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SigmaTEK Corporation

Welcome to the information age! With manufacturing and service jobs moving all over the world, profitability and success in our industry will only be possible if we all harness our expertise in automation and manufacturing efficiency.

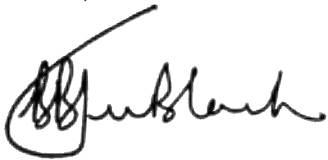
Congratulations on recognizing the need for change in your company. If you had waited until the need for change was obvious to everyone around you, it would probably have been too late.

SigmaTEK Corporation is your perfect partner in automating and optimizing your flat material cutting operations. Our automatic nesting and NC programming software technology is specifically designed for CNC plate burning, plasma, laser and waterjet cutting, routers and knife cutters, profile/punch combo machines and turret punch presses.

Our technological leadership is the result of a relentless commitment to excellence, continued investment in research and development, and our close working relationship with the more than 4,000 SigmaNEST customers worldwide.

We look forward to serving you with the quality products and services you expect and deserve.

Sincerely,

A handwritten signature in black ink, appearing to read "Ben TerreBlanche". The signature is fluid and cursive, with a long horizontal line extending from the end.

Ben TerreBlanche
President and CEO

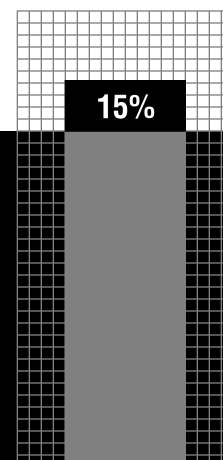


SigmaNEST . . . The leading profile cutting CAD/CAM

As powerful and flexible as CNC cutting machines are, they merely follow the NC program - a program that you create! SigmaNEST ensures that the NC programs sent to the machine are optimized for material yield, machine cycle time, part quality and production schedule.

SigmaNEST is an integrated package offering an easy to use and streamlined work method for programmers, estimators and material management personnel.

With over 4,000 systems installed worldwide, SigmaNEST is the leading profile cutting and sheet metal CAD/CAM system available today. SigmaNEST combines the most advanced automatic nesting technology, machine motion optimization, unequalled ease-of-use and production management automation to increase your productivity, profitability and competitiveness.



**Typical
increased
production
throughput
with
SigmaNEST**

system available today

Key Success Factors

● **Material-** Save Money

- Get the best yield from your raw material by nesting with SigmaNEST
- Consume less material for the same output
- Eliminate Remnants
- Ensure more efficient utilization of cutting consumables such as gas, nozzles and optics
- Lower your cost per part

● **Motion-** Quality Parts - Faster

- Increase machine throughput with motion optimization functionality
- Always run at optimal cutting conditions
- Achieve appropriate part quality consistently
- Advanced NC features

● **Manpower-** Simplified Programming

- Optimized for the latest Microsoft Windows operating system including SQL and .NET
- Unequaled ease-of-use
- Network and Intranet enterprise versions available
- Produce nesting layouts and NC programs effortlessly

● **Management-** Production Information

- Automate production management functions
- Integrate with order entry and MRP
- Accurately estimate and quote
- Customize reports and post-processors
- Allow just-in-time nesting and total programming automation

Achieve lower part costs with optimized material yields

More than just a means of optimizing material utilization, SigmaNEST gives you the power to dramatically increase the productivity and throughput of your entire operation.

Material Utilization

- SigmaNEST's advanced automatic nesting results in tighter nesting layouts and the best yield from your raw material with the minimum amount of waste possible. You'll consume less material for the same production output, lowering cost per part and improving productivity.
- SigmaNEST is capable of multi-head nesting and cutting on new or remnant material.
- Complete material inventory control allows remnant consumption and overall inventory reduction.

Part Quality

- SigmaNEST produces the most dimensionally accurate parts through features such as automatic power ramping at corners, automatic dwell and exact stops.
- User-definable cut quality allows variations within a single part as well as between different parts in a nested layout.
- Lead-in options such as overburns and micro-joints help the cutting machine produce parts of superior quality.



- SigmaNEST includes technology to cut parts in a way that they do not move during the cutting process, ensuring dimensional accuracy.

Material Handling and Safety

- SigmaNEST fully supports automatic cropping and scrap cut functions which reduce "skeletons" into manageable pieces and remnants into manageable shapes.
- SigmaNEST functions such as clamp avoidance, tip-up part avoidance and zone nesting ensures reliable and safe machine operation.
- SigmaNEST optimizes for part off-loading and raw material handling.



The New York Blower Company has improved machine productivity, as well as increased material utilization, by programming its laser and plasma cutting machines with SigmaNEST.

Optimize machine motion through common-line cutting and tip-up part avoidance

SigmaNEST is Faster

- SigmaNEST Advanced True Shape nesting uses the fastest, most sophisticated and most efficient nesting engine available in the industry. The fast automatic nesting system allows you to do just-in-time nesting, taking advantage of combining parts from different orders to get the best yield.
- SigmaNEST can calculate the best sheet size combination for a multiple sheet nesting task, allowing you to order the most suitable raw material sizes.

SigmaNEST is Functional

SigmaNEST optimizes nestings for

- Common-line cutting
- Common-line punching and shearing
- Bevel cutting
- Multi-head cutting with variable head count and spacing
- Continuous Nesting™ and production automation
- SigmaNEST simplifies and automates challenging nesting and cutting tasks. It is your ideal tool and companion for today's competitive environment.

SigmaNEST is Flexible

- SigmaNEST is the only package you need. It produces nestings and ready-to-run NC code for a wide variety of cutting and punching machines.
- SigmaNEST allows you to define your own nesting logic allowing you to include and automate your own business rules.



Construction & Agricultural Equipment:

Cameco
Caterpillar
Deere Hitachi
John Deere
JRB
Komatsu Shearing
Toro
Vermeer



Reduce cycle time and increase consumables life dram

SigmaTEK's technological leadership is maintained by a relentless commitment to excellence and continued investment in Research and Development.

With such tremendous design flexibility, you can go from design to finished part in minutes instead of hours.

Quality Cutting in Motion

The basis of SigmaNEST's NC machine programming functionality is the automatic cutter path generation feature. NC code, including pierce points, leadin/leadout lines and cutting offsets are automatically generated, dramatically reducing programming time. Features include:

- Multi-head programming
- Optimal sequencing of cut path
- Minimum heat distortion logic
- Scrap cutting and remnant cropping
- Open architecture post processor producing compact sub-routine code
- Cutting technology database

Advanced Programming: Motion Optimization

Increase the capacity of your cutting machine by minimizing the cutting cycle time using SigmaNEST while maintaining appropriate part quality.

Motion Optimization features include:

- Reduced cycle time by common-line cutting
- Reduced cycle time by auto-chain cutting parts
- Reduced cycle time by auto-bridge cutting, which allows parts to be continuously cut from a single pierce
- Minimum movement logic
- Vary cutting parameters on a part to minimize production time while maintaining cut quality. This is particularly useful with laser and waterjet cutters.
- Automatic tip-up part avoidance sequencing saves time by allowing rapid traverse movement with lowered cutting head



At Enviro-Tec, SigmaNEST allows everyone to do their jobs more productively with less paperwork, in half the programming time, and uses 20% fewer sheets to produce the same amount of work.

atically

Automatic continuous cutting reduces machine cycle time and
prolongs nozzle life

Advanced Cutting Processes

- SigmaNEST supports the latest advances in Laser, Plasma and Waterjet cutting technology. This includes automatic pulsing, power ramping, variable feedrates, and pierce-on-the-fly.
- SigmaNEST will utilize all the unique cutting functions and cutting technologies on your machine ensuring peak performance while integrating with the rest of your company.

Combo Machine Configurations

SigmaNEST's Advanced NC programming capabilities support a wide range of combination machine configurations.

These include:

- Plasma/Punch combo machines
- Laser/Punch combo machines
- Combination router/drill
- Combination plasma/drill

Intricate Operations Made Easy

- Auto-bevel function allows multi-axis bevel contouring to be programmed effortlessly, including knife, land, blind and "K" bevels
- Repositioning, clamp avoidance and part removal using drop doors, part chutes or part handlers
- Automatically control torch spacing on multi-torch burning machines with programmable torch spacing



Transportation:

Brunswick Boats

**East
Manufacturing**

Diamond Trailers

Great Dane

Hendrickson

McNeilus Truck

Strick

Towmaster

Trinity Industries

Utility

Winnebago

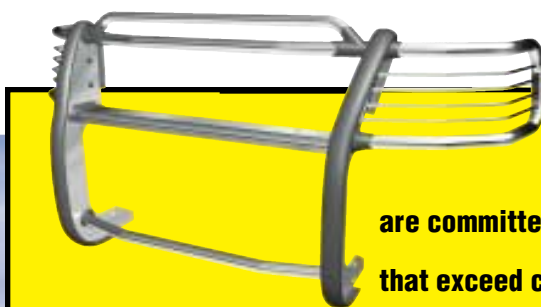
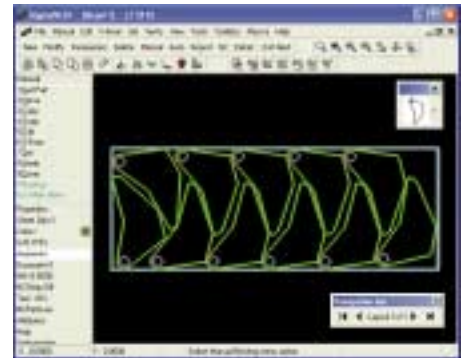
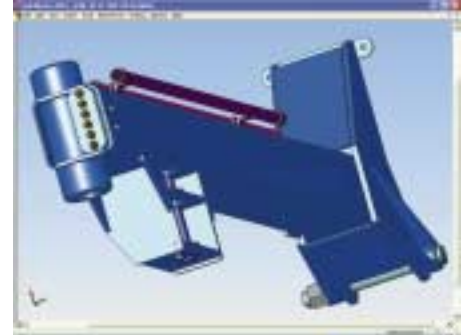


Integrate with engineering and production applications

SigmaNEST directly interfaces with most Solid CAD programs for geometry data transfer.

Engineering Integration

- Interface directly with SolidWorks, Solid Edge, Inventor, Unigraphics, Pro/E, CATIA and other solids based CAD systems
- Solid CAD part properties can be mapped to SigmaNEST part parameters for consistency and accuracy
- Import CAD files through AutoCAD DXF, DWG, and other formats like CADL, IGES, or HPGL
- Convert existing NC programs (G-code or ESSI) to geometry
- Part geometry automatically sequenced and internal contours automatically identified
- Part geometry analyzed for small gaps and duplicate entities and corrected automatically
- Smoothing filter substitutes arcs and lines for segmented polylines
- Create or modify part drawings with SigmaNEST's complete, built-in 2D CAD system
- Create drawings in seconds from integrated Standard Shapes Library
- Multiple "Z" depths recognized
- Sheet metal parts unfolded
- Error reduction improves quality and reduces downtime



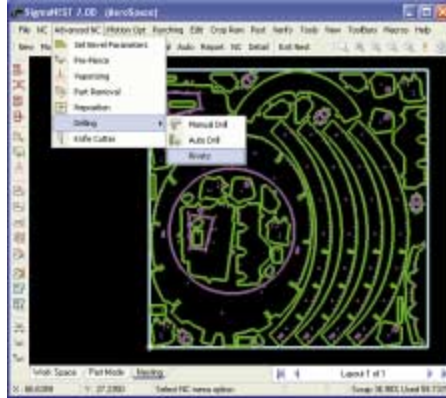
At Fey Automotives Products we are committed to provide products and service that exceed customer expectations. To accomplish this goal, SigmaNEST's role is essential.



Create multi-spindle nested layouts effortlessly

Simplified Programming

- SigmaNEST offers automated functions for ultimate productivity and interactive tools for maximum flexibility.
- Produce nests and NC programs effortlessly.
- SigmaNEST Machine Console™ takes nesting at the machine to the next level of automation and efficiency.
- Optimized for Windows 2000, XP and 2003, SigmaNEST offers unequaled ease-of-use.



Open Architecture

- SigmaNEST is .NET compliant with an open architecture, allowing users to customize and automate the programming function and roll SigmaNEST out as a web service.
- SigmaNEST offers automated links to MRP/ERP software for batch and Bill-of-Material (BOM) processing.
- SigmaNEST uses Microsoft SQL Server or MSDE for client server data management for multiple users.
- Post processors are user-configurable and can be customized to meet your needs offering the greatest level of flexibility.

Aerospace:

Boeing

Cessna

Ferco Tech

Kawasaki Heavy Industries

Northwest Composites

Shinmaywa

Vought Aircraft



Produce accurate estimating, production, inventory and

Designed to streamline the material utilization and cutting technology of the software, SigmaNEST offers a comprehensive suite of production management and database integration tools; and our open architecture allows users to customize post processors and management reports.

Parts Database

- SigmaNEST's parts file management system allows you to retrieve previously created parts quickly and easily.
- Parts can be stored by specific customer, project or product area.
- Part revision level can be synchronized with solid CAD parts and assembly configurations and PDM systems.

Work Order Management and Job Tracking

SigmaNEST's job tracking and work order management system allows you to track every part and Work Order from beginning to end. By creating nesting layouts and cutting jobs, part status is updated from "on order" to "in process" to "completed." If a work order is partially completed by a cutting job, the balance of the parts required will be calculated and made available for a subsequent nesting automatically. Features include:

- Batch processing of Bill-of-Materials
- Work order costing
- Archive and part production traceability
- On-line status reports and scrapped parts feedback

- Mixing different work orders on one sheet
- Accurate inventory leads to improved control
- Work order staging and consolidation with off-load screen minimizes open pallets, resulting in improved workflow

Inventory Management and Stock Control

Use SigmaNEST to manage your raw material inventory effectively, allowing you to get the most from the working capital tied up in stock.

SigmaNEST enables you to monitor raw material quantities in stock, on order and in process. You can easily browse through available stock and remnants, based on material grade and thickness. Stock data can be easily synchronized with existing production management and inventory control software. SigmaNEST's remnant database keeps an accurate record of the shape of remnant. Benefits include:

- Fewer remnants
- Remnant shape more usable
- Up-to-the-minute status report of available stock for any given grade and thickness
- Heat Number traceability
- Remnants do not have to be approximated by rectangles, thus maximizing usable material
- Best sheet selection
- Multi-plate nesting in X and Y



**At Bender Shipbuilding the
SigmaNEST/SimTrans system provides a**

**careful balance between "control and flexibility" that is needed to plan,
manage, and process plate parts.**

management reports

**Achieve Advanced True Shape
nesting into the dead zone and
under clamps through resolved
repositioning**

Scheduling

SigmaNEST calculates production time for cutting jobs accurately, taking into consideration machine accelerations and process dynamics. This serves as the basis for SigmaNEST's machine load management and job scheduling functionality.

MRP/ERP SimTrans Interface

SigmaNEST offers a real-time link to MRP and ERP systems such as SAP, BAAN, eStelplan and JD Edwards. This module automatically registers orders and provides feedback on order status and material consumption.

Estimating and Costing

Cutting time and material requirement calculation provides the input to the user configurable part production cost model. Features include:

- Part and job quotes
- Material yield and scrap tracking
- Time studies and cycle time calculations
- True part weight
- Automatic job cost feedback
- Multi-head cutting and sheet stacking considered

Reports

SigmaNEST's fully detailed reports are clear and accurate, and provide all the information you need to streamline your cutting operation. You can easily customize the report layout to match your own requirements. Examples include:

- Layout reports
- Barcode labels
- Utilization reports
- Tooling setup reports



**Steel Service
Center:**

Alro Metals

AM Castle

American Steel

Delta Steel

Denman & Davis

Earl M Jorgensen

Farwest Steel

Macsteel

Metals USA

O'Neal Steel

Rolled Alloys

Service Steel

Timberline Steel



Meet your needs today and tomorrow with SigmaNEST

From the SigmaNEST Autonest™ package through the SigmaNEST Power Pack™, the scalability available in the system satisfies the unique requirements of customers and allows the perfect growth path from an entry level to a high-end system. SigmaNEST is offered in configurations that meet every need.

SigmaNEST® Autonest™

An entry-level nesting and NC programming system that is quick to learn and easy to use.

SigmaNEST® True Shape™

A more efficient, fully functional nesting and NC programming package for processing rectangular raw material.

SigmaNEST® Techno™

Advanced True Shape nesting and Advanced NC programming.

SigmaNEST® Maximizer™

Included in this fully functional nesting and NC programming package are work order management, scheduling, inventory control and remnant nesting capabilities.

SigmaNEST® Power Pack™

The most complete and advanced SigmaNEST package includes production management, inventory control, advanced automatic nesting and machine motion optimization.

SigmaNEST® Punch Power Pack™

The most complete and advanced SigmaNEST package for turret punch programming includes production management, AutoDynamic™ nesting, punch tool management and machine motion optimization.



Woods Equipment utilizes

SigmaNEST's advanced nesting features to improve cycle time and increase consumables life through chain, bridge, and common-line cutting.

scalability

Access your remnant inventory and automatically nest parts
for multi-torch burning

In addition to the bundled packages, add-on modules are available offering a wide range of capabilities.

ShopCOMM™

An advanced communications module links the SigmaNEST programming workstation to multiple cutting machines via Direct Numerical Control. The operator on any machine can enter a program number right on the control and the corresponding program is downloaded into his machine. ShopCOMM™ connects your CNC cutting machine control units to a Microsoft Windows local area network using serial (USB) communication.

SN/Rotary

Cut tubing on machines equipped with a rotating headstock as simple as cutting flat profiles from a sheet. The system compensates for tube wall thickness and achieves quality cutting by maintaining constant relative surface velocity. It includes 3D modeling.

Develop™

A shapes library software for designing and unfolding 3D transitions and welded fittings for blowpipe, boiler making, HVAC and general fabrication applications.

SimTrans™

A real-time MRP/ERP interface, which includes automatic transaction processing, bill of material processing and batch processing. It facilitates order entry into SigmaNEST from order entry and processing systems and provides part production and material consumption feedback. It synchronizes raw material inventory with commercial systems.

SN/Filter

Smooths geometry consisting of small line segments, substituting circular arcs where possible, resulting in smoother parts and smaller programs. Popular in sign making and artwork. Raster to vector conversion available for scanned images.

SigmaNEST FMS

Integrate material handling including sheet towers, loaders and unloaders with the NC programming office. Job schedules can be set up and manipulated remotely. The system integrates directly with SigmaNEST's job tracking and inventory modules.

Additional add-on modules:

Machine Console
Load/Unload
Stock Manage
Profile/Punch Combination
Router/Drilling Combination
AutoDynamic™ Nesting Server
Bevel Programming
Tribon Interface
Solid CAD Interfaces
StruCAD and Xsteel Interfaces
Legacy data converters
SigmaNEST Cut-to-Length

Furnishings:

Ashley Furniture

Bassett

BenchCraft

Century Furniture

Douglas Furniture

Kaas Tailored

La-Z-Boy

**Lexington Home
Brands**

Woodmark



Maximize your productivity with assistance from our

SigmaTEK Corporation is dedicated to helping service centers, manufacturers and fabricators improve their cost-efficiency through improved material utilization, increased machine throughput and reduced programming time.

We listen to our customers and strive to meet their needs.



Regularly scheduled training classes are held at authorized training centers in Cincinnati, Seattle and other facilities across the globe.



Faber SpA maximizes their equipment utilization and streamlines their entire manufacturing process by integrating Pro/Engineer and SAP into SigmaNEST.



experienced support engineers

Prolong router bit life through tool
depth oscillation

Training

SigmaNEST is easy to learn and easy to use, but it operates in complex and widely varying environments. The most effective way to get the best results with SigmaNEST is by attending one of the training courses.

SigmaTEK offers several courses. These courses are well structured to ensure that everybody gets a good understanding of the software. The training facilities are well equipped and classes are small. This enables us to spend enough time with every student, giving everyone enough hands-on and practical experience to enable them to use the software by the time they complete the training. Training classes are conducted at the Cincinnati and Seattle offices in the US. Training is also available at SigmaTEK offices in the UK, Italy, Australia, Japan and Germany.



Seminars

SigmaTEK offers frequent online meetings and instructional seminars facilitated by the latest web based technology.

Support

Our Technical Support Staff is just a phone call away. Experienced support engineers are available to answer any questions you may have about your SigmaNEST software and to help you maximize your productivity.

Job Shop:

**Chicago Bridge
and Iron**

Cleveland Bridge

Grain Belt

Iowa Laser

Pasadena Tank

Super Steel

Watson Steel

Total solution for plate cutting

SigmaNEST is the leading CAD/CAM system for programming CNC profile cutting and punching machines.

Optimized for plasma, oxyfuel, waterjet, profile punch combo and plate laser cutting machines, SigmaNEST ensures the best results in terms of material utilization, machine motion optimization, part quality, integration, material handling, accurate estimates and management information.

Laser features include:

- Pre-piercing start points before cutting
- Corner ramping
- Tip-up part avoidance
- Common-line and continuous cutting
- Laser bevel cutting

Waterjet features include:

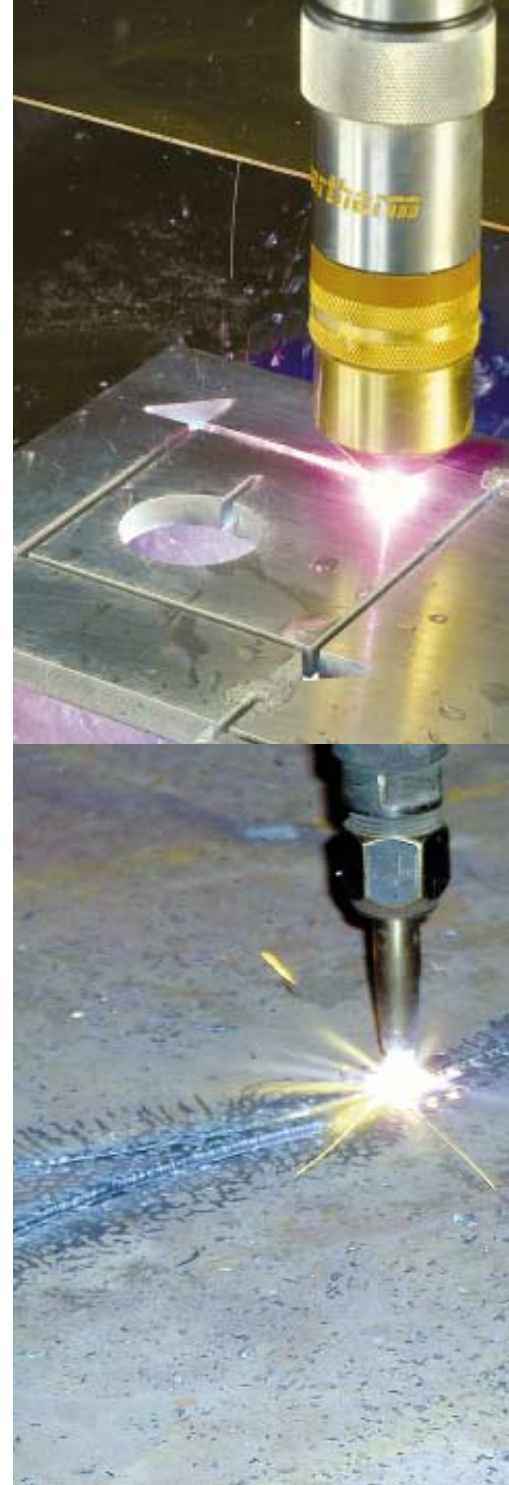
- Feedrate ramping for Waterjet to eliminate tail wash gouging
- Adaptive kerf compensation matched to feedrate for increased part accuracy
- Dynamic cut quality control

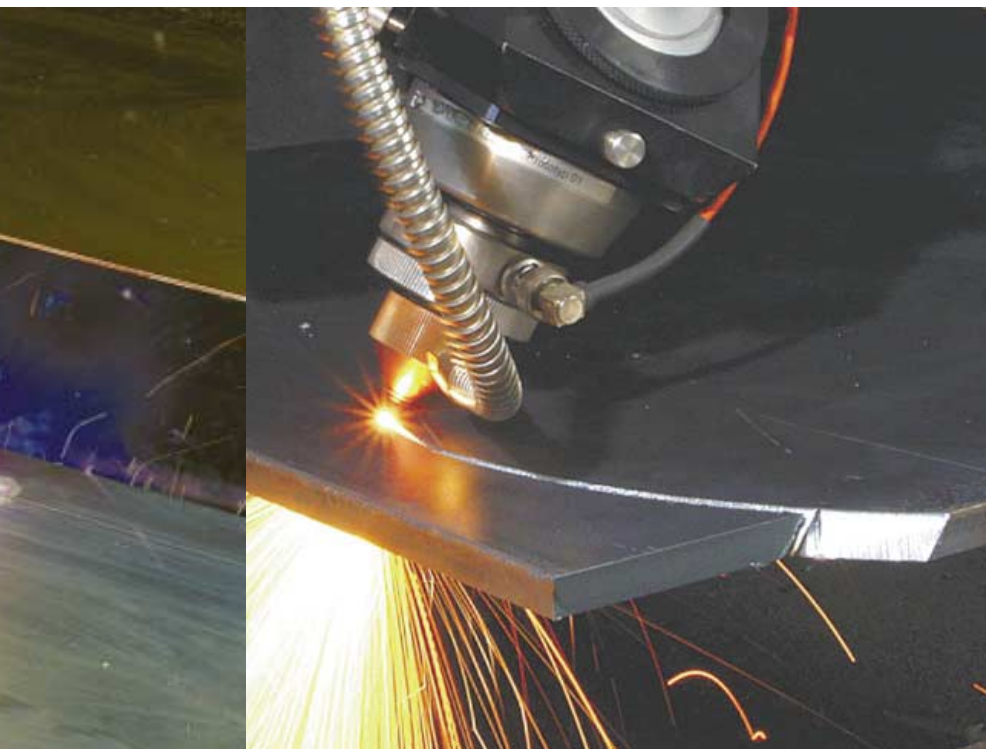
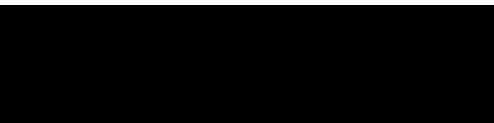
Plasma

Automatic continuous cutting reduces machine cycle time and prolongs nozzle life. SigmaNEST's powerful nesting with just-in-time capability provides nesting layouts in less time than it takes to change a sheet on the cutting machine.

Oxyfuel

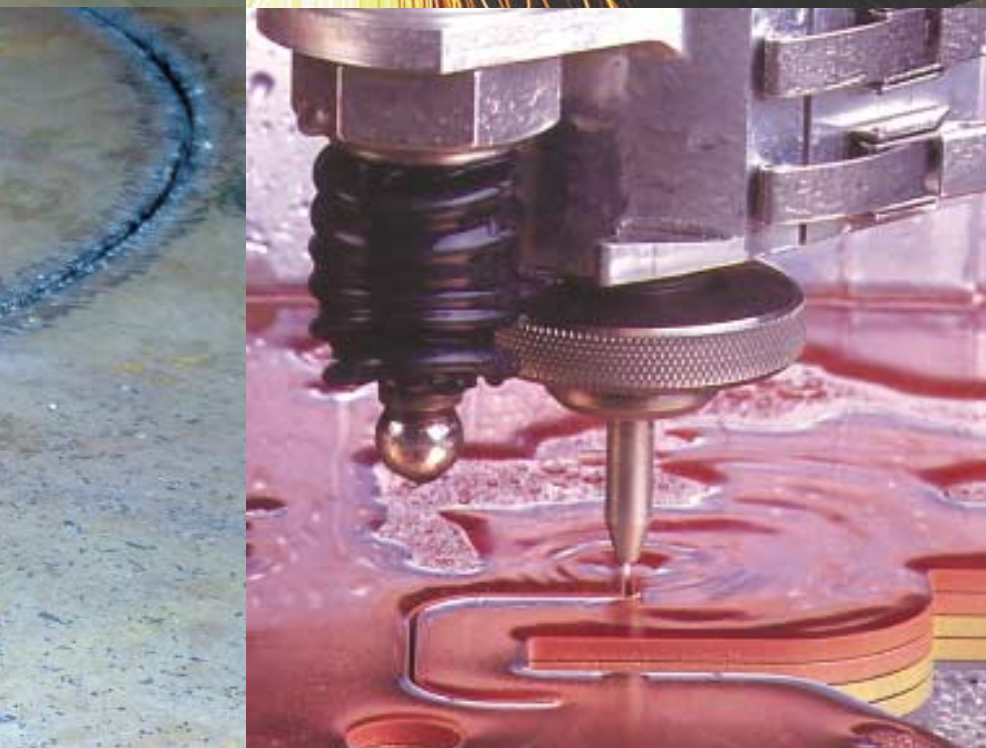
SigmaNEST permits access to your remnant inventory and automatically nests parts for multi-torch burning, resulting in reduced overall material inventory. Cutting technology considers and compensates for thermal distortion.





Laser

Optimize machine motion through common line cutting and tip-up part avoidance, reducing cycle time. Automatic power ramping at corners ensures quality parts automatically.



Waterjet

Automatic corner ramping eliminates tail wash and gouging of material, producing higher quality parts. SigmaNEST supports multi-nozzle cutting on new and remnant material.

Total solution for precision sheet metal

SigmaNEST is the leading CAD/CAM system for programming CNC profile cutting and punching machines.

Directly interfaced with production management and sheet metal design, SigmaNEST ensures the best results in terms of part quality, material utilization, machine motion optimization, material handling, accurate estimates and management information. SigmaNEST supports FMS systems, part handlers and lights-out automation.

Laser features include:

- Vaporizing
- Pre-piercing start points before cutting
- Pierce on-the-fly
- Microwelds and tabs
- Corner ramping
- Tip-up part avoidance
- Common-line

Punch Press features include:

- Common-line punching
- Automatic micro tabs
- Drop door and chute
- Automatic tooling
- Special tooling
- Tool life management

Profile Punch Combo

SigmaNEST allows advanced true shape nesting into the dead zone and under clamps through resolved repositioning.

Laser

Use unique machine cutting features and technology while maximizing material yield and minimizing machine cutting time.





Turret Punch Press

SigmaNEST
AutoDynamic™ nesting
optimizes punch tooling,
material yield, machine
cycle time and work order
priorities to achieve the
lowest cost per part while
maximizing machine
throughput, automatically.



Router and Knife applications

Optimized for router and knife applications, SigmaNEST ensures the best results in terms of integration, part quality, material utilization, machine optimization, material handling and safety, accurate estimates and management information.

Router

Create multi-spindle nested layouts effortlessly and prolong router bit life through depth tabs and tool oscillation. New Continuous Nesting™ technology combines the best aspects of static and dynamic nesting to produce the optimal balance between production throughput and material yield.

Knife

Optimize stack height for multi-layer nesting. Accurate corner cutting with angle recognition and "pizza" wheel control.





Nest with the BEST

SigmaTEK Corporation (Headquarters)
11820 Kemper Springs Drive, Suite 100
Cincinnati, OH 45240 USA
+1 513-674-0005 Phone
+1 513-674-0009 Fax
info@sigmanest.com
www.sigmanest.com

SigmaTEK Europe Ltd.
Unit 16, Barclays Venture Centre
University of Warwick Science Park
Sir William Lyons Road
Coventry CV4 7EZ England
+44 24 7632 3065 Phone
+44 24 7632 3060 Fax

SigmaTEK Australasia Pty. Ltd.
1048 Beaudesert Road
Coopers Plains, Queensland
Australia 4108
+61 7 3246 5213 Phone
+61 7 3246 5212 Fax