

SIGMATUBE

SigmaTUBE™

SigmaTUBE™ is a complete tube-cutting software solution that runs seamlessly integrated inside SolidWorks®. Designed for tube-cutting laser and plasma machines, SigmaTUBE offers linear nesting for round pipe, rectangular tube, and other cross sections.

FEATURES

Step-by-step wizard guides users through the programming process with key features including:

- ▶ Compatible with rectangular, round, or free-form tube
- ▶ Feature suppression for cutting
- ▶ Automatic detection of cut-outs
- ▶ Automatic toolpath and NC code generation
- ▶ Automatic or manual lead-in/lead-out placement
- ▶ 3D simulation of the cutting process that shows work part, cutting head, and machine

ADVANTAGES

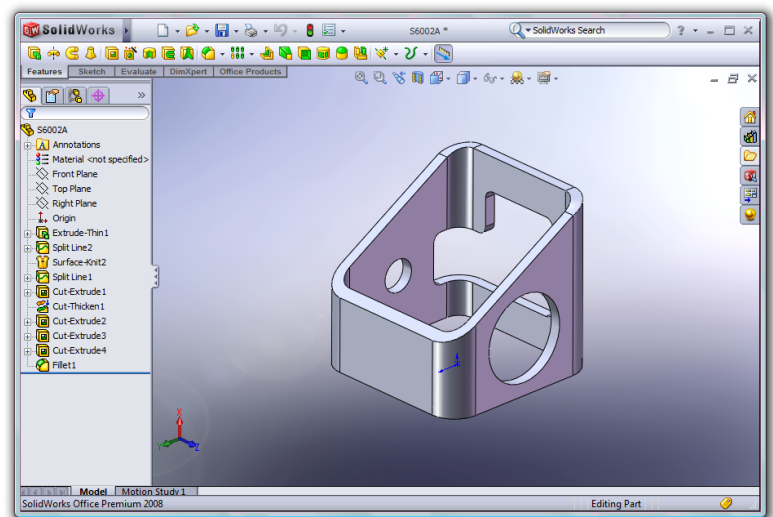
- ▶ One software to program all major cutting machines
- ▶ Effortless nest and NC programming without leaving SolidWorks
- ▶ Supports multiple assembly model configurations
- ▶ Simply refresh model to reflect updated design revisions
- ▶ Advanced linear nesting
- ▶ Arc recognition on rectangular tube faces
- ▶ Thickness compensations and tube supports

BENEFITS

- ▶ Faster turnaround time for orders
- ▶ Optimized material utilization and machine performance
- ▶ Empower your programmer to be more productive
- ▶ No separate CAM system required
- ▶ Complex programming made easy
- ▶ Automatically generate NC toolpath from solid part geometry

TECHNICAL SPECIFICATIONS

- ▶ Runs inside Windows 7, Windows XP or Vista® operating systems
- ▶ Import standard industry file formats such as CDL, AutoCAD DXF and DWG, HPGL, and IGES
- ▶ ESSI, G and M codes can be user-configured
- ▶ Post processors for multiple machines
- ▶ Standard and customizable report generation system



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SigmaTUBE is an add-in module for users who are comfortable with the SolidWorks design interface. It allows users to generate NC code for tube-cutting machines without exporting assemblies or parts out of SolidWorks. In doing so, SigmaTUBE eliminates the time-consuming procedure of exporting design components into a CAM software system for processing.

Intelligent Feature Detection

SigmaTUBE automatically detects SolidWorks tube model features that must be cut. Not only does this powerful product determine which loops and cuts need to be made, but it also recognizes lines and arcs on a flat plane. The software doesn't use a series of small line segments, but rather cuts a line or arc continuously, yielding better quality parts. The "intelligent detection" of SigmaTUBE allows users to speed up the process of generating NC code for a project, without spending valuable time to manually configure every required feature.

Simplified Nesting

The SigmaTUBE wizard dialogue guides users through the process of generating an optimized multi-axis toolpath. Users can assign specifications such as coordinate system selections, toolpath parameters, rotation axes, and chord length parameters. All nesting and toolpath data is stored with the SolidWorks assembly compatible with PDM or product data management systems.

Report Generation

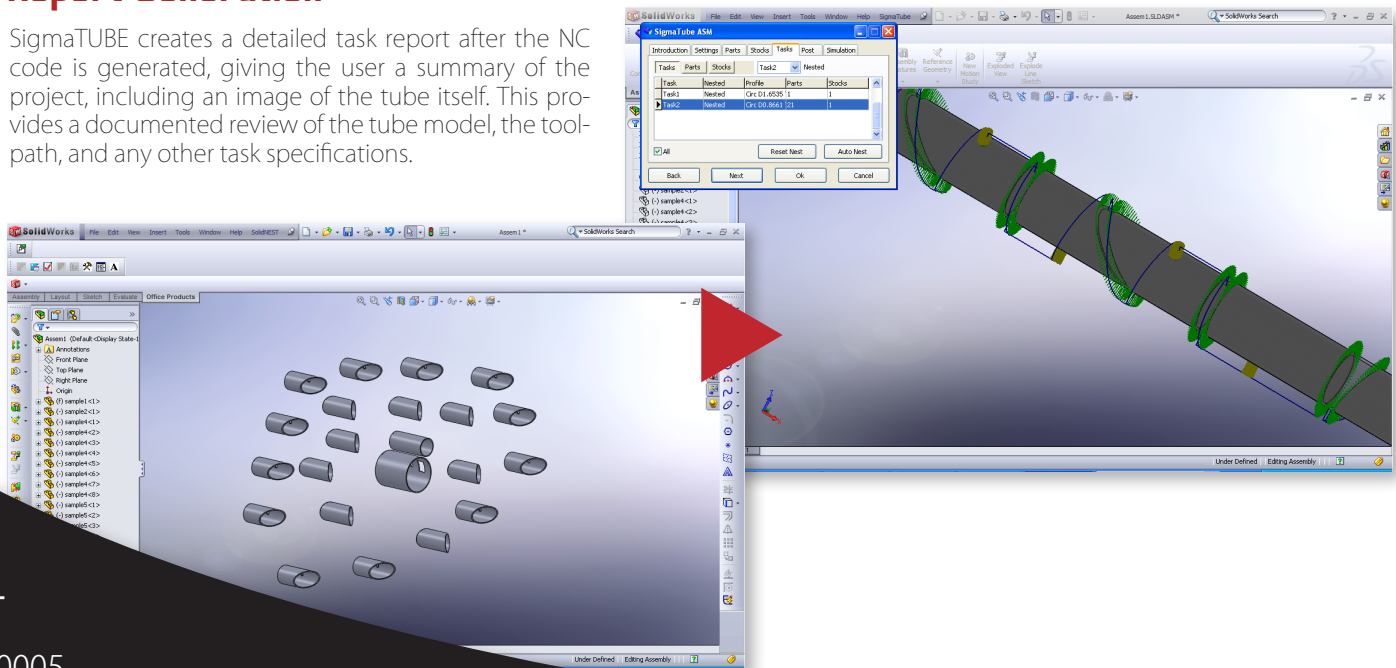
SigmaTUBE creates a detailed task report after the NC code is generated, giving the user a summary of the project, including an image of the tube itself. This provides a documented review of the tube model, the toolpath, and any other task specifications.

Lead-in/Lead-out Placement

When preparing cut path sequences, users can either allow SigmaTUBE to place the lead-in and lead-out points on the path automatically or manually. By providing an interactive approach, SigmaTUBE gives users the freedom and flexibility to mold projects to satisfy any unique requirements. The power and control remains in the users hands.

NC Programming

SigmaTUBE provides the ease and convenience of automatic toolpath and NC code generation as the most efficient tube-cutting process available. SigmaTUBE can configure paths from INI files. Before generating NC code, SigmaTUBE provides users with 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 after it has been generated. To ensure easy retrieval, the toolpath can also be saved into the SolidWorks file.



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