



SigmaNEST for Profile Cutting

SigmaNEST Profile Cutting Package Comparisons

Machines Supported:

- Laser
- Plasma
- Oxyfuel
- Punch
- Combo
- Waterjet
- Router
- Knife
- Multi-process
- Multi Axis

■ Nesting Solutions to Optimize Your Operation

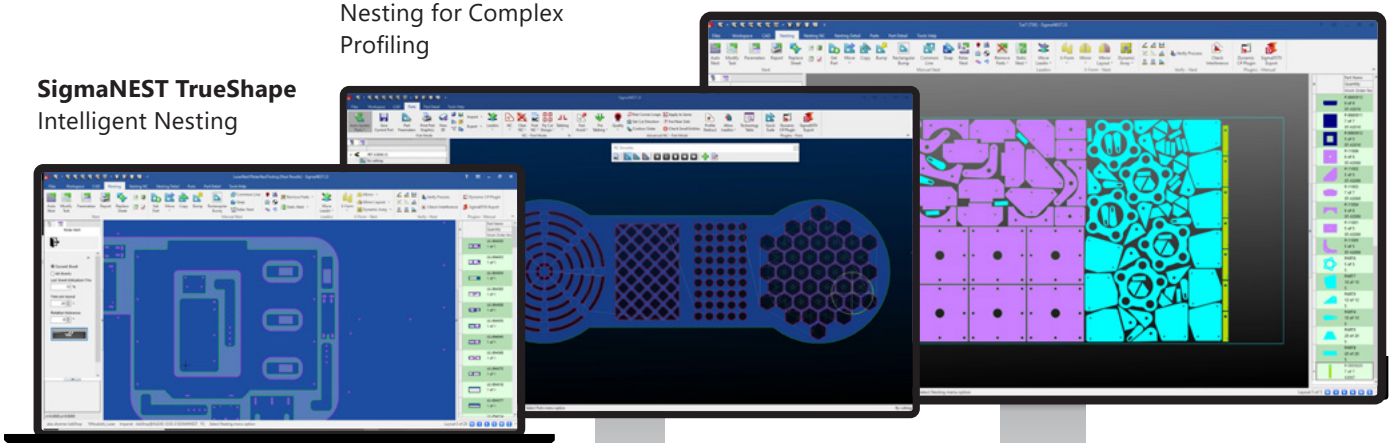
SigmaNEST offers a range of nesting packages to increase productivity for large and small fabricators, from complex automation to simple point-and-click autonesting. SigmaNEST is designed to simplify programming while optimizing your manufacturing resources, and is backed by a suite of solutions for shopfloor automation and business integration.

SigmaNEST packages can be customized for your specific machines, material types and costs, production quantity, business methods, and nesting complexity. The three most popular packages are: SigmaNEST TrueShape for intelligent nesting capabilities, SigmaNEST Techno to tackle more complex profiling, and SigmaNEST Powerpack which adds features for high-volume production.

SigmaNEST TrueShape Intelligent Nesting

SigmaNEST Techno Nesting for Complex Profiling

SigmaNEST PowerPack Nesting for High-Volume Production



Standard with all Profiling Levels

+ Diverse Import/Export

- Directly import any major 2D and 3D file for painless part creation
- Leverage filters and mapping tools to only import the parts you need
- Recognize important CAM features on the drawing or model like bevels, milling pockets, and bends
- Automatic error correction for DXF, DWG, CDL, IGES, DSTV, STEP files, G-code and NC ESSI code
- Optional import capabilities include direct access for SolidWorks, Autodesk Inventor, Siemens Solid Edge/NX, Ansys, PTC Creo, PDF/Image Import, and others

+ Part Creation and Version Management

- Fast geometry creation with easy CAD tools, extensive 190-shape library, user-definable scripts, dimensioning, and part data marking
- Kerf creation and automated lead-ins/outs according to material and motion
- Store part, nest layout, toolpath, and machine data in an intelligent workspace file
- Integrated parts database keeps a searchable catalog of parts and geometry, material, area, weight, and cost

+ Automatic Part Cost Estimating

- Automatically calculate part area, weight, cutting time, cost, and material requirements on import
- User-definable reports and cost parameters

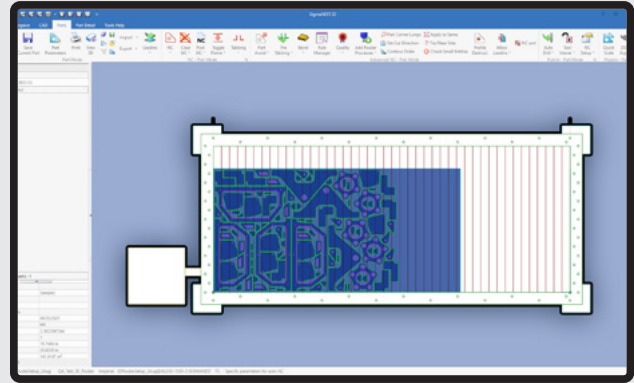
+ Toolpath Modules

- All packages include Auto NC to automatically apply toolpath according to your parameters such as cut sequence or grouping by process. These default settings are specific to the machine, material, and thickness, to establish consistency across the shop

+ Detailed Reporting

- Dozens of pre-built report templates for different business areas like costing, inventory, machine operations, and unloading
- Easy-to-use editor to customize any report
- SigmaNEST reporting data can be imported, exported, or connected to nearly any system

SigmaNEST TrueShape Intelligent CAD/CAM Nesting



Advanced features such as machine bed visualization

SigmaNEST TrueShape software features:

+ TrueShape™ Nesting

- Automatic multi-torch Rectangular and TrueShape™ nesting using an algorithm that adjusts to optimal torch distance from sheet to sheet
- Automatically nest pre-nested clusters
- Nest for pre-piercing, corner loops and bevels
- Static nesting support

+ Manual Nesting Capabilities

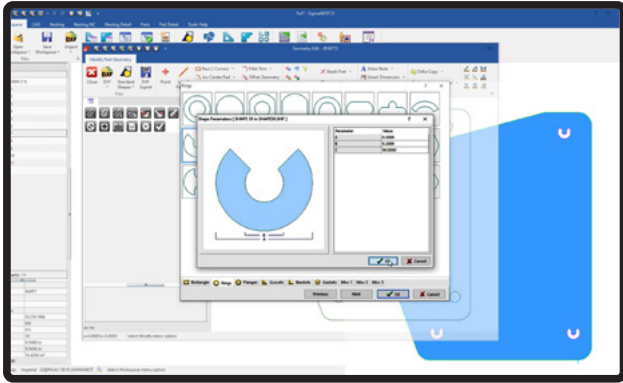
- Drag and drop parts onto single and multiple sheets
- Maintain part clearance with easy bump mode (including around lead-in)
- Redefine and position lead-ins/out
- Automatically updates all occurrences of a parts when changing geometry
- Easy rotation and part alignment

+ NC Programming

- Continuous cutting with pierce elimination
- Automatically set adjustable part cut sequence from user-defined start point
- Minimum movement, reduced heat distortion, skip cutting and block cutting while preserving internal part sequence
- Easily clear NC for current or all nests, and from individual parts in a nest
- Sequential or simultaneous multi-torch line cropping options

SigmaNEST Techno

Intelligent Nesting for Complex Profiling



Customizable part library for complex shapes

SigmaNEST Techno boosts the TrueShape level with a more advanced feature set:

+ Advanced Automatic Nesting

- HD Advanced TrueShape offers time-based nesting with advanced placement for efficient material savings.
- Automatic part pattern recognition and part clustering
- Intelligent multi-torch cutting
- Nesting for common-line cutting

+ Advanced NC Programming

- Common-line cutting support for "two parts, one pierce," "automatic slit cuts" and "cut-rapid-cut"
- Chain and bridge cutting
- Crash avoidance for cut areas
- Pre-pierce start points before cutting, and adjustable feedrate in pierce zones for better part quality
- Vaporize setting for sheet coatings
- Apply no NC to the sheet edge
- Group parts for inspection or removal
- Automatic and customizable sheet cropping
- Automatic tabbing with Center of Gravity recognition

+ Advanced Toolpaths

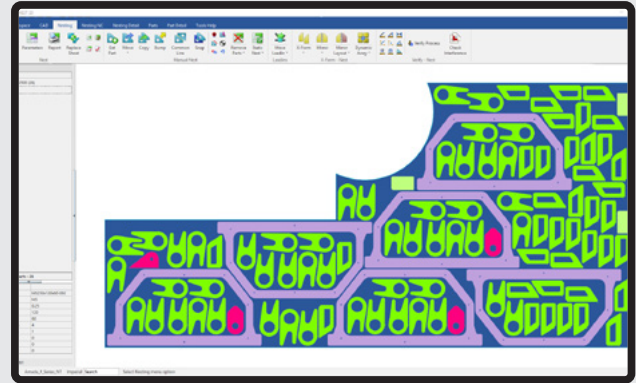
- Profile Destruct: Scrap cut skeleton and internals for faster cycle times and reduced tabbing operations
- Manage punch tools, turret setup, manual repositioning, interactive nesting and punch tabbing.

+ Integration Option

- Bi-directional ERP interface through SimTrans

SigmaNEST PowerPack

Nesting for High-Volume Production



Optimized nesting control for remnants and multiple sheets

SigmaNEST PowerPack adds high production capabilities to the Techno and TrueShape levels:

+ Advanced Batch Commands

- Special of processing toolpaths, punch processes, nesting, and task parameters

+ Work Order Tracking

- Automatic task creation
- Integrated order database
- Combine work orders to reduce scrap
- Automatic part quantity tracking
- Work order status reporting

+ Inventory Control

- Integrated stock and remnant material database
- Browse and select remnants based on graphical preview, size, thickness, material type, sheet number, heat number, compatible materials, etc.
- Event-based inventory consumption tracking, status and cost reporting
- Import/export capabilities such as new plates received, sold, and material consumed

+ Premium Options: HD Supernest / Continuous Nesting

- HD Supernest automatic time-based nesting for maximum level efficiency
- Continuous Nesting - Optimized nesting and process control across multiple sheets through grouping and sequencing according to secondary process, kits and assemblies, and more

TOTAL SHOP SOLUTIONS

SigmaNEST software helps professional fabricators maximize their material, machines, data, and manpower across the shop.

CAD/CAM

Superior Nesting & NC for Cutting, Bending, Routing, Punching of Flat Sheet & Tube Stock, Remnant & Workflow Control

Shop Floor Control

Scheduling, Part Tracking, Shop Floor Manager and Data Collection, Quality Manager and Logistics

Business Systems

Quoting, True Costing, Inventory, Process Automation, Job Status, Invoicing, Order Tracking, ERP/Accounting Exchange

SIGMANEST PACKAGE OPTIONS

☑ Included
⌘ Optional

	AUTONEST	TRUESHAPE	TECHNO	POWERPACK	POWERPACK PREMIUM
GEOMETRY MODULES					
2D CAD Package	☑	☑	☑	☑	☑
Standard Shapes Library	☑	☑	☑	☑	☑
Verify Geometry	☑	☑	☑	☑	☑
Smoothing Filter	⌘	⌘	⌘	⌘	☑
Parts Database	☑	☑	☑	☑	☑
SigmaUNFOLD Integration	⌘	⌘	⌘	⌘	⌘
NESTING MODULES					
Basic Nesting	☑	☑	☑	☑	☑
TrueShape Nesting		☑	☑	☑	☑
Advanced Automatic Nesting			☑	☑	☑
HD SuperNest	⌘	⌘	⌘	⌘	☑
Shear Nesting		⌘	⌘	⌘	⌘
Continuous Nesting				⌘	☑
AutoDynamic Punch Nesting			⌘	⌘	⌘
TOOLPATH MODULES					
Profile AutoNC	☑	☑	☑	☑	☑
Advanced NC Profiling	⌘	⌘	☑	☑	☑
Common Line Cutting	⌘	⌘	☑	☑	☑
Knife Cutting Module		⌘	⌘	⌘	⌘
Router Module		⌘	⌘	⌘	⌘
Drilling Module		⌘	⌘	⌘	⌘
Waterjet Module	⌘	⌘	⌘	⌘	⌘
Bevel Module	⌘	⌘	⌘	⌘	⌘
Profile/Punch Combination Machine	⌘	⌘	⌘	⌘	⌘
Right Angle Shear NC	⌘	⌘	⌘	⌘	⌘
Profile Destruct	⌘	⌘	☑	☑	☑
Punch Tooling	⌘	⌘	☑	☑	☑
BHQ	⌘	⌘	⌘	⌘	⌘
PRODUCTIVITY MODULES					
Work Order Tracking Module	⌘	⌘	⌘	☑	☑
Inventory Control Module	⌘	⌘	⌘	☑	☑
SigmaQUOTE Module				⌘	⌘
INTEGRATION MODULES					
SimTrans Data Bridge	⌘	⌘	⌘	⌘	⌘
SimTrans ERP Interface			⌘	⌘	⌘
AUTOMATION MODULES					
SigmaNEST Part Create API	☑	☑	☑	☑	☑
SigmaNEST Basic Batch Commands	☑	☑	☑	☑	☑
SigmaNEST Advanced Batch Module			⌘	☑	☑
SigmaNEST Software Development Kit	☑	☑	☑	☑	☑
CAD IMPORT MODULES					
2D & 3D CAD Import DXF, 3D DWG, IGES, DSTV, STEP	☑	☑	☑	☑	☑
PDF & Image Import	⌘	⌘	⌘	⌘	⌘
SOLIDWORKS - CAD Import Direct	⌘	⌘	⌘	⌘	⌘
Autodesk Inventor Direct	⌘	⌘	⌘	⌘	⌘
Siemens NX or Solid Edge Direct	⌘	⌘	⌘	⌘	⌘
Ansys SpaceClaim Direct	⌘	⌘	⌘	⌘	⌘
PTC Creo Direct	⌘	⌘	⌘	⌘	⌘
CAD Import Plus	⌘	⌘	⌘	⌘	⌘