



CAD/CAM and nesting software for CNC punching technologies

PUNCHlab is a CAD/CAM software developed to manage CNC punching technology.

It has been recently updated to full compatibility with Windows 7 and it has been entirely programmed with object-oriented technologies and developed with C++ and C# languages.

The customizing possibilities help users, whether they are experienced or not, to

get immediate benefits, improving efficiency and productivity.

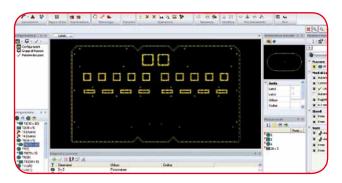
The PUNCHlab constant evolution guarantees its users the best performance. Each operation such as geometry, nesting or technology can be applied automatically or manually.

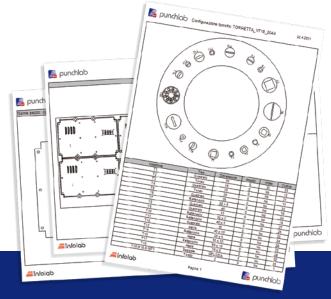
However the user can always operate, at any time, to modify even a single part of the decisions taken by the system, leaving the others unchanged.

It's a unique environment flexible and efficient for all operations for the setting up of the machining process: geometry, nesting, technology, sequence, post processor.

All steps are managed in real time and with the utmost guarantee of completeness.

- geometry
- import DXF
- interactive nesting
- automatic nesting
- punching tecnology
- special tools managing
- multiple turret configurations
- statistics
- working reports
- pieces database
- parametric shapes
- customized postprocessor
- communication with CNC







geometry

The functions available in the geometry module are those typical of a bi-dimensional CAD system. To obtain more or less complex profiles on

which to apply following machining. The module includes dimensioning and DXF importing functions.

pieces database

All pieces created or imported from the other CAD systems and all data that are connected to them (material, thickness, customer, order, etc.) can be saved in a database endowed with a crossed selection function on the form fields which allow to find the wanted pieces for the machining.

interactive nesting

The interactive functions of the PUNCHlab nesting allow positioning of the pieces on materials by making operations of translation, rotation and mirroring at the same time.

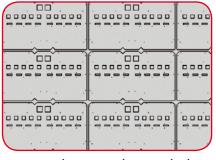
During all movements, it is always possible to have a control function of collision without invalidating the speed of the operations. If necessary, it's possible to place smaller pieces inside bigger pieces, keeping all the above mentioned functions unchanged.

Multiple automatic functions allow the filling of parts or of the whole panel.

automatic nesting

An extension of the nesting allows to express quantity and degree of freedom for every single piece out of those chosen to create the automatic disposition.

The calculation and disposition function can be interrupted by



the user to do manual adjustments and to restart after corrections.

punching technology

The application module of the punching technology represents the core of the PUNCHlab. Its controls allow the application on geometries of all necessary information for the manufacturing. All functions are performed without using

any programming language and each machining process is created or modified by working directly on the drawing.

The complete integration of the PUNCHlab modules allows the user to perform any kind of operation without changing his work environment.

Every technological information can be changed at any time, without having to redefine everything from the beginning.

simulation

The simulation module allows the user to test the work as it will be made by the machine. It's possible to start from a particular point, regulate the speed of the simulation and obtain a cycle time of the work considering dead times, speed changing, quick movements. deceleration.

statistic module

It is possible to estimate economic values based on weights, times and prices of the requested machining.

