CAM for sheet metal machining
The nesting and programming software for laser cutting

act/cut

Providing efficient and automated nesting capabilities combined with the ability to support all laser cutting functions as well as to manage a wide range of technological parameters, act/cut is the most productive and effective solution for programming your laser cutting machines.

Advantages and **benefits**

- High-performance automatic nesting (in terms of efficiency and calculation time) thanks to the availability of multiple nesting strategies.
- One click to perform the nesting, the tool path and CN program generation.
- Optimized and automatic management of cutting conditions.
- Optimized and automatic management of common cut thanks to two strategies (pre-cut and rectangular grid).
- Efficient prevention against risk of collision between the laser head and cut parts thanks to several tool path strategies (laser head lifting-up or by-pass).
- Automatic management of skeleton cutting.

act/cut advantages in laser cutting

Significant material savings

- Reduced loss rates thanks to the high performance of automatic nesting (possibility to choose among multiple strategies).
- Optimized nesting in common cut.

Minimum programming time

- Automatic assignment of cutting characteristics, including lead-ins/ outs, reconfiguration loops, etc.
- Automatic nesting functions with no or limited user intervention required.
- Possibility to operate in full automatic mode.

Optimized time cycles

- Optimized computation of the tool paths.
- Automatic computation of the tool paths with common cut according to various configurations (common cut in rectangular grid or with precut of the neighboring parts).
- Automatic or interactive control of fast trajectories in « head-up » or « head-down » modes.
- Laser power control during rapid crossing.
- Faster cutting of rectangular hole matrices using the automatic "quick grid" function.

Complete mastering of the technological process and complex machines

- Ad hoc assignment of the cutting conditions according to various parameters (material, thickness, surface, perimeter, geometric complexity of the part).
- Management of the different laser piercing modes.
- Intelligent management of the cutting of plastic film-covered sheets (burning or vaporization).
- Support of any laser cutting machine and of any related process (cutting conditions, piercing, engraving, tack welding, micro-welds, etc.)
- Support of a wide range of machine and manufacturer specific features; for example, repositioning machines.

Full integration to sheet metal CAD/CAM to automate the unfolding-cutting-folding workflow

- 3D import of sheet metal folded parts (STEP, IGES, native formats).
- Easy interaction with act/unfold, our sheet metal unfolding module (import and modification of the geometry or machining of folded parts).
- Plan of folding procedure generation for **act/bend**.

Improved quality of manufactured parts

- Assignment of ad hoc cutting conditions according to various parameters (material, thickness, surface, perimeter, geometric complexity of the part, plastic covering).
- Availability of various reconfiguration loops to ensure the best cutting results on angles (sharp right angles).
- Heat distribution over the sheet with specific cutting sequence, etc.
- Skeleton cutting management with various possible parameter settings to remove obstacles and level the sheet before cutting.
- Possibility to re-launch a program in order to cut a single part.

Enhanced safety around the machine

- Availability of several strategies to prevent collisions between the laser head and cut parts that may have toppled over: head lifting up, parabolic trajectory, cut part by-pass, or use of specific sequences minimizing risky passing over cut parts.
- Height control to allow cutting near the sheet edge.

Eased handling in the workshop

- Skeleton cutting management with various possible parameter settings to ease cut-off removal.
- Part evacuation and sorting (palletization).
- Hierarchical nesting according to priority groups to easily sort the parts during evacuation.

act/cut 2d