P.E.P. TECHNOLOGY©

Automatic Nesting Technology

The P.E.P. Automatic Nesting results shown below are typical of the material yield generated by P.E.P.

Organization of parts on the nest

For more than 25 years programmers have manually used computers to nest two parts together, they checked multiple rotations of the parts, and nested the best rotation in rows and columns. Time was the limiting factor for the programmer and to this day, nesting in rows and columns is the most effective way of nesting.

That's where P.E.P. comes in. P.E.P. is the only nesting software that analyzes the parts PRIOR to nesting a single part. P.E.P. analyzes and then categorizes the pairs by "type", and then mathematically nests the parts in memory more than 30 times based upon the plate area, using combinations of parts in rows and columns. As you will see in the video links, P.E.P.'s methods are true to the concept regardless of where a part is nested on a plate.

The advantage that P.E.P. has over the programmer is time. P.E.P. can compare more pairs of parts, check hundreds of rotations, and therefore nest the parts much more efficiently.

The advantage P.E.P. has over other Automatic Nesting products is the nesting technology allows P.E.P. to nest parts in columns and rows on multiple plates performing all the tasks **AUTOMATICALLY**. Other automatic nesting products require the operator to select the nesting mode based upon their experience with the nesting software and the type of part being nested. When nesting multiple parts this single mode must work for all the parts throughout all the plates. The nesting results are then accepted or rejected based upon what the operator perceives, and whether another mode can do a better job. At best, this approach only works some of the time, and almost always requires editing of the nests to get an acceptable yield.

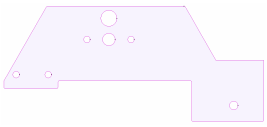
Material Yield Savings

The P.E.P. Automatic Nesting Software will save approximately $18,000.00 per $100,000.00 spent on material. As shown here, P.E.P. nested 76 parts on the sheet below. Competitors products using their push and shove concept will nest only 63 parts, and the Manual Gridding approach only nests 56 parts. Although the material saving on this nest is more than 20%, the material savings can vary by as much as 30% on some nests. Companies cutting $500,000.00 annually will save on average more than 18%, saving the company more than $90,000.00 per year, or $450,000.00 every five years in material.

Heat Build-up, Faster Cutting Speeds, Un-Necessary Rapid travel and Un-Necessary Head Raises

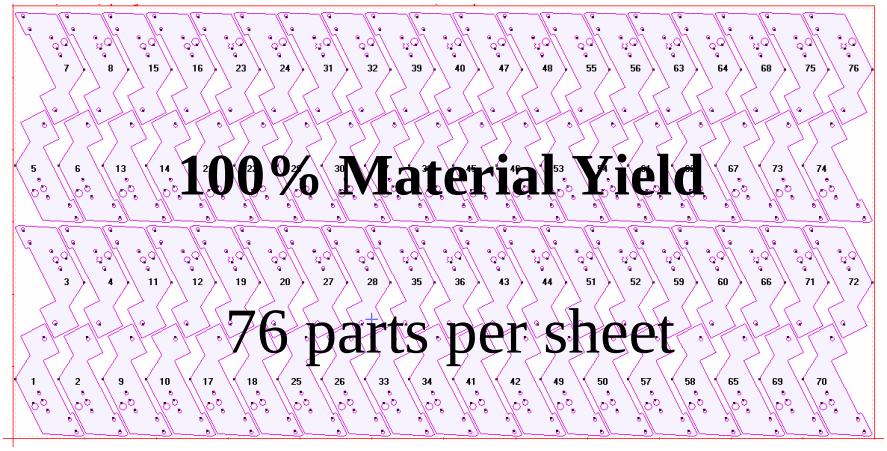
The nesting of parts in columns and rows is equally important to the productivity of the machine. Columns and rows eliminate heat build-up in the material which allows the machine to cut at faster feed rates, it reduces rapid travel distances and eliminates head raises resulting in a 15% to 25% increase in machine productivity. Since the machine time is far more expensive than the material, the benefits of P.E.P.'s automatic nesting as it applies to machine productivity needs to be understood. Machine productivity is covered in a separate document.

FROM THIS …



TO THIS…

AUTOMATICALLY



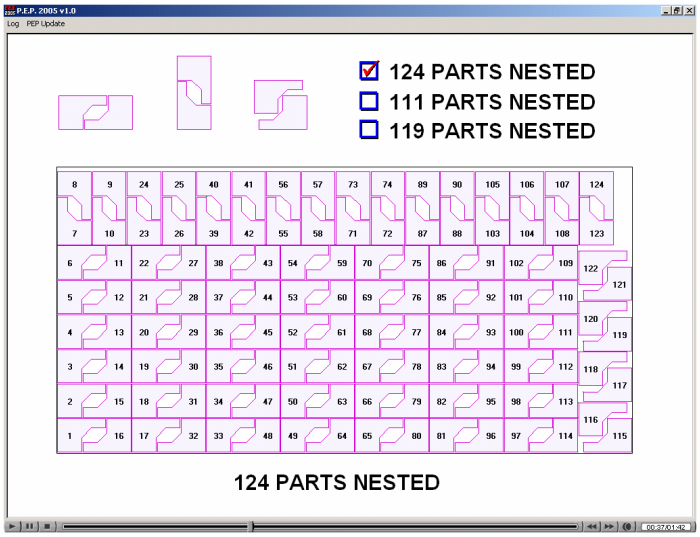
Measurement Masters, Inc. • One Technology Drive D401 • Irvine, CA 92618
Corporate: (949) 753-7878 Fax: (949) 753-8585 E-mail: Sales@peptechnology.com

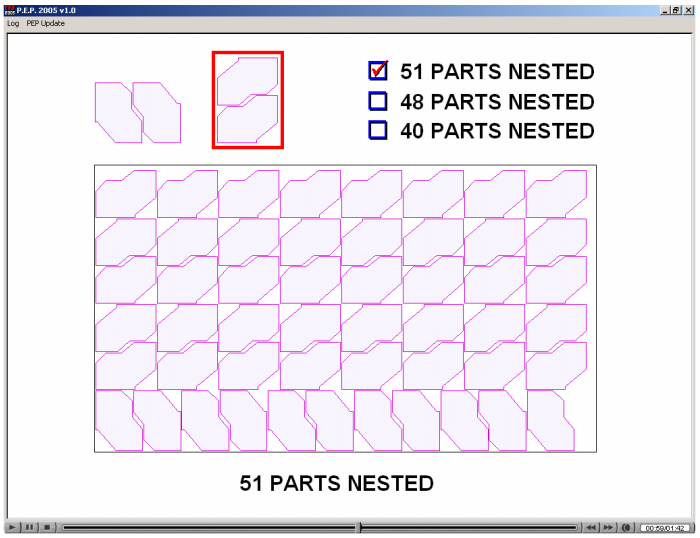
The following links will demonstrate the unique column and row nesting approach results that improve material yield and machine productivity. No other nesting product nests in this manner.

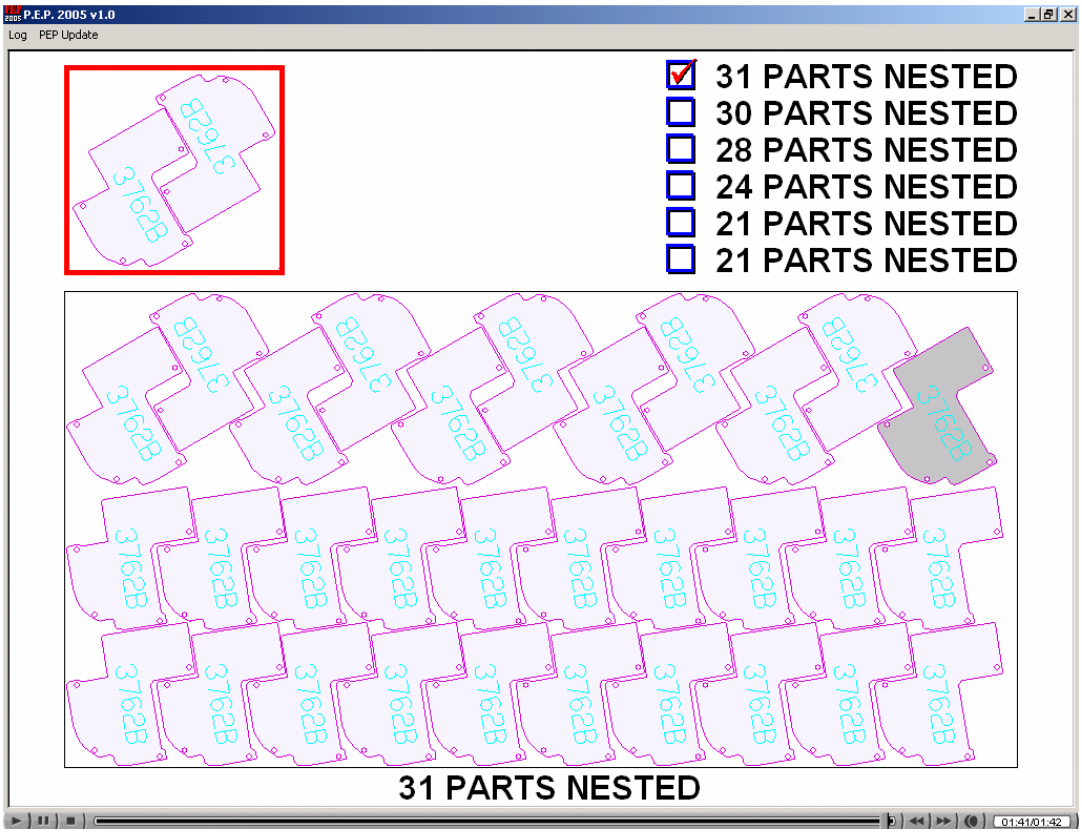
Once the nest is created, the sequencing logic will sequence the parts and assign lead-ins according to the machine parameters, such as bottom up, top down, flying optics, hybrid, etc.

Link #1 Column and Row Concepts

In this video, the software demonstrates several of the techniques used to find and nest pairs.



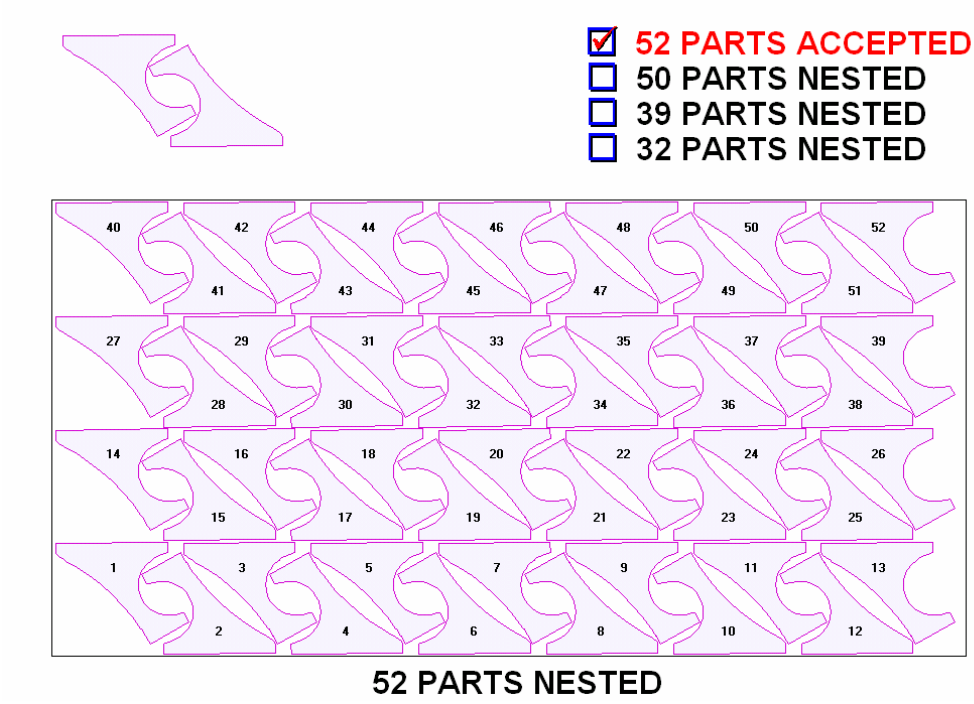




Measurement Masters, Inc. • One Technology Drive D401 • Irvine, CA 92618
Corporate: (949) 753-7878 Fax: (949) 753-8585 E-mail: Sales@peptechnology.com

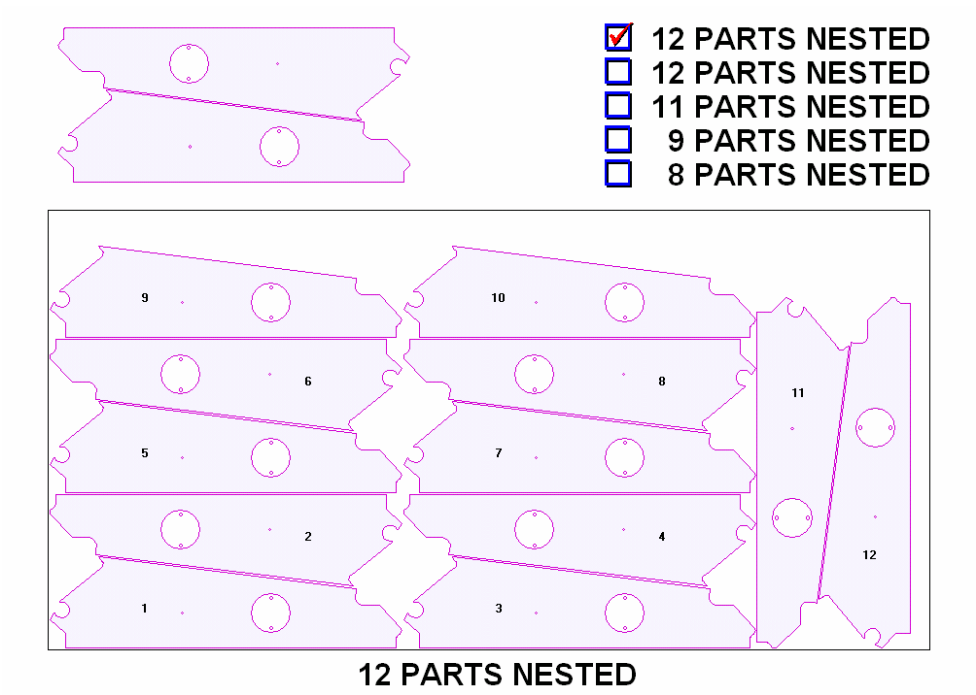
Link #2 [Rotating and Interlocking Pairs]

In this video, the software demonstrates how interlocking pairs are created.



Link #3 [Gridding vs. Pairing]

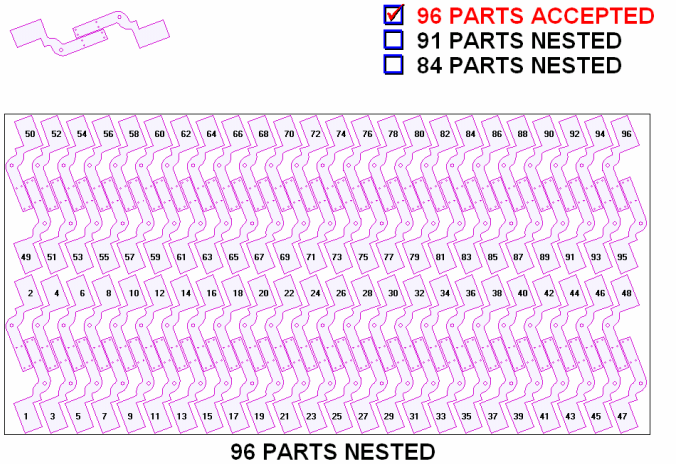
In this video, the software demonstrates how the logic compares nesting single parts to nesting pairs.

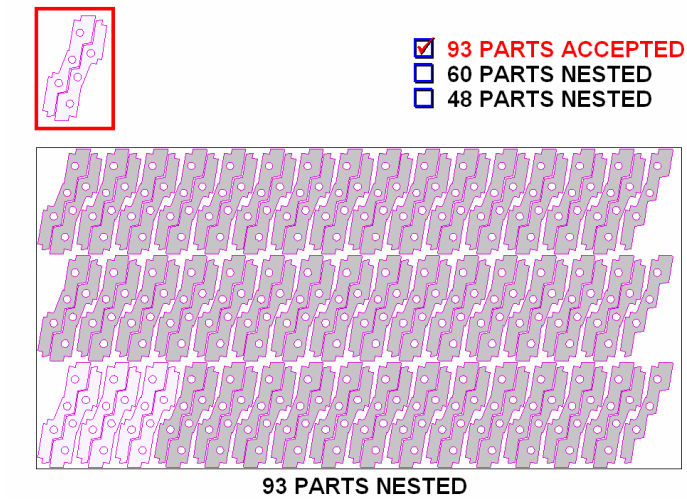


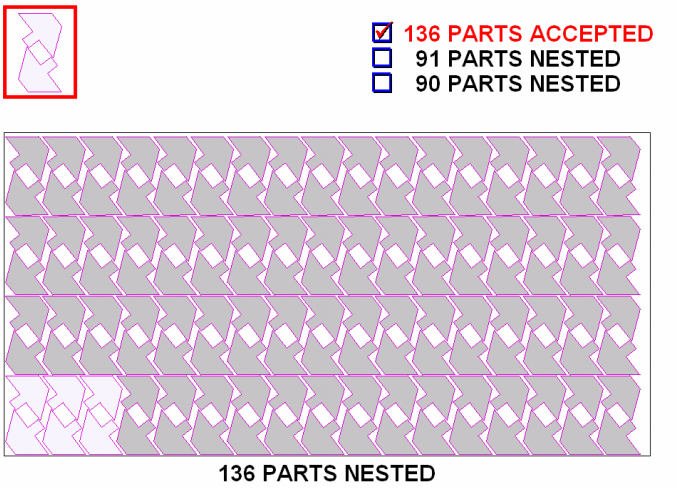
Measurement Masters, Inc. • One Technology Drive D401 • Irvine, CA 92618
Corporate: (949) 753-7878 Fax: (949) 753-8585 E-mail: Sales@peptechnology.com

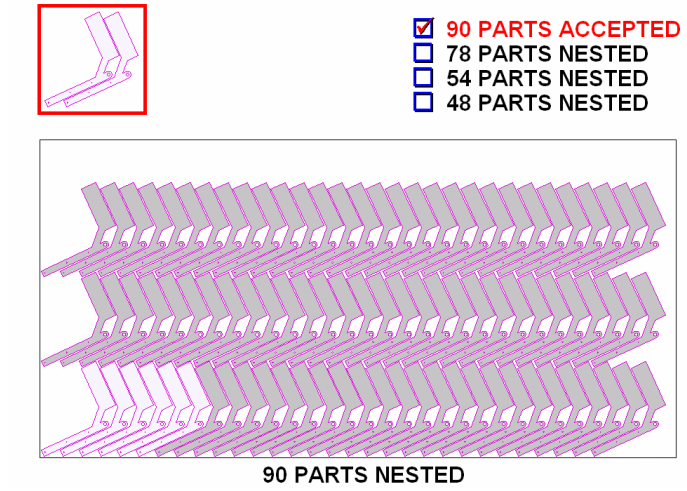
Link #4 [Soft Grain Nesting Concepts]

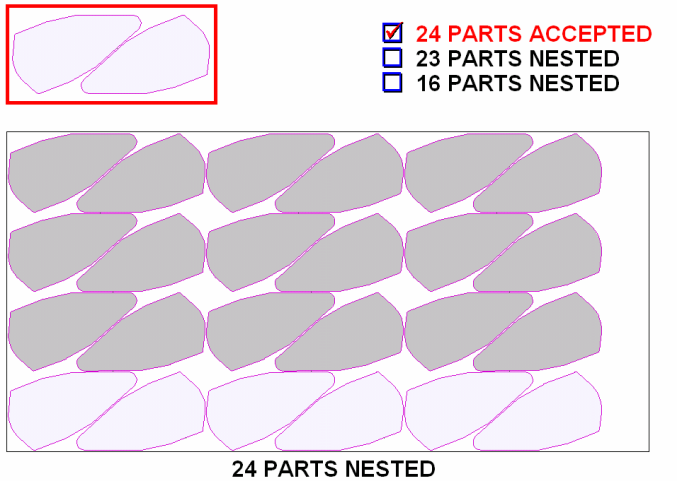
In this video, the software demonstrates how the soft grain logic nests pairs and interlocking parts while holding part rotation to 180 degrees of the primary part. Doing so holds the accuracy of the parts when fabricated on the press brake. Soft Grain logic increase material yield by as much as 30%.

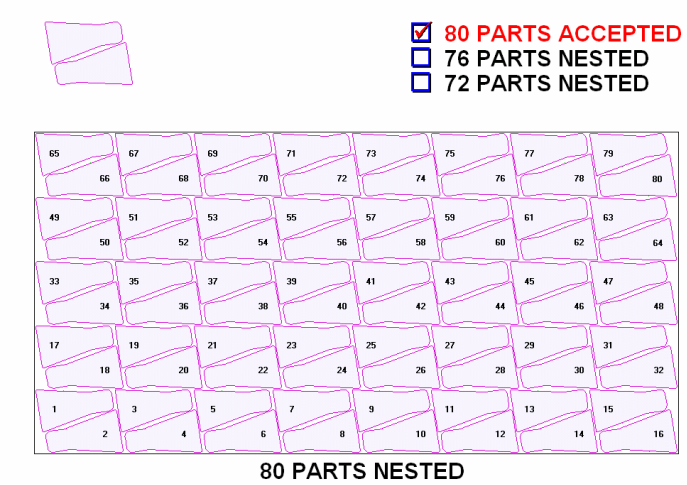




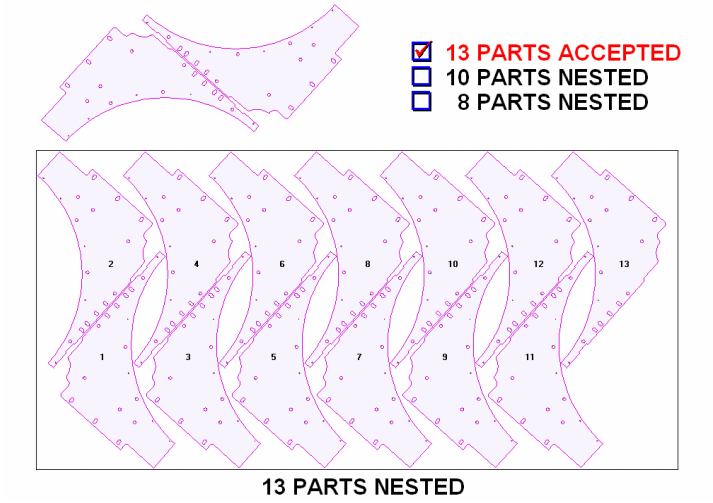


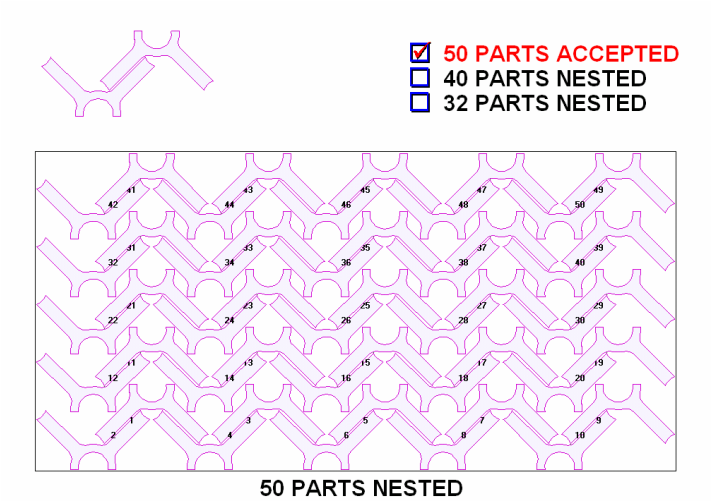






Measurement Masters, Inc. • One Technology Drive D401 • Irvine, CA 92618
Corporate: (949) 753-7878 Fax: (949) 753-8585 E-mail: Sales@peptechnology.com

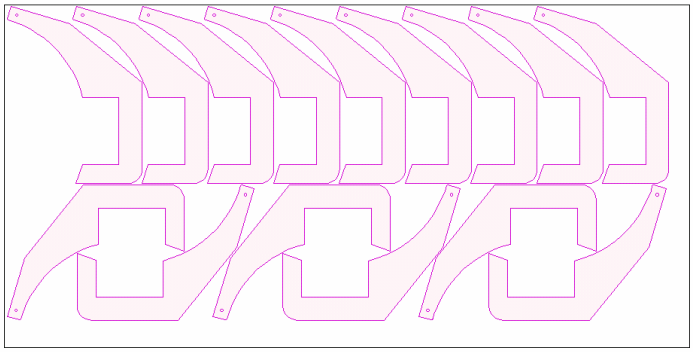




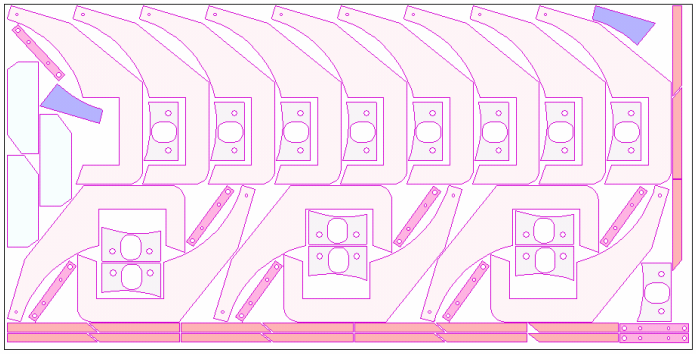
Link #5 [Multi-Part Column and Row Concepts]

In this video, the column and row techniques for nesting a single part are applied to multi part nesting.

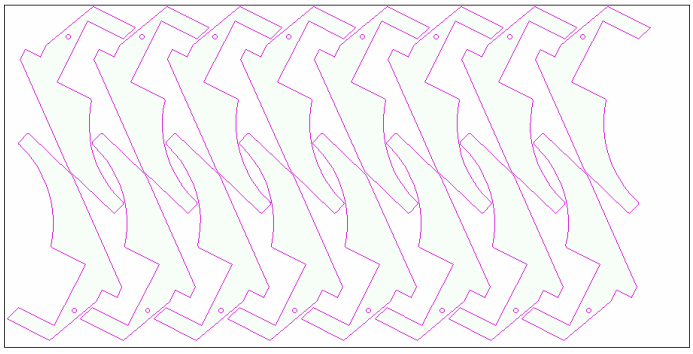
From this…



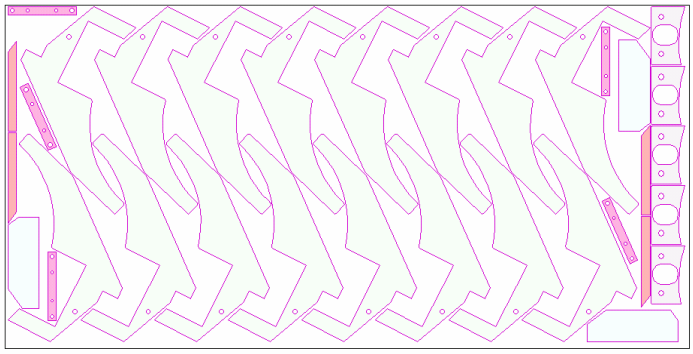
To this…



From this……..

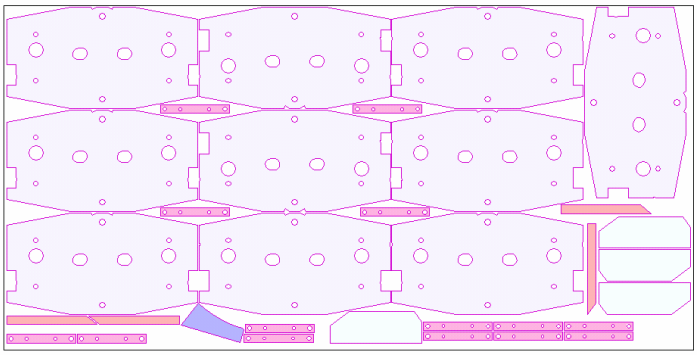


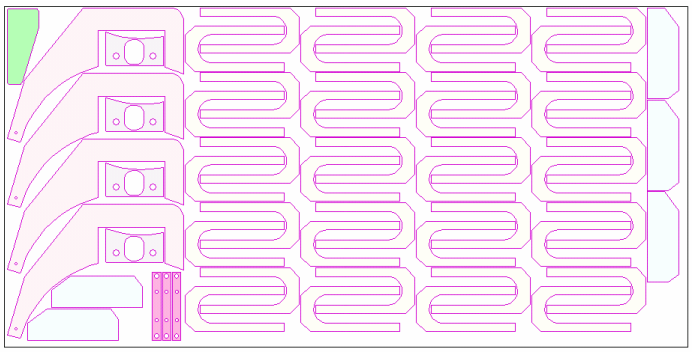
To this

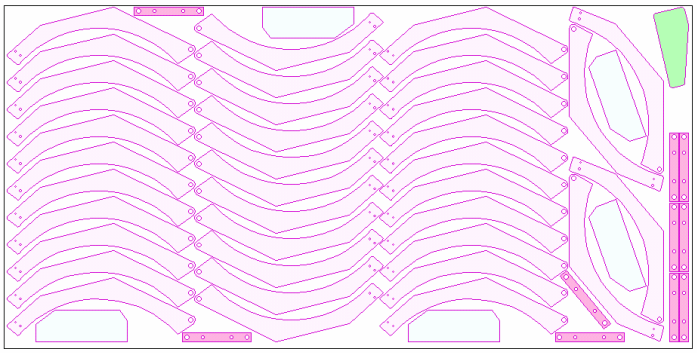


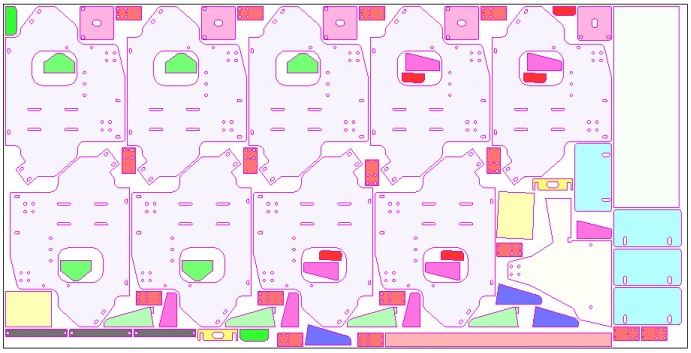
Measurement Masters, Inc. • One Technology Drive D401 • Irvine, CA 92618
Corporate: (949) 753-7878 Fax: (949) 753-8585 E-mail: Sales@peptechnology.com

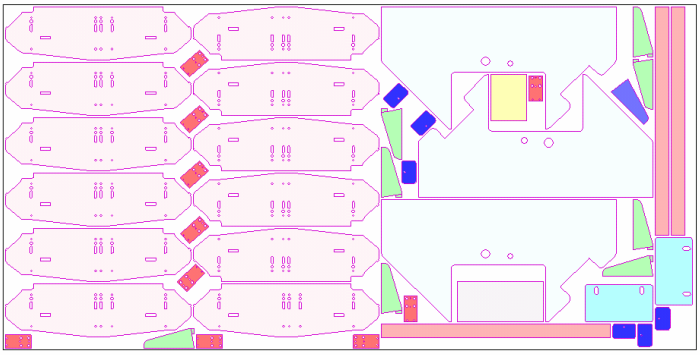
Other nesting examples that appear in the video

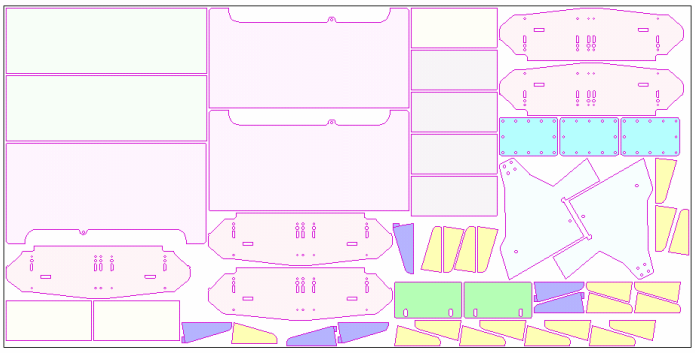






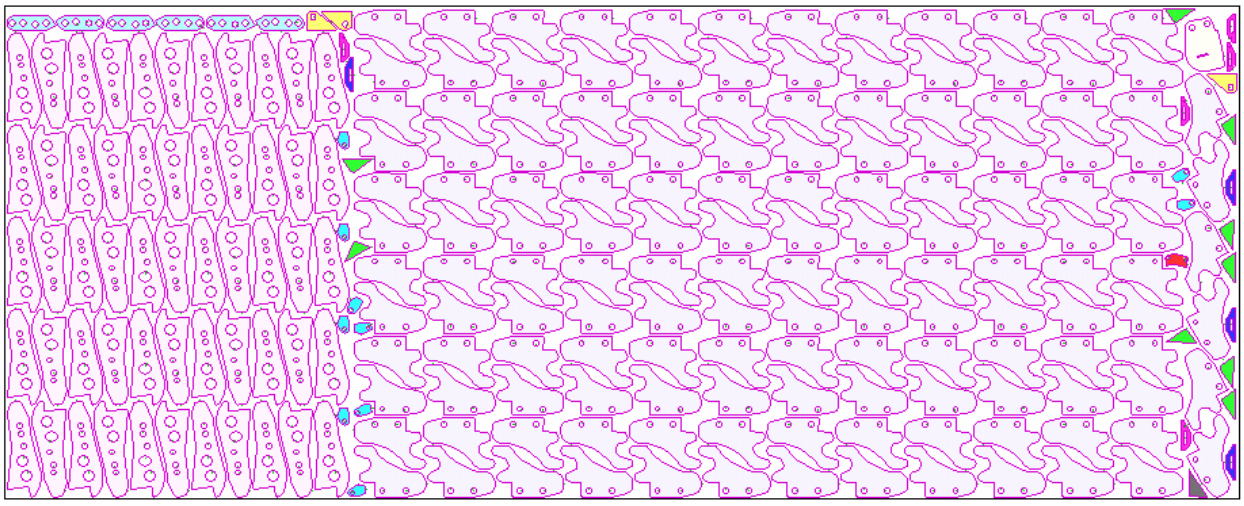


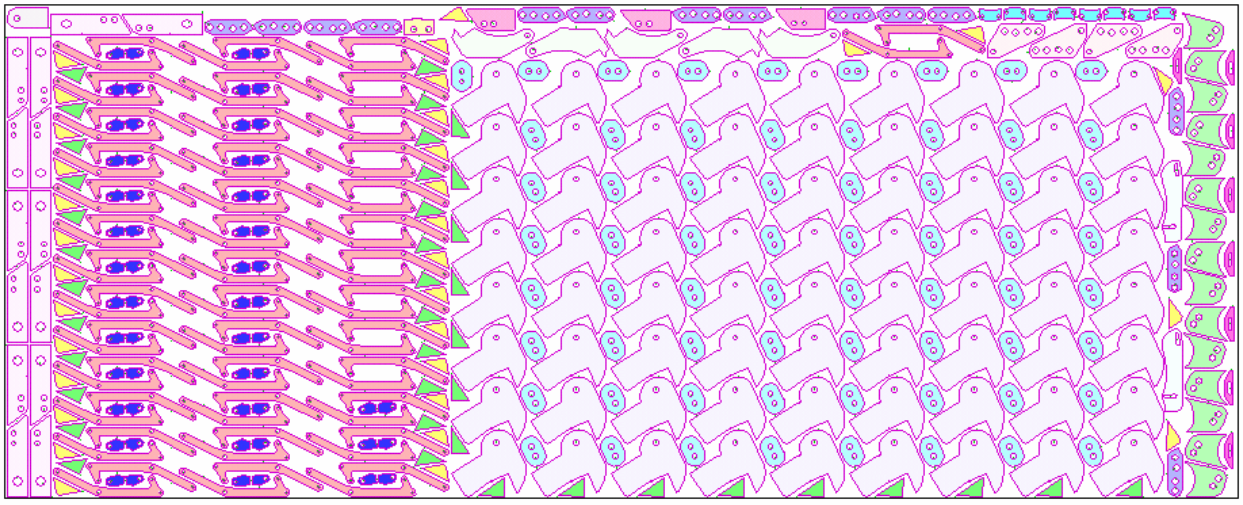


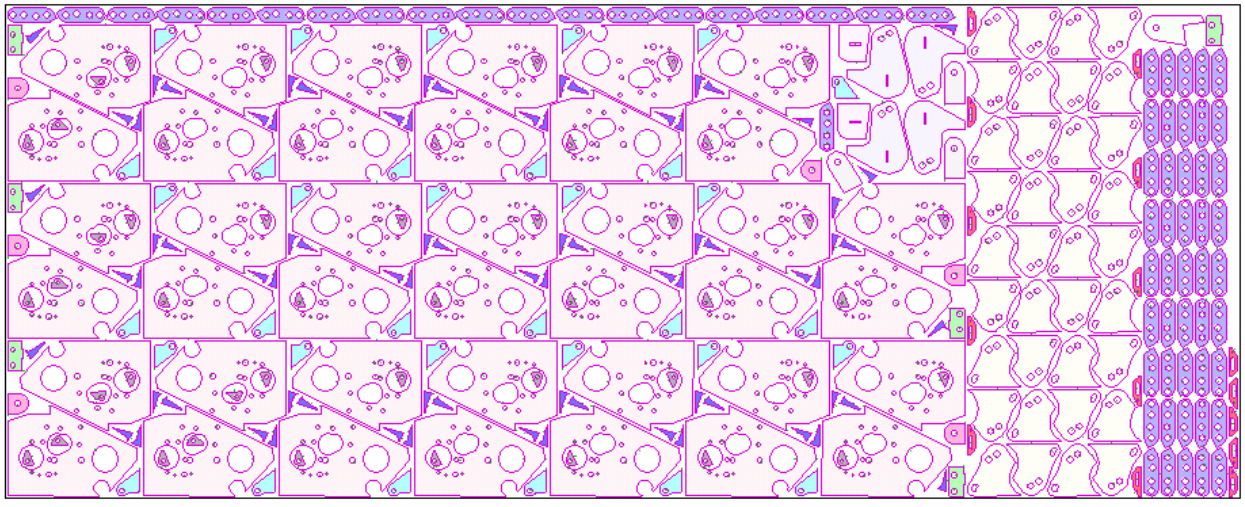


Link #6 Finished Sequenced Nests

This video shows the nesting engines interlocking column and row logic and the finished cutter path produced after analyzing the nest and sequencing the parts.







Measurement Masters, Inc. • One Technology Drive D401 • Irvine, CA 92618
Corporate: (949) 753-7878 Fax: (949) 753-8585 E-mail: Sales@peptechnology.com