

SigmaNEST Punch Techno™

SigmaNEST Punch Techno, the second-tier punch package, improves material efficiency and machine through put using advanced nesting functionality. "Auto-dynamic nesting," available in the Punch Techno and higher modules, combines nesting benefits with automatic tool selection to reduce manual programming and avoid time-consuming changes during the punching process.

FEATURES

- Auto-dynamic nesting with tooling and tool compensation
- Tool management and substitution
- Mixed-part and dead-zone nesting
- Common-line tooling
- Auto-repositioning
- Automatic tabbing and micro-joints
- Turret setup tracking and reporting
- Drop door support

ADVANTAGES

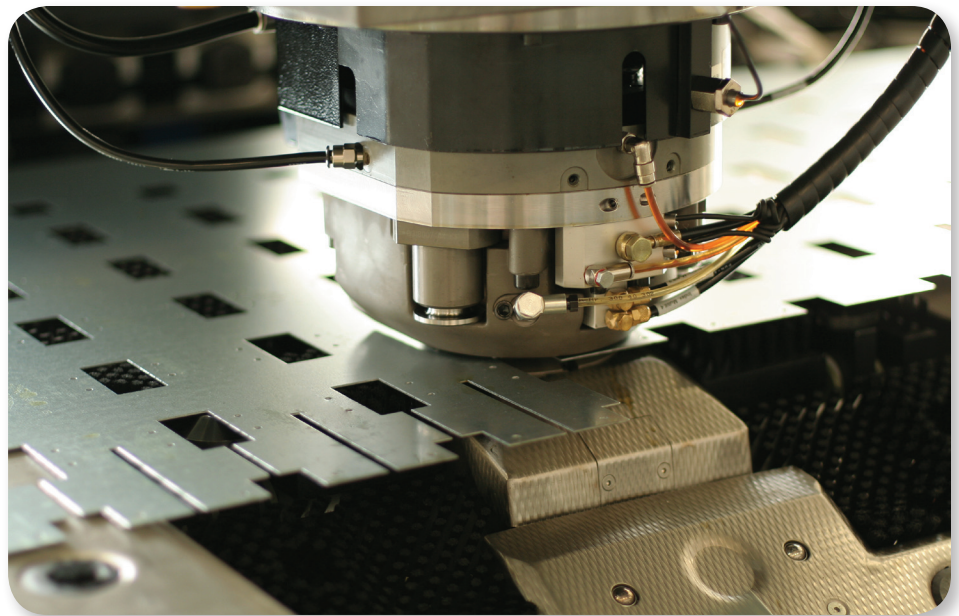
- Automatic recognition of best sheet in inventory, even non-rectangular remnants
- Better shop floor planning with accurate costs and time estimates

BENEFITS

- Using a single software for multiple machines reduces programming and training time required
- Improved material utilization to reduce scrap
- Save engineering time through simplified programming and more efficient machine output
- Higher efficiencies in tool management

Technical Specifications

- Runs inside Windows XP or Vista® operating systems
- Post processors 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



Drop Door Compatibility

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

Part Creation Management

- Standard shapes library with customizable, industry relevant shapes
- Lead-in/-outs automatically applied according to material or process type
- Automatic part geometry error detection and correction
- 2D CAD capabilities with part creation features
- Calculate kerf by computer or control

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 specs

Automatic Nesting

- Automatic or manual rotation and alignment of parts
- Automatic nesting of pre-nested clusters of parts
- 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
- Pattern recognition
- Automatic part clustering
- Learning technology

Auto-Dynamic Tooling

Auto-dynamic tooling assigns a tool to the part while nesting takes place to ensure nests are always valid. SigmaNEST Punch Techno provides more efficient nests by considering the full range of available tools when nesting. Users can manually tool and sequence parts before nesting or re-tool an existing nest for special circumstances.

Tabbing and Repositioning

- Manually place tabs before or after tooling
- Automatic overlap repositioning commands and full manual override options
- Dedicated tab tool support

Reporting

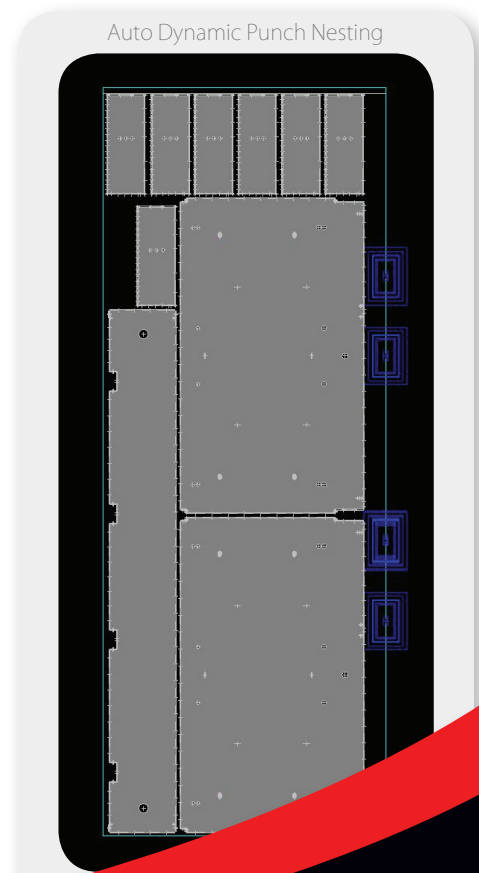
- Automatic report generation with job information including punch time estimates, tool usage, material yield, and automatic job cost feedback

Safety Zones

- Correctly mark adjacent turret positions as being unavailable for oversized tools
- Automatically sequence louvers so that subsequent punching operations won't damage the forming operation
- Dynamic clamps zones depending on station size

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



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