

## SigmaNEST Techno™

SigmaNEST Techno is the most advanced solution available for laser, plasma, oxyfuel, waterjet, punching, and router machines. It maximizes material efficiency and machine through-put using advanced nesting and NC functions, including common-line cutting, bridge cutting, and chain cutting.

### FEATURES

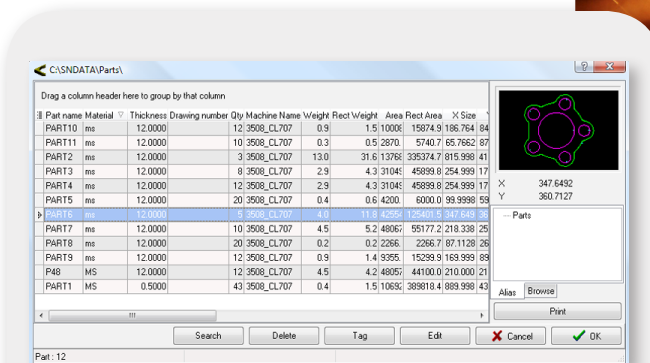
- Automatic and manual advanced true shape nesting
- Automatic part pattern recognition
- Adaptive nesting for multi-head machines
- Accurate cost and time estimators
- Drag, drop, and bump features
- Pre-piercing and tip-up crash avoidance

### ADVANTAGES

- One software programs for all major profile cutting and punching machines
- Higher levels of continuous cutting with minimal pierces
- Maximum flexibility in file conversion and importation

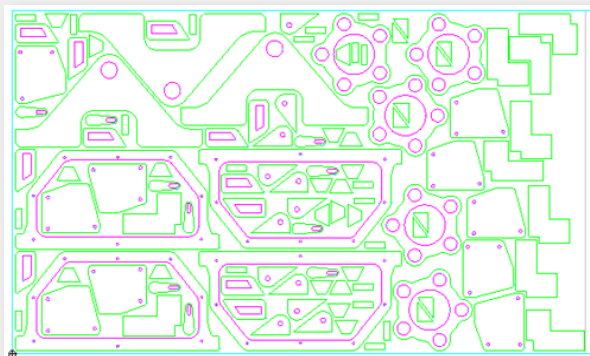
### BENEFITS

- Reduce or eliminate expense related to scrap
- Extended life of machine consumables
- Accurate planning with accurate time and cost estimates before cutting
- Faster machine through-put

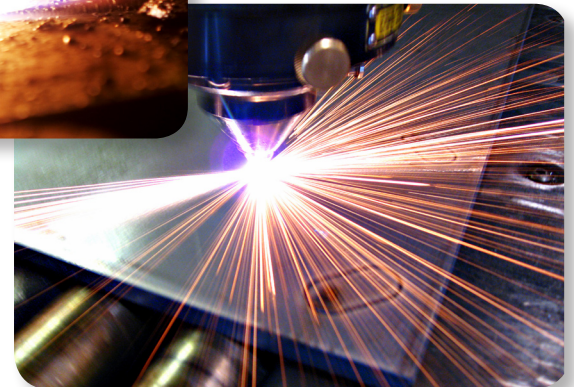


Part name	Material	Thickness	Drawing number	Qty	Machine Name	Weight	Rect Weight	Area	Rect Area	X	Y	Size
PART10	ms	12.0000	12_3508_CL707	0.9	1.5 1000E	15874.9	196.764	84				
PART11	ms	12.0000	10_3508_CL707	0.3	0.5 2870	5740.7	65.7662	87				
PART2	ms	12.0000	3_3508_CL707	13.0	31.6 1376E	335374.7	815.996	41				
PART3	ms	12.0000	8_3508_CL707	2.9	4.3 3104E	45899.8	254.999	17				
PART4	ms	12.0000	12_3508_CL707	2.9	4.3 3104E	45899.8	254.999	17				
PART5	ms	12.0000	20_3508_CL707	0.4	0.6 4200	6000.0	99.9999	59				
PART6	ms	12.0000	10_3508_CL707	4.5	5.3 4806E	95177.2	218.338	25				
PART8	ms	12.0000	20_3508_CL707	0.2	0.2 226E	2266.7	87.1129	26				
PART9	ms	12.0000	12_3508_CL707	0.9	1.4 935E	15299.9	169.999	89				
P48	MS	12.0000	12_3508_CL707	4.5	4.2 4805E	44100.0	210.000	21				
PART11	MS	0.5000	43_3508_CL707	0.4	1.5 106E	389818.4	889.999	43				

Parts List



Advanced TrueShape and common-line nesting capability



### Technical Specifications

- Runs inside 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

## Geometry/Importing

- Integrated 2D CAD drawing package:
  - Create polylines, lines, arcs, circles, fillets, chamfers, notches, bevels, layers, text, notes, and dimensions
  - Duplicate, move, scale, mirror, rotate, or array copy geometry
  - Trim, break, extend, auto-segment large arcs, and snap-to arcs as well as circle quadrants
  - Validate the file, filter geometry, and change weld gap before creating a part
  - Definable reference point and default part rotation or default to minimum rectangle rotation
- Import design from major CAD systems
- Import ESSI language and existing G-code programs
- Store workspaces and extracts parts from nest
- Map layers to processes (for marking and cutting) or quality settings
- Create multiple parts from a single file

## Estimating Part-Cost and Time

- Calculate work costs with an integrated costing model featuring user-defined parameters for machine recovery rate, operator costs, and other overhead and consumable materials
- Calculate processing time based on the nominal feed rate, material type and thickness, machine acceleration, part quality specs, rapid traverse, and head up/down movement on piercings
- Automatically calculate part area, cut length, and pierce numbers

## Manual Nesting

- Drag and drop parts onto single and multiple sheets
- Maintain part clearance with easy bump mode (including around lead-in)
- Redefine and reposition lead-in/-out
- Automatically update all similar parts when changing geometry

## Automatic Nesting

- Automatically nest multi-torch rectangular and true shape with an algorithm that changes optimal torch distance from sheet to sheet
- Automatically nest pre-nested clusters and parts within parts
- Nest for pre-pierce, corner loops and bevels
- Specify clamp positioning, nesting under clamps, and automatic clamp interference checks

## Level 2 Nesting

- Define non-rectangular raw material from geometry
- Use true shape nesting on non-rectangular sheets
- Automatically crop plates
- Nest for multi-head machines on non-rectangular sheets

## Advanced Automatic Nesting

Advanced True Shape nesting offers an interactive solver with:

- Pattern recognition
- Automatic part clustering
- Learning technology
- Specialized algorithms for multi-torch cutting
- Nesting for common-line cutting
- Nesting on multiple, side-by-side sheets
- Stack nesting
- Double-sided nesting

## NC Programming

- Automatically set part cut sequence from user-defined start point with manual override
- Sequence options for minimum movement, reducing heat distortion, skip cutting, and block cutting while preserving internal part sequence
- Clear NC for current or all nests, and from individual parts in a nest
- Set for sequential or simultaneous multi-torch line cropping

## Advanced NC Programming

- Set for automatic common-line cutting using schemes such as “two parts, one pierce,” “automatic slitting cuts,” and “combination cutting”
- Continuously cut contours in a complete nest with a single pierce for chain and bridge cutting
- Avoid passing over previously cut parts with tip-up part crash avoidance
- Pre-pierce all start points before cutting
- Vaporize coating
- Apply no-edge NC
- Manage feed rate for pierce zone compensation and enhanced part quality detail
- Create inspection part
- Create part groups
- Automatic tabbing
- Scrap cut skeleton

## Post Processing

- Creates industry standard G and M codes
- OEM-specific technology tables cover standard material thicknesses and grades

## CONTACT

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