

SigmaNEST Punch Combo™

SigmaNEST Punch Combo combines the functions of AutoNEST™ for profile cutting with SigmaNEST Punch functionality to optimize cutting and punching process coordination for single and combined orders. It provides punch/plasma and punch/laser machines with:

FEATURES

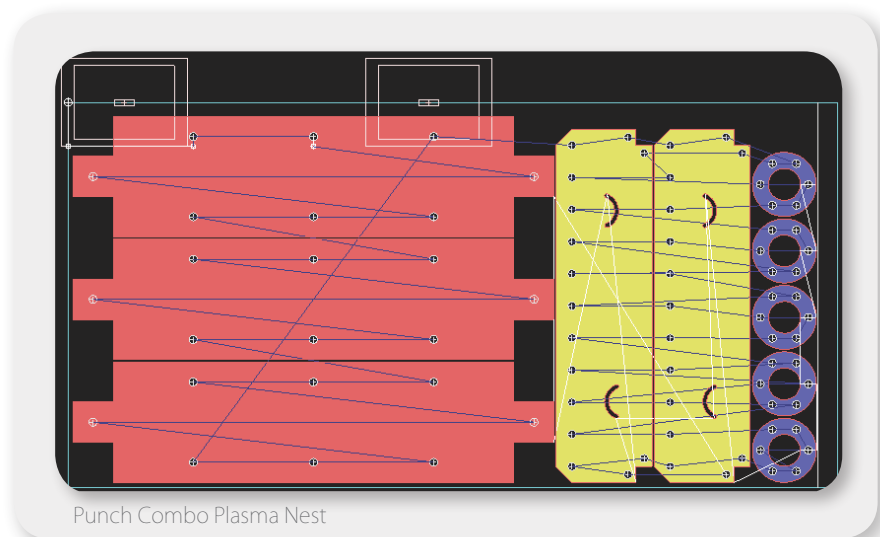
- Automatic and manual NC tool path generation
- Tool management and substitution
- Nesting in dead zones and under clamps
- Automatic and manual punch tooling
- Pre-pierce punching
- Auto-repositioning
- Automatic tabbing and micro-joints
- Turret setup tracking and reporting
- Drop door support
- 2D CAD capabilities

ADVANTAGES

- Higher efficiencies in tool and work order management
- Save time with fewer tool changes
- Automatic recognition of best sheet in inventory, including non-rectangular remnants
- Improved shop floor planning with accurate costs and time estimates

BENEFITS

- Using a single software for multiple machines reduces programming and training time required
- Maximize rectangular yield per sheet
- Save engineering time through simplified programming and more efficient machine output



Technical Specifications

- Runs inside Windows XP or Vista® operating systems
- Post processors available for multiple machines
- Import standard industry file formats such as CDL, AutoCAD DXF and DWG, HPGL, and 3D IGES
- ESSI, G and M codes can be user-configured

Part Creation Management

- SigmaNEST CAD offers intuitive functionality to provide users with precision in geometry
- Choose from customizable geometry, or create and save shapes in standard shapes library
- Automatic part geometry error correction
- Lead-in/lead-outs automatically applied according to material or process type and checked by machine

SigmaNEST Punch Combo brings nesting advantages for both the cutting and punching machine processes in one powerful solution

Geometry/Importing

- Map layers to processes (for marking and cutting) or quality settings
- Validate files, filter geometry, and change the weld gap before creating a part
- Create polylines, lines, arcs, circles, fillets, chamfers, notches, layers, text, notes, and dimensions
- Duplicate, move, scale, mirror, rotate, and array copy geometry
- Trim, break, extend, auto-segment large arcs, and snap-to arcs as well as circle quadrants

Tabbing and Repositioning

- Manually place tabs before tooling
- Automatic overlap repositioning commands and full manual override options

Estimating Part-Cost and Time

- Calculate part 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, and part quality specifications

Automatic Nesting

- Automatic or manual rotation and alignment of parts
- Automatic nesting of pre-nested and pre-tooled clusters
- Multiple sheet nesting on rectangular sheets
- Nesting under clamps with automatic clamp avoidance and corrective repositioning
- Nesting sequence controlled by user values for priority, due date, and broken work order

Safety Zones

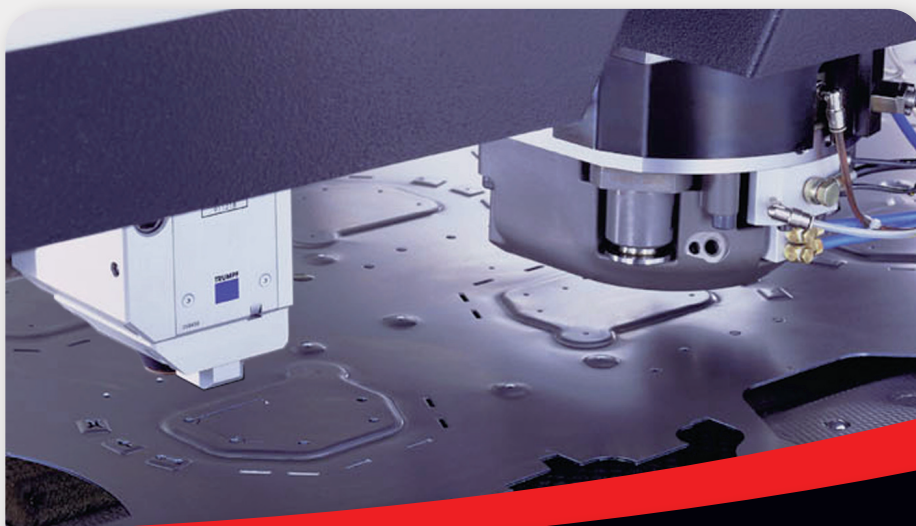
- Ability to correctly mark adjacent turret positions as being unavailable for oversized tools and tool usage
- Automatically sequence louvres so that subsequent punching operations won't damage the forming operation

Post Processing

- Create industry standard G and M codes
- Open architecture
- OEM-specific technology tables cover standard material thicknesses and grades
- Simultaneously post to multiple, compatible machines

Reporting

- Automatic report generation with job information including punch time estimates, material yield, and automatic job cost feedback



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