

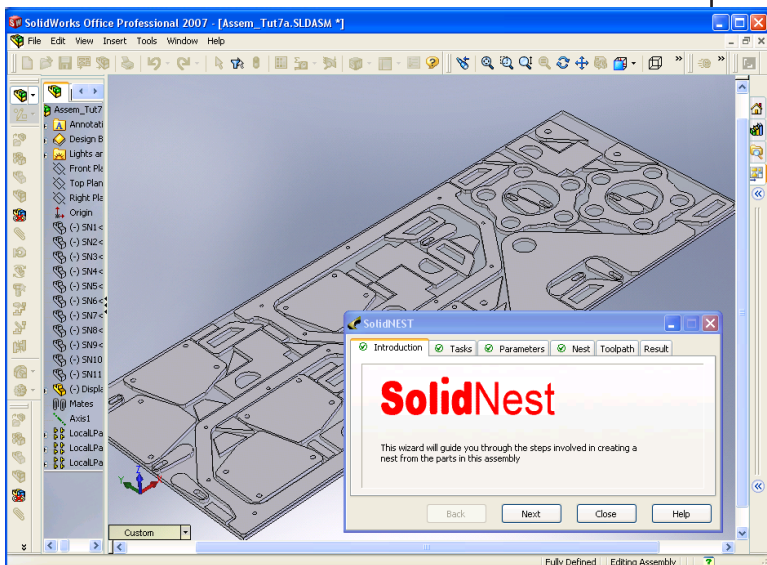
SolidNEST® is an Automatic Nesting and NC programming solution for Sheet Metal and Profile Cutting that runs inside SolidWorks. SolidNEST® combines the superior nesting power of SigmaNEST with SolidWorks for a seamless transition from a 3-dimensional model in SolidWorks to generating NC code for Laser, Plasma, Oxyfuel, Waterjet, Router and Punching through a single SolidWorks interface.

SolidNEST is a complete Nesting and NC programming solution that runs completely inside SolidWorks. It provides a powerful, easy to use wizard based interface for the SolidWorks user to create nesting layouts and NC programs for all the parts in the current assembly.

It is intended for a user, who is intimately familiar with the SolidWorks design environment, to easily create layouts and generate NC programs inside the same environment, and eliminate the need to export the design components into a CAM software system for further processing.

Benefits

- Reduction in material waste through improved utilization
- Reduced machine cutting cycle time (common line cutting)
- Improved cost effectiveness through Design for Manufacturing
- 3D SolidWorks model is single data source. No DXF.
- Easy to use through familiar SolidWorks window
- Reduced NC programming time
- Streamlined production



Running SolidNEST inside SolidWorks

In order to run SolidNEST it is only required to

- Load SolidNEST through SolidWorks' Add-in interface.
- Open an assembly which contains the components to be nested. SolidNEST can process sub-assemblies and also consolidate multiple instances of the same component when creating nesting tasks.

SolidNEST is completely driven by a step-by-step user interface that can be accessed through a toolbar button. This wizard based interface takes the user through different steps involved in creating nesting tasks, generate layouts, create toolpath and NC Code. The user can save information about the nest at any intermediate step and can restore directly to that point in the process to continue to generate NC programs.

Features

- Advanced true shape nesting
- Advanced NC toolpath generation
- Associativity between nest and assembly parts
- Easy to use interface
- Support for multiple configurations
- Sheet metal parts unfolded automatically
- Automatic nesting, toolpath, and NC program generation
- User definable job cards and reports for nest layouts
- Complete nesting information embedded in the assembly
- Nesting visualization and toolpath sequencing simulation

SigmaNEST Integration

SolidNEST uses the proven SigmaNEST system for nesting and toolpath generation behind the SolidWorks interface. It maintains complete associativity and flags the nesting layout and toolpath, whenever the components in the assembly change. Simply regenerating will update the nest and toolpath.

SolidNEST provides additional processing options through its advanced interface for a more experienced SigmaNEST user to access some advanced SigmaNEST options from the SolidWorks environment.



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Automatic Nesting and NC Generation

SolidNEST can ignore components in the assembly that do not need to be profile cut through automatic keyword, filter, and configuration mechanisms. It can automatically create nesting tasks based on material and thickness for all the components in the assembly.

Post processing Options

It is possible to setup and configure multiple machines in SolidNEST. This gives the user the ability to generate NC Code for different machines. Detailed nesting and layout reports gives complete information about the total cutting times, different parts nested on the layout and other program parameters.

SolidNEST provides a powerful visualization and simulation for nesting layout and toolpath sequencing. User can play, pause, rewind, forward, and even alter the speed of simulation and turn off the nest layout for better visibility of toolpath.

Exporting Options

SolidNEST provides to the advanced user the capability to save a layout as a SigmaNEST workspace or as a SolidWorks assembly. The user can then either open up this workspace with SigmaNEST and access its additional customization and processing options or use the SolidWorks nest assembly as an input to other CAM software for toolpath and NC Code generation, if required.

Maintain Associatively between the Nest and Components

Since SolidNEST runs completely inside the SolidWorks environment, it can track and flag updates whenever any one of the components inside the nest changes. The user can then choose to update or continue with the current nest depending on how the component update affects the nest.