

Nesting System Optimization

ProNest[®] optional module



Productivity modules



Benefits

- Increased material utilization
- Faster inventory turnover
- Faster programming

About

Programmers may be faced with many different parts to nest and many different plate sizes to choose from, along with different nesting strategies to select. But how do you know which combinations will provide the best outcome or the highest material utilization?

With Nesting System Optimization, you can let the software do the math for you. This module will calculate every possible combination of parts, plates, remnants, and different nesting strategies, until it finds the best possible outcome.

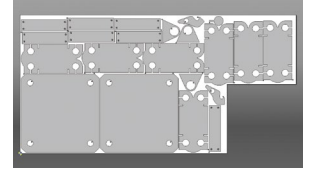
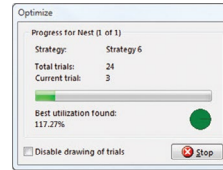
In addition, Nesting System Optimization can prioritize parts to ensure they are the first to be nested, and/or prioritize remnants over new plates to maximize inventory turnover. You can also use this module for cut-to-length coil nesting.

Example job

- 150 parts to be nested
- 0.25" material thickness
- 6 plate sizes available (4 new and 2 remnant)
- 4 different nesting strategies set to be trialed

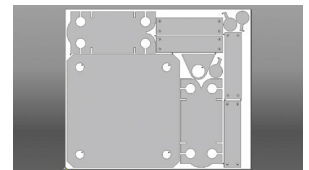
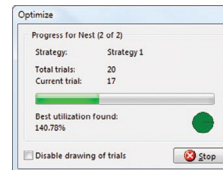
Step 1:

Nesting System Optimization begins creating the first nest by running a trial for every possible plate and nesting strategy combination. In this case there are 6 plate sizes available and 4 nesting strategies being used, so a total of 24 trials will be conducted. Material utilization and other criteria including part and remnant prioritization are used to define the nest.



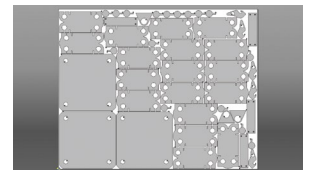
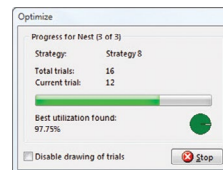
Step 2:

The process is repeated using the remaining parts and plates. At this point there are 5 plate sizes remaining and there are still 4 nesting strategies being used, so a total of 20 trials will be conducted.



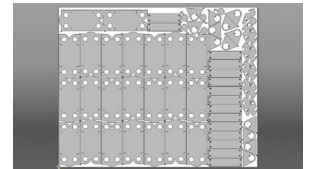
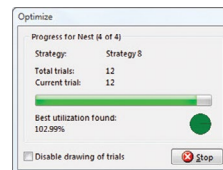
Step 3:

Nesting System Optimization will continue to run trials and create nests until all parts have been nested.



Step 4:

All parts are nested and the job is complete.



Conclusion

The finished job consists of all 150 parts nested on two remnants and two full plates. The "true area" material utilization averages 80% and the rectangular utilization averages 94%. And that's with a priority on remnants (using full plates can often result in higher utilization).

Compared with standard nesting, this module makes it easy to consume remnants, while consistently achieving higher utilization. The difference is typically a few percentage per nest, but the savings accumulated over time can be immense.

Visit our website to request a demo:
www.hypertherm.com/modules

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Please visit www.hypertherm.com/patents for more details about Hypertherm Associates patent numbers and types.

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Consider including other Productivity modules to further improve your operation:

- Automatic Nesting
- Chain and Bridge Cutting
- Common Line Cutting
- Skeleton Cut-up
- Collision Avoidance

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www.hyperthermassociates.com/ownership

Environmental stewardship is one of Hypertherm Associates' core values. www.hyperthermassociates.com/environment

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