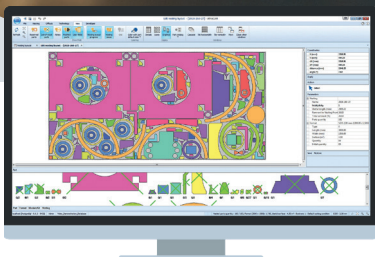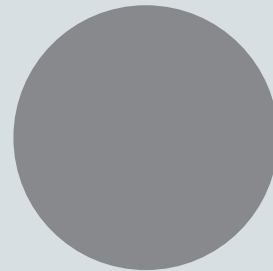# almacam

CUT

The nesting and programming software for laser cutting

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, Almacam 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 NC program generation.**

✓ **Optimized and automatic management of cutting conditions.**

✓ **Multi-tool and special tool management.**

✓ **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.**

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→ 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 Unfold, our sheet metal unfolding module (import and modification of the geometry or machining of folded parts).
- Plan of folding procedure generation for Almacam 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.

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