

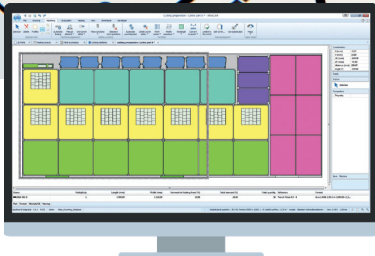
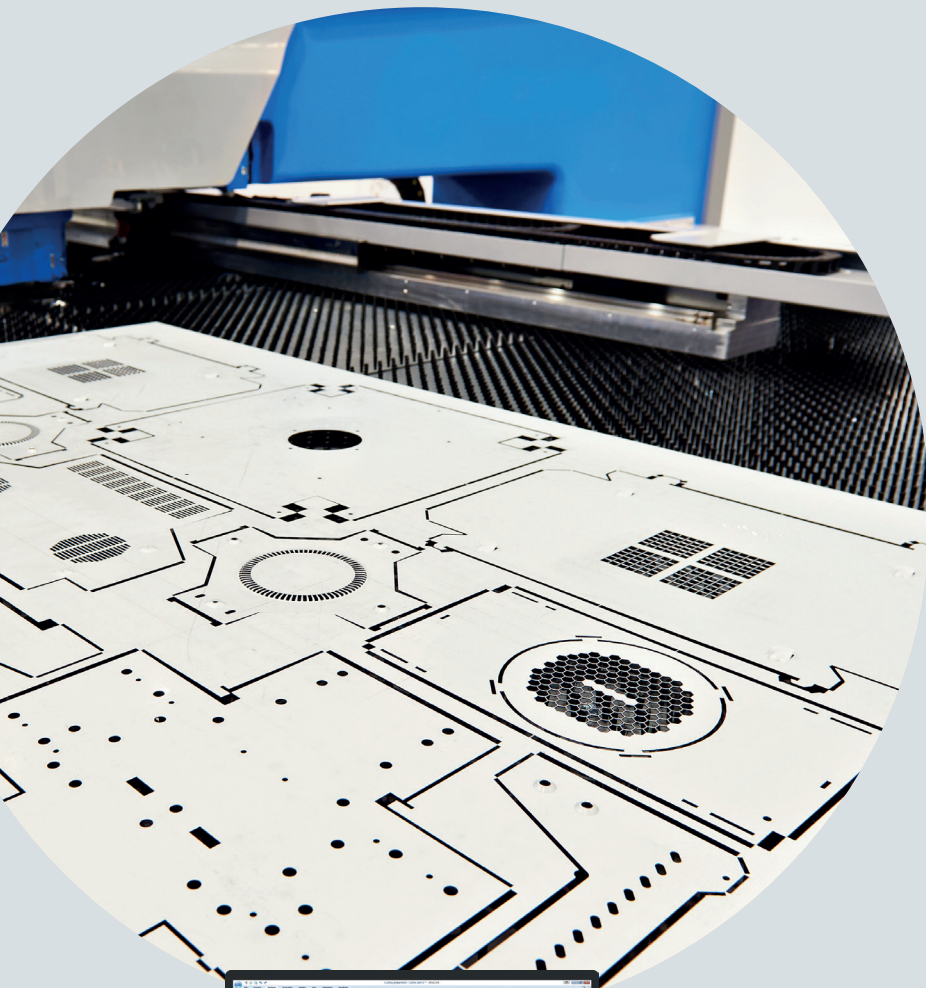
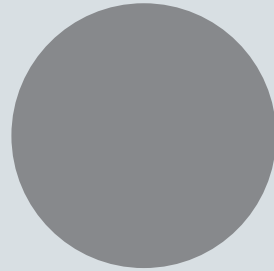
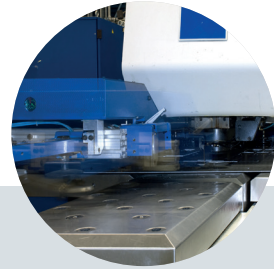
almacam

PUNCH

The programming and nesting software for punching-nibbling

Almacam Punch's added value in punching-nibbling technology lies mainly in the software's powerful automation (tool allocation, machining sequence, nesting, part evacuation, etc.)

This makes Almacam Punch a highly productive solution for on-demand production of numerous and varied parts. The software can manage all loading/unloading peripheral systems and is perfectly adapted to combined machines.



→ Advantages and benefits

- ✓ One mouse click to perform the tool allocation and part nesting, optimize the machining sequencing including the part evacuation and generate the NC program.
- ✓ Automatic completion of identical part common cut with or without micro-junctions.
- ✓ Automatic part nesting under or around clamps.
- ✓ Multi-tool and special tool management.
- ✓ Automatic or manual management of any type of evacuation system.
- ✓ Part machining preparation based on a pre-defined turret model which allows limiting the number of tool changes on the machine.

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→ Minimum programming times

- The working turret is generated during part preparation, and is validated at each step of programming.
- Automatic tool allocation according to the configurable rules.
- Hole geometry identification for automatic punch strikes allocation using any kind of tools.
- Automatic notching of various shapes and corners.
- Complex machining recording in a database for future re-use on similar parts.
- Comparison between the geometry of a manufactured part and the revised geometry of the same part.
- Automatic nesting and sequencing of common cuts between similar parts.
- Automatic calculation of working areas, including clamp areas to work under.

→ Optimized cycle times

- Optimized sequence respecting the part evacuation and tool order (possibility to configure the sequence type per tool).
- Possibility to perform common cuts between different tools.
- Automatic selection of the tool generating the smallest number of strikes for notching.
- Selection of the most appropriate nibbling tools according to the part geometry.

→ Significant material savings

- Automatic nesting enabling part positioning under or around clamps.
- Specific nesting algorithm for shearing.

→ Complete mastering of the technological process

- Management of mounting angles, clamping types, avoidance and accessibility areas according to the turret position.
- Multi-tool or additional turret management in order to increase the number of supported tools (Trumatool).
- Support of any kind of special tools such as roller balls, grooving and deformation tools, kick out and multi-radius tools, etc.
- Optimized management of working areas and clamps.
- Sheet reversal management.

→ Full integration to sheet metal CAM workflow

- 3D import of sheet metal folded parts (STEP, IGES, native formats).
- Easy interaction with Unfold, our sheet metal unfolding module.
- Plan of folding procedure generation for Almacam Bend.
- Possibility to operate in full automatic mode.

→ Support of connate processes and special peripheral devices

- Automatic or manual control of standard evacuation systems (trapdoors, lifts) and manufacturers specific systems (Trumasort, Trumalift, Trumagrip, Amadalift, robotized evacuation, etc.)
- Support of punching/laser and punching/shearing combined machines.

→ Enhanced safety around the machine, extended tool life duration and improved quality of manufactured parts

- Tool selection according to the material and thickness.
- Nibbling using any tool except for round, square, rectangle or oblong tool: for example, banana-shaped, multi radius, trapezoid tool, etc.
- Automatic sheet edge cutting.
- Optimized overlap management in punching (minimum step and overlap control).
- Very late use of deformation tool with automatic head lifting up or use of deformation tool at the very last moment and with simultaneous head lifting up.
- Automatic detection and shunning of remnants resulting from common cut.
- Automatic avoidance of clamps in case of trajectories with rapid crossing.

→ Eased part preparation and handling in the workshop

- Part machining preparation based on a pre-defined turret model which allows limiting the number of tool changes on the machine.
- Automatic or manual management of micro-junctions resulting in easier evacuation of complete sheets.
- Evacuation system management (trap doors and lifts).
- Palletizing module providing automatic functions for stack collision checking and the evacuated part sorting.

