

# Pro/ENGINEER® NC Sheetmetal Option

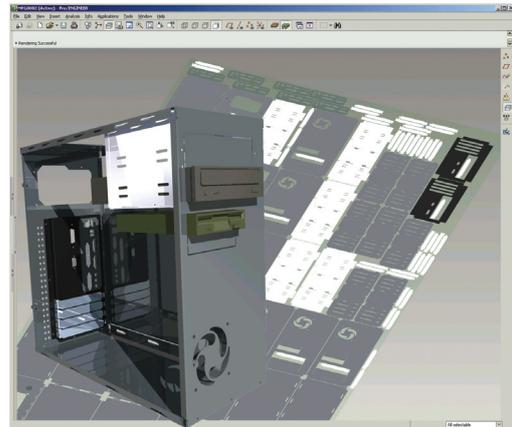
OPTIMIZE YOUR SHEETMETAL MANUFACTURING

Delivering high quality products to market faster and cheaper requires efficient manufacturing design and processes. With Pro/ENGINEER NC Sheetmetal Option, manufacturing engineers gain powerful capabilities to automatically create NC toolpaths for sheetmetal designs using both standard and form tools.

## Optimize Design For Manufacturability

Manufacturers need best-in-class solutions to meet the challenging demands of today's competitive, global marketplace. But with inefficient sheetmetal manufacturing, companies waste money due to high levels of scrap, and waste time due to many manually repetitive operations. Pro/ENGINEER NC Sheetmetal Option helps you eliminate these problems by automatically creating and optimizing toolpaths using standard and form tools. And, by leveraging its smart AutoNesting capabilities, you can utilize the maximum sheet area, which reduces both scrap and material costs, and shortens lead times. It's the ideal solution if you manufacture sheetmetal components for products such as computers, appliances, consumer electronics and office furniture.

Pro/ENGINEER NC Sheetmetal Option, an integral part of the Pro/ENGINEER product family, provides an advantage over external CAM packages because it gives you a seamless integration to sheetmetal designs created in Pro/ENGINEER. That means all product models are fully associative, which enables concurrent engineering, accelerates design changes to downstream deliverables, and decreases errors due to data translation.



AutoNesting in Pro/ENGINEER NC Sheetmetal Option helps you maximize your use of the sheet area.

## Key Benefits

- Fast NC programming for turret punch presses, contouring laser/flare machines, nibbling, and shearing
- Automatic tool selection (standard and custom forms) for punching, forming, and nibbling
- Intelligent optimization algorithms for achieving consistent output on the machine, thus reducing non-cutting traveling times, ultimately reducing tool changes
- Displays nesting efficiency (percentage scrap) and machining time report for manufacturing planning
- Full post-processor generation provides seamless integration with all CNC machine tools
- Maximizes sheet utilization, which increases manufacturing efficiency and decreases costs
- Supports Pro/ENGINEER and other CAD sheetmetal designs

# Optimize Sheetmetal Manufacturing

## Capabilities

### • AutoNesting with MRP input

Integration with company's existing material resource planning (MRP) system. Automation's ability to input an ASCII file allows any external system to create order lists of parts that Pro/ENGINEER can automatically retrieve and nest

### • AutoContouring for Laser/Flame/Plasma cutting

Using the new expanded workcell definition, NC sequences are automatically created for all part contours on the nested sheet. The sequences created can then be posted and sent to the machine, or customized by the NC programmer

### • Automatic tool selection (standard and custom forms) for punching, forming, and nibbling

### • Seamless integration with Pro/ENGINEER

- No second system to purchase and learn
- No dual database issues
- No data translation—manufacturing information is even stored in the assembly file (.asm)

### • Multi-CAD support

Able to machine imported 2D/3D models, as well as native Pro/ENGINEER sheetmetal designs

### • DXF direct import

DXF files can be read directly into Automation, creating Pro/ENGINEER parts 'on the fly'

### • NC programmers efforts are reused

Single-part programming method captures all NC programmer customization once, for repeated application to any nest into which the part is placed

### • NC Post-Processing

Full post-processor generation capabilities to integrate seamlessly with all CNC machine tools

- Graphic NC post-processor generator
- Interactive, online, context-sensitive help
- Extensive library of machine tools and CNC controls

## Language Support

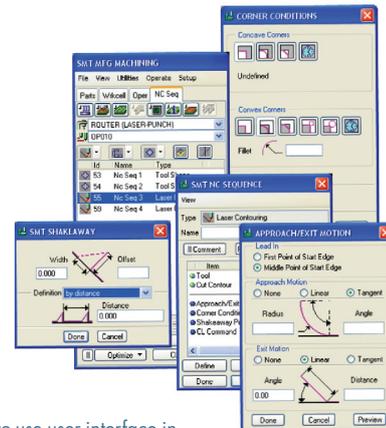
English, German, French, Italian, Spanish, Japanese, Chinese (Simplified and Traditional) and Korean

## Platform Requirements

Microsoft Windows (Vista and XP)

UNIX platforms (Solaris and HP-UX)

For the most up-to-date platform support information, please visit [www.ptc.com/partners/hardware/current/support.htm](http://www.ptc.com/partners/hardware/current/support.htm)



The easy-to-use user interface in Pro/ENGINEER NC Sheetmetal Option lets you quickly create NC toolpaths for your sheetmetal designs.

## The Pro/ENGINEER Advantage

Pro/ENGINEER is simple to learn and use, and is available in a variety of packages designed to meet your company's specific needs. Whether you need a cost-effective 3D CAD system that contains all the basic design capabilities, or a comprehensive Product Development System that seamlessly connects your extended supply chain, you'll find exactly what you need in a single, fully scalable solution. Choose the package that fits your needs today, and as your needs change and grow, you can easily upgrade to the package that is right for you tomorrow, which leverages the same powerful platform—this means no data translation and a consistent user experience.

The Pro/ENGINEER family of CAD/CAM/CAE solutions delivers a distinct advantage for manufacturing engineers because every Pro/ENGINEER application is fully associative. That means any change made to the design is automatically reflected in all downstream deliverables—without any translation of model information between applications. By eliminating data translation, you not only save time, but you also avoid the possibility of translation errors in your design. Pro/ENGINEER is the first choice for manufacturing engineers because no other 3D package offers a complete set of native manufacturing applications—from sheetmetal design to NC programming, progressive die design, process documentation, post-processing, and toolpath verification and simulation.

For more information on the Pro/ENGINEER NC and Tooling Solutions, visit [www.ptc.com/go/cam](http://www.ptc.com/go/cam)

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