

Case Study

ASCO Power Technologies



Highlights

- Replaced several systems driving multiple technologies with JETCAM
- Now the standard nesting system for all future machines
- Programming time up to 75% faster than other systems in use
- Up to 14% more efficient in nesting benchmark tests
- Tool teach makes auto-tooling for complex parts much quicker
- High performance nesting up to 4% more efficient than original free form nesting
- Tight integration with Aquila DMM
- One programmer 95% repurposed after DMM started programming JETCAM
- In use since 1997
- Fast training, backed up by the JETCAM University
- Further benefits received under maintenance
- Excellent local support

ASCO Power Technologies, based in Welcome, North Carolina, manufacture automatic transfer switches, switchgear and other power management products. The company has used JETCAM Expert since receiving it alongside a Finn-Power 880 CNC punch press back in 1997. Its performance provided a stark contrast to the different nesting software systems being used to drive other machines in their facility at the time.

James Hunley, Fabrication Specialist recalled; *"We used a range of systems supplied alongside machines at the time, with varying issues. One was slow and not user-friendly - more of a CAD system than software designed for punching. Functions such as batch nesting were very cumbersome. We moved to another system, which resolved some of the issues of its predecessor but brought its own problems. Making changes often required you to start over - not convenient when you'd just spent 20 minutes tooling a part."*

Having multiple nesting systems, each driving specific machines caused their own issues, as staff would be less

knowledgeable on some systems than others. This also caused issues during holiday season or sick-leave. Re-tooling jobs for other machines often meant going back to DXF and starting again.

James noted; *"One system was unreliable at applying tooling if the part was not created perfectly in CAD. This meant that we'd have to go back to the engineering department to get changes made to the CAD file before trying again."*



After using JETCAM Expert alongside other systems James realized that it was outperforming them in every way. He, along with Steve Gandy (Manufacturing Technician) and Susan Krohn (IT) sought to expand on this; *"We started to wonder what else it could drive. It was the most user-friendly, and financially it was cheaper than other systems. Why, when we can*



do things faster in JETCAM would we not use it for everything?"

The decision was made around 2005 to standardize on JETCAM Expert for all new machines. James noted; *"We've run a number of benchmark comparisons over the years and each time JETCAM outperformed other systems, both in terms of overall speed of programming and nesting efficiency. Programming was up to 75% quicker, and nesting efficiency could be as much as 14% better. The machine path optimization allowed jobs to run faster with code generated by JETCAM."*

In addition to new machines running with JETCAM James also set about replacing the remaining nesting systems, talking with JETCAM US distributor NestOne Solutions about postprocessors; *"We needed a stable and consistent solution for all of our machines. After we initially got JETCAM we quickly identified that we were seeing bottlenecks on other machines. When we purchased posts for other machines, such as our Wiedemann we were able to move work over to it in a matter of hours, whereas previously it would take three days."*

Technology-specific functionality has also allowed ASCO Power Technologies to save time. Tool Teach in particular as been instrumental in streamlining the process of applying punch tool hits to complex components. James commented; *"We adapt to what engineers request on the part with teach mode - we can teach a special tooling arrangement*



which will then be applied automatically on all parts with elements of the same geometry. JETCAM automatically cleans the file during import and then we'll auto-tool the part for each machine that it can be processed on, which means that it's ready to nest on any machine."

In 2014 the company upgraded their standard free form nesting to JETCAM's Free Form High Performance Nesting module. This delivered on average a further 4% material saving using its time-based nesting algorithm.

Continually looking for areas of improvement, ASCO Power Technologies identified that scheduled, fully dynamic nesting across all of their machines would deliver further benefits. They reviewed MES systems, finally settling on Aquila DMM due to its tight integration with JETCAM Expert. In 2017 the company went live with DMM, with operators now able to request nests on demand; *"Previously, operators might cherry-pick easier nests. Now we are driven by data. DMM knows what parts to make and the next machine available, so it will send the parts for dynamic nesting to JETCAM, with NC code*



Software: JETCAM Expert Premium
Rectangular and High
Performance Nesting
Right Angle Shear (RAS)
Sucker unloading support

Machines: Amada Pega/Vipros CNC Punches
Finn-Power SG6 CNC Punches/RAS
Wiedermann Magnum 5000 CNC Punch
Euromac BX1000 CNC Punches
Cincinnati CL940 Lasers

then quickly being ready. This ensures that the machines are always busy. The partnership between Aquila and JETCAM was a seamless fit”

Real-world scenarios can also be managed, with complex parts such as louvres handled using static nests. James added; *“DMM allows us to work outside of the automated processes if we need to. It sees the order and knows that this requires an existing static JETCAM nest instead of a new dynamic one. Fully automating the nesting process freed up one person’s job by 95% - now he just programs parts and oversees the DMM schedules.”*

ASCO Power Technologies has continually taken a maintenance contract, regularly seeing the benefit from features in new releases. James noted that there was a continual trend of improvement, especially with algorithms within the software; *“These have evolved over the years. Issues were uncommon to start with anyway, but now they are more of a rarity. The number of manual interactions is probably down by 80%.”*

With a previous supplier support was a major issue. Calls would constantly go unanswered and on one occasion the vendor denied support unless ASCO Power Technologies spent \$60k to upgrade software, despite paying for maintenance. With JETCAM, not only has the support requirement been significantly lower, but the quality of responses has set a new bar for James; *“I cannot say enough about what JETCAM and their distributor NestOne bring to the table in terms of*

response time. We don’t need to call so often due to the level of automation, but I’d be hard-pressed to believe that any company would service their products better than JETCAM.”

When ASCO Power Technologies first received JETCAM, training was provided by the machine tool vendor. Since then, new staff have been trained in-house by existing users, or with short online sessions with NestOne technical staff. ASCO Power Technologies are also taking advantage of JETCAM’s online ‘University’, which comprises of hundreds of short videos, each one detailing a specific feature.



James finalized; “Over the years I’ve dealt with maybe 6 or 7 other systems, and JETCAM is superior to all of them. To date, whenever we’ve purchased a new machine we’ve just called NestOne for a post, which has always been available. As we move forward, any new machines that we purchase that can run JETCAM will be running JETCAM.”

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