PROGRAMMING FOR CNC PUNCHING MACHINES

Radpunch is a market leading solution for the programming punching machines. With over 40 years of punching experience, RADAN successfully drives thousands of punching machine tools worldwide.

This history easily allows us to integrate different generations of punching machines taking into account modern facilities such as FMS cells with component loader and unloaders.

The technological basis of integrated punching inside Radpunch means you will be able to automate the programming phases, regardless of the tools used (standard, special, forming, wheels etc.)

Understanding the sophistication and the limits of each machine tool individually is the key to driving it efficiently. Radpunch will assist your operators to optimise your manufacturing capacity to within those limits for all of your machines.

PROGRAMMING FOR LASER CUTTING, PLASMA OR WATERJET MACHINES

Radprofile is a highly automated software solution for laser cutting, plasma, waterjet, and flame cutting machines. Radprofile seamlessly integrates the whole programming process of geometry creation, nesting, cutter patch calculation, sequencing, code generation, and finally DNC connectivity to the machine controller.

Your machines then function with a direct link to production and sales orders. The pieces are well managed according to the sheet production strategies specified by the technical operator. Each nest is converted into machine language in just a few seconds to be readily available for production.

All the technological functions of your machines are integrated into Radprofile: marking, vaporizing, plastics, pulsed, small and large contours, slowdowns, rapid cuts... are all perfectly managed Radprofile modes. The cutting functions of text or scanned drawings are quickly accessible in the software.

An exclusive feature positions lead-ins ensuring safe movement and increases productivity. The software also automatically manages the order of cutting depending on the heat build-up in the material.
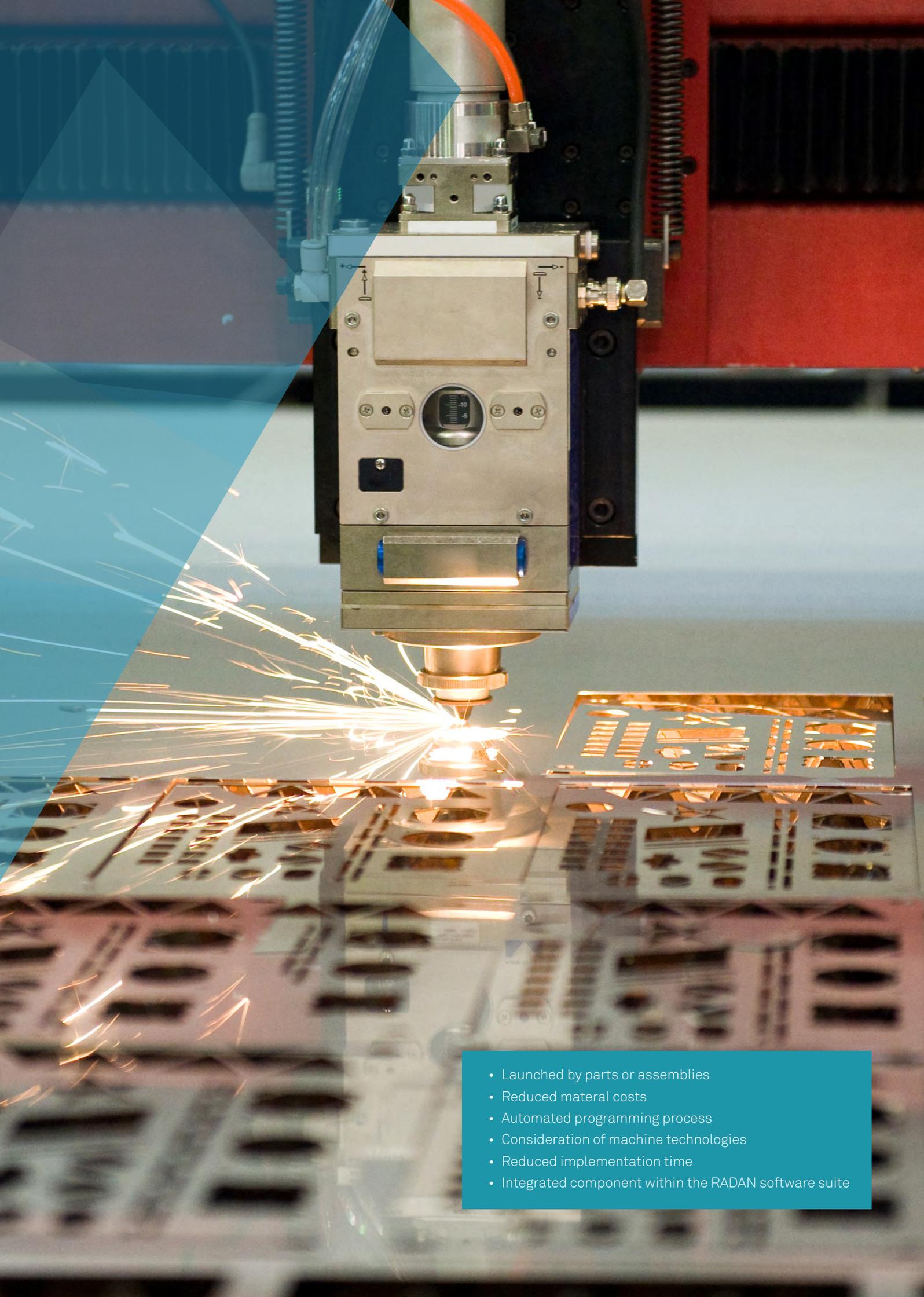
- Launched by parts or assemblies
- Reduced materal costs
- Automated programming process
- Consideration of machine technologies
- Reduced implementation time
- Integrated component within the RADAN software suite

AUTOMATIC NESTING ADAPTED TO PUNCHING AND CUTTING MACHINES

HIGH LEVELS OF AUTOMATION

It is easy to manage the workflow of your machines thanks to the intelligent features of the integrated project mode in Radnest.

This mode manages your production taking into account your raw materials inventory and disposable drops as well as your customers' deadlines and priorities.

Radnest is the nesting solution that enriches both Radpunch and Radprofile. Radnest significantly optimises the use of the sheet and generates substantial savings on raw materials.

Radnest interfaces with the production management system you use. This avoids manual input and significantly reduces the risk of error. Radnest coordinates the order of cutting and post-processor operations to automatically generate programs. The nesting algorithm analyses the exact shape of the parts, nests them and adapts the number of components to be manufactured and the amount of sheet stock required.

Radnest analyses all the available sheet sizes allowing the optimum use of material for the production. The differences in parameters between parts are integrated into the technological base by material / thickness / machine to ensure a reliable and optimum production.
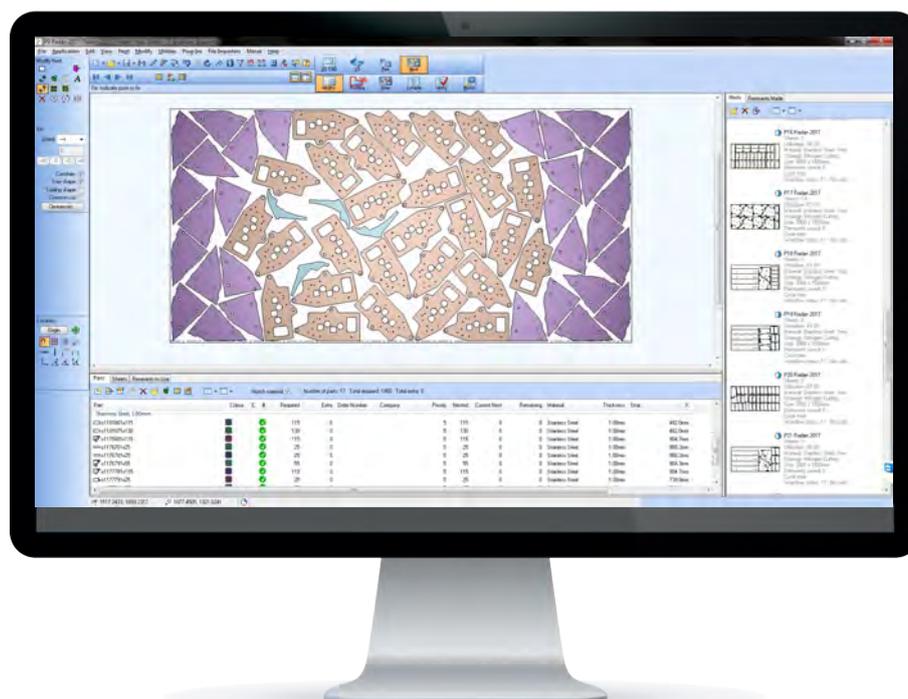
- Intuitive interface with external CAD tools
- Customisable machinery with posts processors
- Library of tubes and standard patterns
- Automatic nesting on tubes
- Instant generation of laser path
- Easy and fast manual retouching
- Total control of head angles
- Cutting technology controal at all points
- Import and machining of 3D models

PROGRAMMING OF TUBE CUTTING MACHINES

Radtube interfaces with any CAD solution on the market. It comes with standard interfaces such as IGES and DXF, but also comes with native formats like DWG, Inventor, VISI, SolidWorks, Solid Edge, and IronCAD.

These are however not exhaustive and several options are available such as Catia V4-V5, Unigraphics, Pro Engeneer, VDA and STEP. Although the model can be wireframe, surface or solid, the software perfectly applies the toolpath in each geometry type.

Radtube is compatible with most machines on the market such as Adige, NTC, Trumpf, Mazak and Amada... If a machine is not on the list, Radtube fits the definition of the machinery to achieve the processors on demand.

Radtube supplies a library of parametric tube shapes that simplifies the creation of tubes to be cut. If a suitable section does not exist, the 'Freeform' option is used to create the special shape section. If none of the standard shapes are suitable, it is possible to construct the outside / inside shape using the integrated 3D CAD tools.

MULTI-AXIS LASER CUTTING

Radm-ax is the multi-axis extension of Radtube and allows the programming of laser cutting machines, water jet, and other technologies. These two programs share the same basic graphics so naturally you will find them similar in Radm-ax's capacity of the import and treatment of 2D and 3D files.

Radm-ax delivers proven post processors dedicated to the main 5-axis cutting machines on the market (NTC, Prima, Trumpf, Mazak, Amada ...).

Radm-ax also has a powerful post-processor generator to finalise the CNC code and achieve a precise definition of the machine simulation.

Collision detection of the cutting/machine head uses very fast algorithms, making it simple and safe for programming.

Radm-ax contains ultra-powerful utilities to generate and automatically cut the component's support fixture. The process of holding the workpiece on the cutting table is assured throughout by Radm-ax to secure the cut.