# SIGMA**TUBE**®

SigmaTUBE is a complete tube and pipe cutting software that operates seamlessly within SolidWorks®. SigmaTUBE supports round, square, rectangular, or triangular tube/pipe along with structural material such as I-beams, H-beams, C-channel, angle iron, and other user-defined shapes. Custom programs are available to fully maximize the advanced features of Mazak FabriGear, Trumpf, BLM, Bystronic, Amada and Other 3D tube and pipe cutting laser machines.
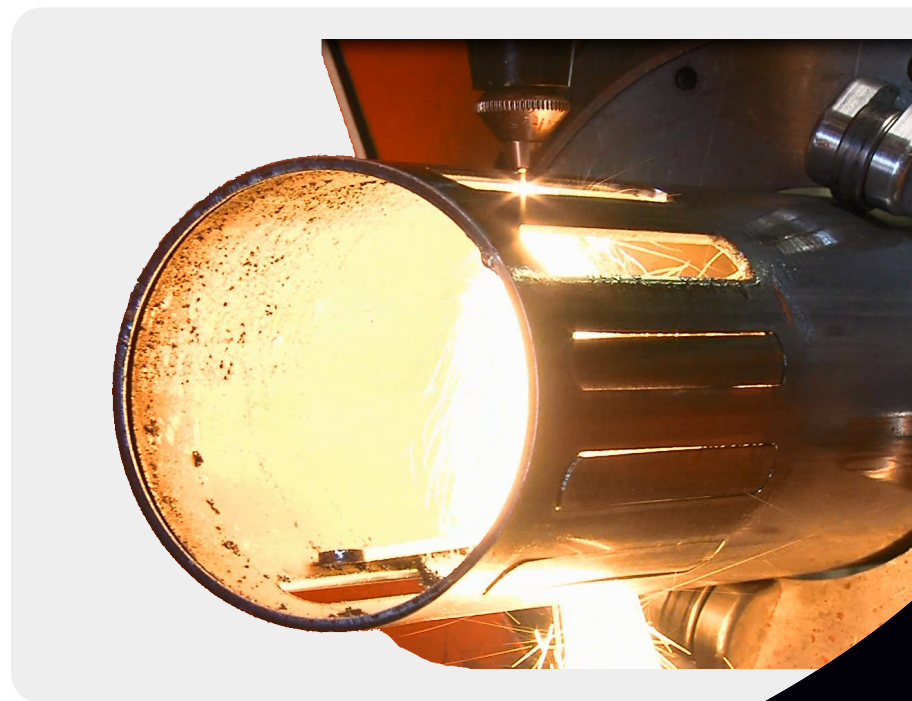
## Features

▶ GUI Conforms to SolidWorks Environment
▶ Intuitive Arrangement of Tools and User Interface Provides a Hassle-Free Programming Environment
▶ Wizard Guides User along each Programming Step
▶ Automatic Cut-Out Recognition
▶ Automatic/Interactive Toolpath & NC Code Generation
▶ 3D Toolpath Simulation Displays: Tube, Cutting Head, and Machine
▶ Automatic Geometry Compensation for Normal to Surface Cuts
▶ Tabbing
▶ Automatic, Manual, and True Shape Nesting
▶ Cutting & Marking
▶ Torch Radius Compensation
▶ Bevel Cutting
▶ Support for Weld Preparation
▶ Variable Cutting Conditions Supported for Ramping on Knuckles
▶ Automatic/Interactive Sequencing of Cutting Path
▶ High-End Graphical Interface Provided to Edit the Tilt, Rotor, and Chuck Values when Tooling Intricate Shapes
▶ Collision Detection between Part and Torch

## Advantages

▶ One Software Programs all Major Cutting Machines
▶ Effortless Nesting and NC Programming within SolidWorks
▶ Supports Multiple Assembly Model Configurations
▶ Simple Model Refresh Provides Updated Design Revisions
▶ Cutting Technology Table sets Cutting Condition Parameters

## Benefits

▶ Faster Order Turn-Around
▶ Optimize Yield & Machine Performance
▶ No Separate CAM System Required
▶ Simplified Programming Increases Productivity
▶ Automatically Generate Tool Path from Solid Geometry



## Technical Specifications

▶ Windows® 7, Windows® 8
▶ Import Standard Neutral File Formats (IGES, STEP, Parasolid)
▶ User can Configure ESSI, G and M Codes for Multiple Machines
▶ Generates Standard & Customizable Reports

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## Intelligent Feature Detection

SigmaTUBE automatically detects tube sections and features that must be cut on the machines. The software not only determines which loops and cuts need to be made but also recognizes lines, 3D arcs, and flat plane arcs. Rather than using a series of line segments, SigmaTUBE cuts a line or arc continuously resulting in faster and better cuts. Intelligent Feature Detection accelerates NC code generation.
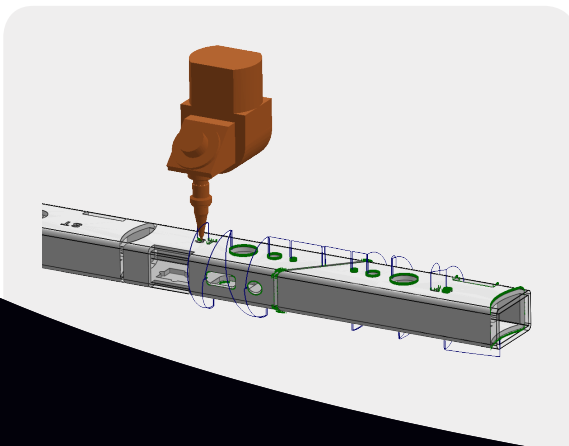
## Toolpath Generation

SigmaTUBE guides the user through generating an optional multi-axis toolpath. Specifications such as coordinate system selections, toolpath parameters, rotation axes, and chord length parameters may be assigned. Automatic tool paths are generated based on tool path settings. For each contour, and lead-in/out, tool orientations can be modified. The cutting sequence can be calculated automatically or manually.

Customized toolpaths can be generated on the contours manually. All nesting and toolpath data is stored with the SolidWorks assembly compatible with Product Data Management (PDM) systems.

## Nesting

SigmaTUBE offers powerful automatic, manual and true shape nesting to achieve optimal nesting results and minimize scrap. Efficient nesting is achieved by calculating best possible combinations based on actual geometry. Common-line cutting cuts shared edges at the same time reducing time and pierce points.
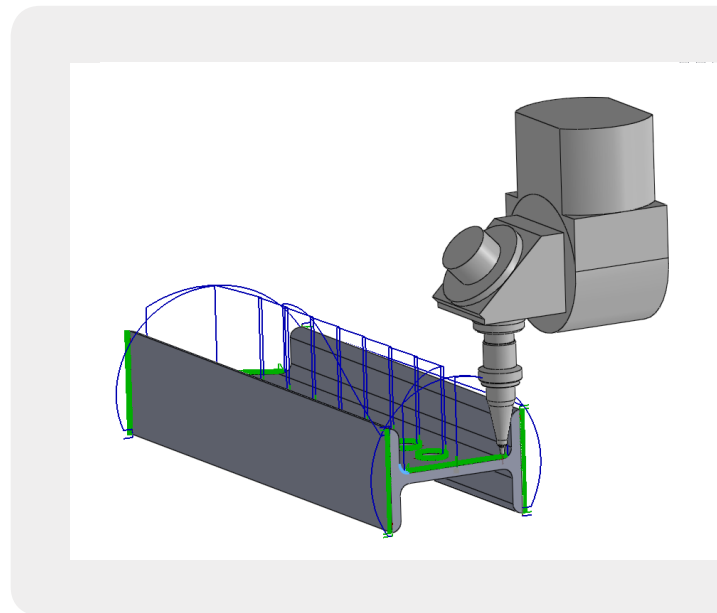
## NC Programming

Before generating NC code, SigmaTUBE provides a detailed, animated preview of the cutting process for each tube, including a display of rapid cuts. Although the efficiency of automatic generation can't be outdone, the user has the option to edit the toolpath and code.

## Report Generation

SigmaTUBE creates detailed reports to include the image of the tube with the toolpath, tube dimensions, total time, and cutting length.

## Machine Support

SigmaTUBE is compatable with all major laser and plasma cutting machines.

## CONTACT

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