



**MTC software®**

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# TECHNICAL BRIEF



## ProNest® Delivers Concrete Savings to Leading Construction Industry Producer

### Company Profile

DES MOINES, IA USA—**Construction Products, Inc.**, a division of EFCO Corp. ([www.efcoforms.com](http://www.efcoforms.com)), manufactures concrete forming systems with the goal of providing the *“Best Value and Lowest In-Place Concrete Costs”* to its worldwide customer base spanning most major industrial segments. CPI does this by offering its customers a superior, value-added product backed by on-site training and customer service.

### Rising Material Costs Propel Change

Due to dramatic increases in global mild steel sheet metal and plate pricing; the primary materials used by CPI in its product fabrication, a decision was made to evaluate approaches to managing costs and maintaining profitability. As part of this process, CPI completed an extensive evaluation of nesting software as a means to help improve material utilization efficiency and ensure the greatest return on investment.

### ProNest Sets the Standard for Cost Savings

CPI selected **ProNest** as their nesting solution of choice and implemented it for programming on all cutting machines, including plate and rotary axis tube cutting. ProNest’s intuitive interface design made it easy for CPI’s staff to quickly learn and use, allowing the company to smoothly transition away from their existing, less efficient programming. Today, CPI has trained each machine operator to use ProNest, and programming is done while the machines are cutting, using work stations on the shop floor in conjunction with a ProNest multi-user network license format.

**Stacy Gatch**, CPI Manufacturing Engineer, has the following to say about the company’s ProNest experience. *“Thus far using ProNest, we have experienced a savings of 5% across the board in material utilization which translates into an annual savings of \$50,000 in material alone. Using ProNest and MTC’s assistance optimizing the installation, we streamlined*



River Bridge, Perak—Malaysia



Fulton Ferry Port, NY—USA



Prado Dam, CA—USA

*Photos courtesy of EFCO Corp.*

### Did You Know . . .

*MTC Software can provide one nesting program that will work with most cutting machines and CNC controls; new and old alike.*

### Interesting Facts . . .

- ▶ *Our employees understand the cutting processes you work with*
- ▶ *Our auto-nesting saves time and material, typically outperforming attempts to manually nest the same job*
- ▶ *Our ProNest software works seamlessly with all leading brands of waterjet machines, including Flow, Omax, Jet Edge, and many others*
- ▶ *Our products are so easy to learn that we can install the software and train a new customer online, the same day*

*CPI continued*

our programming operation to save an additional \$31,000 in labor costs, annually. Finally, when we purchased the Alltra brand rotary axis tube cutting machine, a new technology for our company, MTC Software was instrumental in assisting us with quickly getting that operational." Overall CPI's investment in ProNest has returned itself several times over, and as material costs continue to climb, will offer even greater savings in the future. ❖



Photo courtesy of ALLtra Corp.

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## For More Information

Learn about MTC Software programming solutions that can help your company improve productivity and part quality, plus increase profitability.

Visit our website at [www.mtc-software.com](http://www.mtc-software.com) or call your local office.



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## ProNest® Advantage

ProNest is used to support numerous CNC cutting processes. Using ProNest as a single programming solution means you do not have to sacrifice any software features to achieve the best productivity and quality. In fact, we often hear from our customers that ProNest is not only easier to learn and use than OEM-developed programming software but also that it offers a richer, more comprehensive feature-set. Here are just a few examples of the benefits you can achieve when using ProNest with some commonly used cutting processes:

### LASER

- Use **Subrouting** of parts/profiles to both make the CNC code easier to read and to reduce the overall file size
- Use **Corner Radius** technology to identify corners on an imported part drawing and automatically replace them with small arcs; helping to optimize the NC code so that during cutting the machine can maintain higher speeds on corners while still achieving better part quality through improved part geometry

### WATERJET

- Use the **Quality** designation as a means to assign different feedrates to the entities of a part, and control the resulting edge quality
- Use **Dynamic Piercing** to maximize piercing efficiency by rapidly moving the nozzle in a cyclical motion during piercing so that jet "rebound" does not get in the way of the incoming water stream

### PLASMA

- Use variable **Feedrate and Kerf Parameters** plus torch **Under/Over Travel** to reduce hole taper and lead-out inconsistencies
- Use **Auto Height Control Lockout** to prevent the torch from diving and crashing when the "slug" falls out from the interior cut

### OXYFUEL

- Use **Heat Dissipation Cut Sequencing** to reduce plate warpage during cutting by automatically sequencing parts in different zones of the plate
- Use **Advanced Edge-Piercing** features and one of the available **Lock Lead-In** formats to reduce cycle times and improve part geometry

## COMBINATION MACHINES

- Use **Repositioning** functionality to process plates that are larger than the maximum X-axis work area, using a single pass
- Use **Plate Load/Unload** support to control automatic material handling and maximize productivity