

## LASER/PROFILE CAM - NEXT GENERATION SOFTWARE FOR FIBER & CO<sub>2</sub> LASERS

Automatically assign Lead-in and Escape Geometry based on part size and thickness of material. Sophisticated algorithms handle traverse-line routing for even the most complicated parts with Corner / Edge Control to ensure a good quality cut. Built in support for Multiple Pierce Types and Cut Conditions to exploit machine specific features and Unparalleled support for standard and special machines.

### LASER AUTO-TOOL

Conditions required for various Laser CAM processes can be specified in the Part - Settings Dialog (Approach Point, Escape Geometry, Joints, Pierce Types, Corner Loop Types, work-chute). Conventional operations that manually controlled these parameters are no longer necessary as they can completely automated.

### STITCH or FLY CUTTING

MetaCAM supports automatic geometry based sequencing where entities are broken down to segments to take advantage of the latest high speed fiber lasers - the user can set up these sequences interactively or automatically providing them full control on how the part is cut.

**PART SETTINGS**

- General
  - Basic
  - Sheet
  - Clamps & Origin
  - Custom
- Laser CAM
  - Preset
    - Cutting
    - Pierce
    - Lead-in and lead-out
    - Corner process
    - Wirejoint sets
    - Finishing rules

**Outer Corners:**

Angel	Type	Shape	Radius	Dwell
< 30	None			
< 60	Loop	Type A	4	
< 90	Loop	Type A	4	
< 120	Loop	Type A	4	

**Inner Corners:**

Angel	Type	Shape	Radius	Dwell
< 30	None			
< 60	None			
< 90	None			
< 120	None			

Done Defaults...

### AUTO TRAVERSE OPTIMIZATION

Operations such as Optimization, routing of traverse lines, repositioning are all bundled into single auto sequence operation. This focus is to minimize machine traverse time with additional features to automatically avoiding tipped up parts that prevents head collision.

### SKELETON CUTTING & SLAT MANAGEMENT

Automatically cut the skeleton into smaller pieces for easy handling and management by the operator - the user can define how small they want to cut the skeleton and how close to the edge of the part they want to go.

**PART SETTINGS**

- Laser CAM
  - Preset
    - Cutting
    - Pierce
    - Lead-in and lead-out
    - Corner process
    - Wirejoint sets
    - Finishing rules
  - Process
    - Auto-tool settings
    - Reposition settings
    - Sequence settings
    - Route traverse lines

☒ Use simple shortest-distance sort  
☐ Sort based on the pattern below

Start corner: Top left  
 Pattern: GRD  
 Direction: Y first

☐ Do all piercing at first  
☐ Sort individual piece by piece  
☐ Auto-cluster boundary tooling

Done Defaults...

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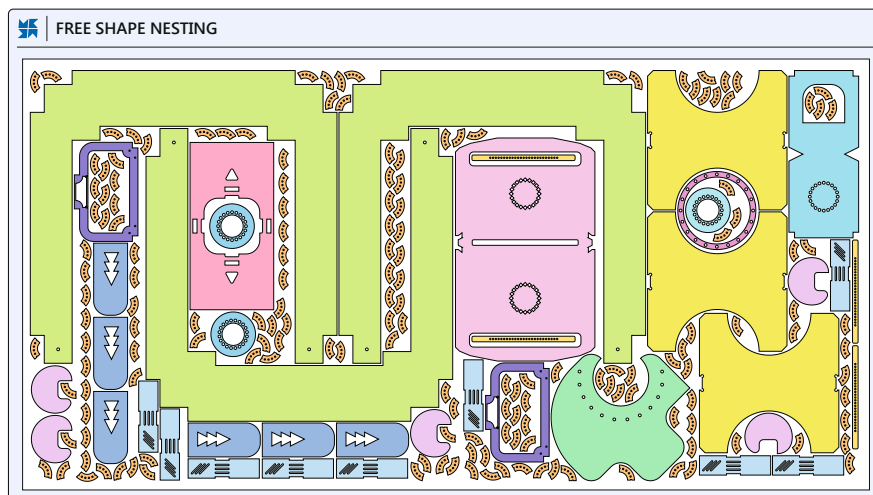
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# NESTING

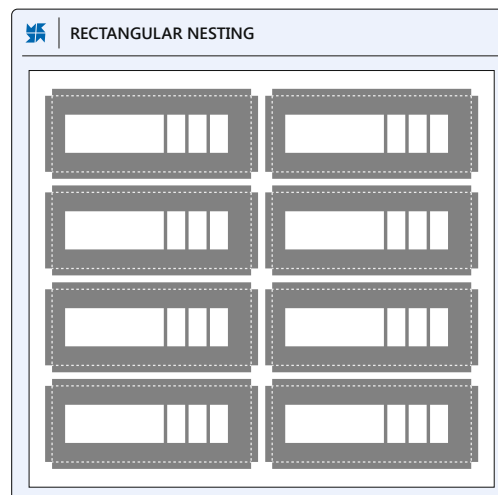
MetaCAM's state of the art nesting engine - completely developed by Metamotion has a variety of nesting algorithms to suit different needs. The tight integration with MetaCAM offers benefits that third party nesting engines can never match. Reading Parts, the nesting engine can directly generate nested sheets and greatly simplify workflow.

Maximize Material Utilization and Reduce Programming Time | Go from multiple orders to fully nested NC programs in minutes | Algorithms for Common Line Cutting, Part-in-Part, Right Angle Shear and Nest Around Clamps | In the event of capacity issues, easily re-nest parts for a different machine | Automatic Turret Conflict Resolution to build a single nest turret | Reduce Cutting and Shearing Time with Common Line Nesting



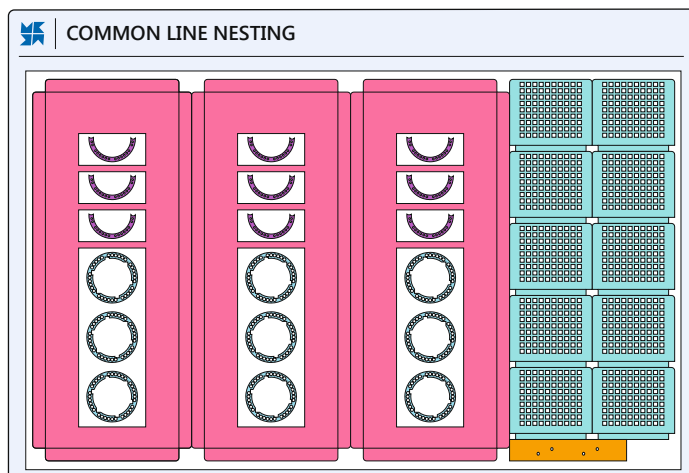
## FREE SHAPE NESTING FOR LASER & PUNCH

The true free shape nesting algorithm generates the most advanced nest while rotating parts and interlocking parts based on geometry to increase material utilization.



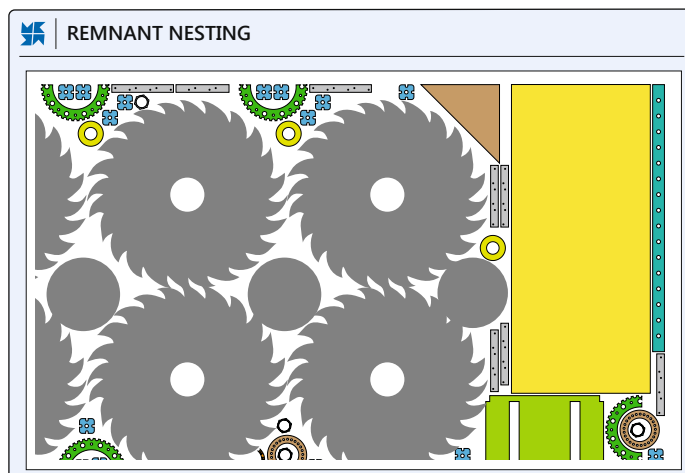
## RECTANGULAR NESTING

This nesting algorithm handles more regular shaped parts both for punch and laser machines while still optimizing the space and rotation of parts. Special constraints like grain are taken into account.



## COMMON LINE NESTING

Reduce cutting time and save material with the common line nesting by automatically generating a common line nest of parts that are also paired giving no loss in edge quality due to piercing.



## REMNANT NESTING

MetaCAM can store rectangular, irregular and true shape remnants that can be re-nested to reuse material and increase utilization.

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