SigmaNEST® Punch Basic

SigmaNEST Punch Basic is the entry-level package providing single part nesting for punch machines. It is ideal for environments that utilize single or multiple machine types because it works with all major punch press, turret punch, and combo machines.

Features

- Single interface for tool library and turret configuration
- Interactive part and nest mode tooling
- Manual repositioning
- Automatic tool sorting
- Manual tabbing and micro-joints
- Drop door support
- Tool safety zones

Advantages

- One software programs all major profile cutting and punching machines
- Save time with Tool Sort by making fewer tool changes
- Maximum flexibility in file conversion and import options
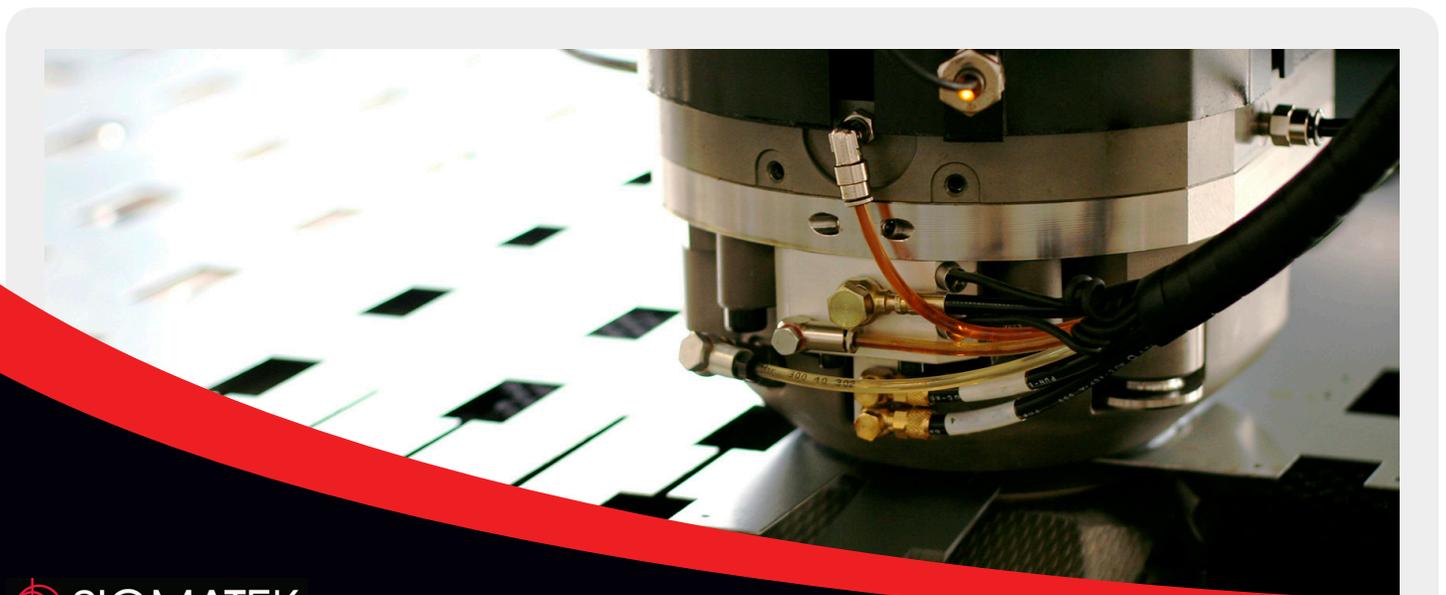- Custom shapes can be saved into standard part library for future use

Benefits

- One software for multiple machines reduces programming and training time
- Save engineering time through simplified programming for complex processes
- Higher profitability
- More efficient machine output

Technical Specifications

- Runs on current Windows operating system
- 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

- Choose from more than 190 customizable shapes or create and save shapes and parts in an integrated database with user-defined fields
- Automatic part geometry error detection and correction
- 2D CAD capabilities with part creation features

Estimating Part Cost and Time

- Calculate part costs with an integrated costing module 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

Post Processing

- Create industry standard G and M codes
- Open architecture
- OEM-specific technology tables cover standard material thicknesses and grades

Safety Zones

- Correctly mark adjacent turret positions as being unavailable
- Automatically sequence louvres so that subsequent punching operations won't damage the forming operation
- Dynamic clamp safety zones depending on tool station in use

Tabbing and Repositioning

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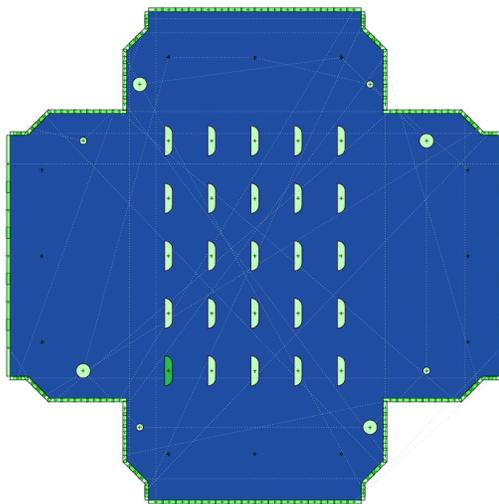- Dedicate tab tool support

Reporting

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

Automatic Nesting

- Automatic or manual rotation and alignment of parts
- Automatic nesting of pre-nested 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

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, and auto-segment large arcs
- Snap-to arcs as well as circle quadrants

Single Part Punch Basic

SigmaNEST Punch can determine the most efficient choice; one hit with a large tool versus two hits with a small tool for a dramatically more efficient nest.