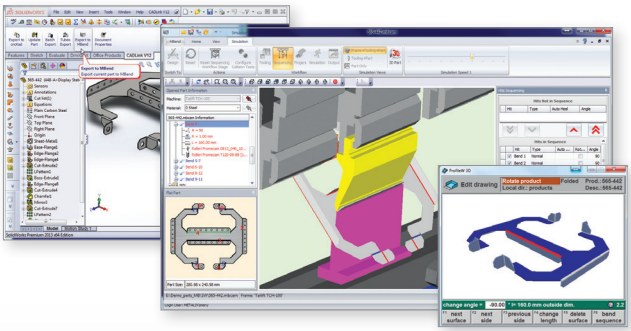
MBend provides options for automatic and full manual control over the backgauge:

- Automatic fingerstop positioning
- Automatic retraction calculated according to flange geometry
- Graphic control for all backgauge axes
- Snapping for all axes

3D Simulation and Collision Detection

Automatic simulation and collision detection for part, fingers, tools, and machine:

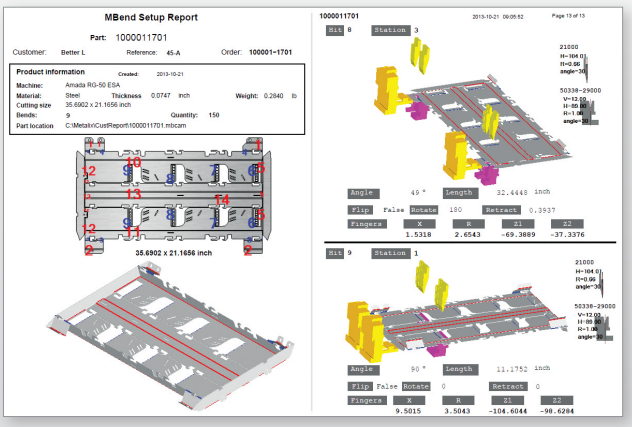
- Detect collisions between all moving elements
- Simulate the bending sequence with the full machine configuration in 3D - fingers, tools, part, and machine
- Visualize bending (overbend, springback) realistically
- Simulate operator part handling



Setup Reports

Comprehensive Setup Reports include:

- Bend sequence instructions
- Tool setup details
- Product handling
- Bend-by-bend graphics



machine

CAD/CAM that speaks your language