

RADAN

The complete CAD/CAM solution for the sheet-metal industry







RADAN is the complete CAD/CAM solution for the sheet-metal industry

Our strength is in providing world- class, innovative software that is essential to the design, manufacturing and quality control of sheet-metal components and products.

Market leader for 40+ years

That's how long we've been developing software. We've learned a thing or two since we started offering software for sheet-metal manufacturers in 1976. Our goal is to develop products and services that help our customers become more successful and profitable.

First-class support

We understand it's essential to maximise productivity, which is why our support plans are designed with your success in mind. Whether via phone, on-site, email, or our online portal, our technicians are here to help.

Quality drives productivity

We have a proven track record of reliable product delivery, and we run our software through rigorous testing to ensure that we only release the most stable of products. We listen to your requirements and build answers into the software to meet your expectations now and for the future.

Intelligent quoting

Radquote is a sheet-metal quotation program enabling you to quickly and easily create quotes for sheet-metal and purchased parts. It provides you with a full breakdown of costs, and allows you to alter each cost area to give you the flexibility you need when negotiating. Flexible reporting allows you to send professional quotations and make internal reports for analysis. Customer management and reminders help track active quotes and record success rates.

Flexible cost calculations

Radquote comes with a standard set of cost calculations for material consumption, laser cutting, punching, bending, welding, painting, sub-contracting and assembly. These operations can be customised and new operations added to meet your requirements. Quote-level operations, such as analysis and transport costs, are also included.

Quick and flexible during negotiations

Radquote provides a full breakdown of where costs come from, so you can see which areas most affect the overall cost. During negotiations, you can quickly adjust your margins and override the calculations to achieve your selling price while maintaining full cost control.

Professional reports and letters

Radquote uses a powerful reporting engine to produce professional reports and letters. It comes with a set of standard letters which can be quickly customised to include your company logo and details. You can also add your own layouts and reports.

Links to ERP

Radquote also links seamlessly with most ERP systems, particularly WORKPLAN. This means that if there's a material price rise recorded in the ERP system, Radquote will utilise that information.

Managing quotes

When you have issued the quote to a customer, you can set a reminder date and add notes, making it easy to manage the follow-up. When a quote is won or lost, the result can be recorded for use in monthly reports and analysis.

Utilise the power of RADAN to improve cost accuracy

Using the power of RADAN makes Radquote a unique, fast and accurate way to issue, in a few clicks, the quotes you need to grow your business. When negotiating quotes, you need to have an accurate view of costs so you can be competitive without losing money.

RADAN 2D and 3D CAD/CAM software creates accurate geometry for calculating parameters such as profile lengths and part areas. RADAN nesting is used for maximum sheet utilisation and to apportion scrap to per-part material costs. RADAN tooling can be used for accurate cutting times and tooling costs. Radquote utilises all of this information to give you better control over your margins.

Radquote features at a glance

- Utilise geometry and tooling from RADAN parts
- Quickly describe parts without drawing geometry
- Supports complete assemblies
- Material costs based on nests
- Common operations supplied as standard
- Customisable operations and calculations
- Flexible reporting
- Cost breakdown analysis
- Customer management
- Follow-up call reminders
- Full quote management and statistics





MES

WORKPLAN features at a glance

- Real time allocation on jobs and part quantities
- Production management (productive & unproductive tasks)
- Job line report
- Non-conformity management
- Supplier evaluation
- Measuring device
- KPI and quality indicator

WORKPLAN and RADAN

WORKPLAN is an intelligent project-management solution that combines sales and production management with manufacturing execution systems (MES) functionality within a single database. As the backbone of your manufacturing company, WORKPLAN centralises data to improve production management. For example, the system tracks and stores data for machine events, monitoring, CMMs, CAM supervision, production workflow, and part traceability on the shop floor.

RADAN integration

WORKPLAN utilises Radquote, the powerful quoting system dedicated to sheet-metal processing, to build prices with material costs and production times. It also allows all documents to be illustrated with images of the parts. The direct link between RADAN and WORKPLAN guarantees fluent data exchange to improve productivity.

- Sheet-metal requirement estimation
- Import parts to be produced in RADAN
- Import stock per material, thickness and sheet size
- Sync programs directly in WORKPLAN to manage production

Stock and nest

WORKPLAN offers a simple and efficient stock-management solution for sheet-metal nests, including stock reception/withdrawal, inventory, scrap management and part traceability. Interfaced with the CAM programming software, data reporting in WORKPLAN and deduction of sheets consumed is available with just a few clicks.

Activity basket

When several tasks from different projects are performed simultaneously within a single production operation (punching, laser cutting, etc.), it is hard to monitor and assign real time activities without unbalancing job reports. WORKPLAN includes the concept of an activity basket where it is possible to create a basket of operations grouped by service, and manage the cost distribution according to your needs.



Highly efficient CAD specialised for sheet-metal

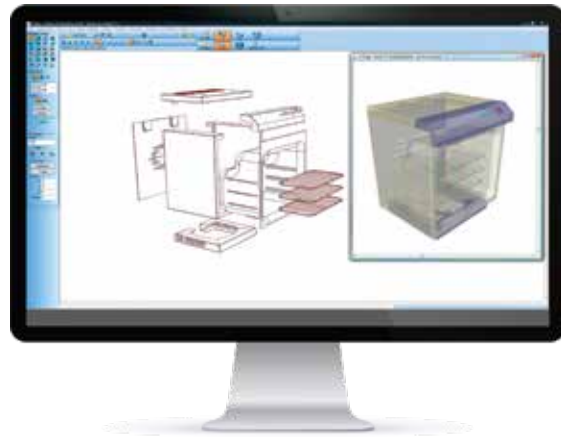
RADAN 2D is a complete sheet-metal solution that enables users to easily apply built-in sheet-metal industry expertise to 2D part drawings.

The ability to support inaccurate third-party data is one of the solution's strengths, as RADAN 2D offers a quick and simple method to repair or simplify geometry imported from other systems.

With the addition of the optional parametrics package, you can easily generate variations of previously produced parts for use on current jobs.

Parametric functions cut programming time by enabling users to reuse, or edit and reuse, programs saved from previous jobs instead of starting the programming process from scratch. While programs can be reused as-is, the parametric function enables users to easily resize parts or make other adjustments with just a few mouse clicks.

As RADAN 2D can be driven either manually or from a simple spreadsheet, it is possible to automatically create flat patterns of parts to produce and create compatible output that can be used by the rest of the RADAN product portfolio.



RADAN 2D features at a glance

- Simple and user-friendly
- Industry-specific sheet-metal features
- Fast geometric construction
- Increased productivity
- Reliable data exchange in DXF, DWG and IGES
- Facilitates collaboration between contractors and subcontractors
- Full automation

3D modelling, part unfolding and sheet-metal features

RADAN Designer forms a pivotal part of our CAD/CAM solution by providing users with all of the tools needed to prepare parts for bending, nesting and cutting.

From model design to part repair and modification, RADAN Designer is the ultimate CAD solution for taking geometry through to manufacturing.

Unfold preparation

Several powerful sheet-metal functions are available to prepare a part for unfolding.

RADAN Designer offers functionality to correct part thickness, change bend radii, and make changes to flange angles and lengths.

Unfolding

Unfolding a sheet-metal part couldn't be easier.

RADAN Designer offers a flexible material library and several calculation methods to create the correct unfolded shape. These include unfolding using a setback at 90 degrees, a k-factor, DIN correction, or using only the V-width of the die that will be used to bend the part.

Unfolding parameters, such as bend allowances, can be controlled independently of geometry, enabling accurate development based upon the actual bending machines and tooling to be used in production.

This leads to:

- More accurate flat blanks
- Greater accuracy in folding
- A product of higher quality



Extensive range of CAD interfaces

RADAN Designer imports data from a wide variety of exchange formats, including Parasolid, IGES, STEP, ACIS, DXF, DWG, STL and VDA files, as well as native data from the following CAD systems:

- Catia™ V4 and V5
- Pro/ENGINEER and PTC Creo
- Autodesk® Inventor®
- Siemens NX
- SOLIDWORKS®
- Solid Edge

RADAN 3D features at a glance

- Easy to learn intuitive user interface
- Extensive list of CAD import formats
- Automatic unfolding using comprehensive rules
- Accurate automatic unfolding, even with imported models
- Direct modelling CAD environment
- Powerful sketching with automated region creation

Programming for CNC punching machines

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

Our breadth of experience allows us to easily integrate different generations of punching machines with our sheet-metal software and accommodate needs related to modern equipment, such as FMS cells with component loaders and unloaders.

The technological strength of integrated punching within Radpunch supports all phases of programming regardless of the tools used (standard, special, forming, wheels etc.)

Understanding the strengths and limitations of each individual machine tool is the key to driving your equipment efficiently. Radpunch will assist your operators in optimising manufacturing capacity to fully harness the power of your machinery.

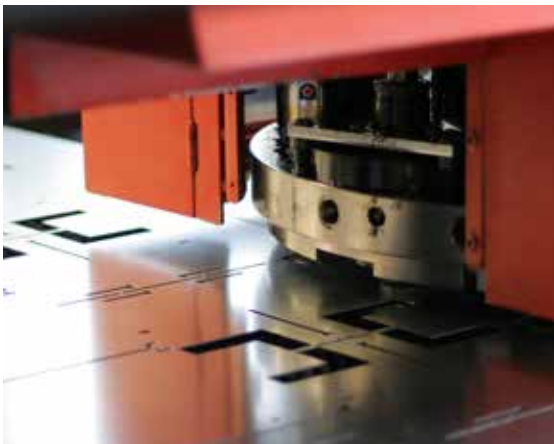
Programming for laser cutting, plasma or waterjet machines

Radprofile is a highly-automated software solution used to program laser cutting, plasma, waterjet, and flame-cutting machines. The software seamlessly integrates the whole programming process from start to finish, including geometry creation, nesting, cutter-path calculation, sequencing, code generation, and DNC connectivity to the machine controller.

Due to the complete process integration offered by Radprofile, your machinery functions with a direct link to production and sales orders, and processes are managed seamlessly in accordance with sheet-production strategies specified by the technical operator. With nests

generated in just seconds, accurate toolpath is quickly sent to the shop floor, where nesting is optimized for maximum material yield.

All of the functions of your machinery are fully integrated into Radprofile, including marking, vaporising, plastics, pulsed, small and large contours, slowdowns, rapid cuts, and more. With all functions managed in Radprofile modes, cutting functions of text or scanned drawings are quickly accessible in the software. An exclusive feature positions the lead-ins, ensuring safe movement and increasing productivity. The software also automatically manages the order of cutting depending on the heat build-up in the material.



CNC punching machine



Laser cutting

Radprofile features at a glance

- Management of tool sets and dies
- Supports advanced punching functions
- Automatic or manual unloading of parts
- Graphical reports
- Fully automatic multi-part nesting
- Optimised punching sequence
- Common slitting and automatic repositioning of clamps
- Real-time cut in connection with your production management
- Reduced start up-time
- Quick and easy transfer of production from one machine to another



Automatic nesting adapted to punching and cutting machines

High levels of automation

It's easy to manage the workflow of your machinery thanks to the intelligent features offered by the integrated project mode in the **Radnest** nesting solution.

Radnest project mode helps with managing production, including your inventory of raw materials and disposable drops, as well as your customers' deadlines and priorities.

Radnest enriches both Radpunch and Radprofile, significantly optimises sheet usage, and generates substantial savings on raw materials.

The software can be integrated with your production management system to help avoid manual input and significantly reduce the associated risk of error. Once integrated, Radnest

automatically generates nesting programs as they are needed, which eliminates scheduling challenges and enables staff to devote time to other important tasks.

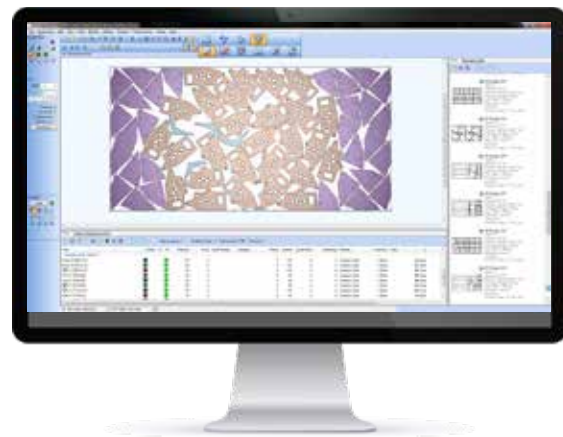
The nesting algorithm analyses the exact shape of the parts, nests them and adapts the number of components to be manufactured, as well as the amount of sheet stock required.

Radnest analyses all available sheet sizes, supporting the optimum use of material

for production. The differences in parameters between parts are integrated into the system's database by material, thickness, and machine to ensure reliable and optimal production.

Radnest features at a glance

- Launched by parts or assemblies
- Reduced material costs
- Automated programming process
- Consideration of machine technologies
- Reduced implementation time
- Integrated component within the RADAN software suite
- Quick and easy transfer of production from one machine to another





Programming of tube-cutting machines

Radtube interoperates with any CAD solution on the market. It comes with standard interfaces, such as IGES and DXF, as well as native formats like DWG, Inventor®, VISA, SOLIDWORKS®, Solid Edge, and IronCAD.

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

The solution comes with a library of parametric tube shapes that simplify 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 graphical environment and 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 etc.). It 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.



Radm-ax features at a glance

- Intuitive interface with external CAD tools
- Customisable machinery with post processors
- Library of tubes and standard patterns
- Automatic nesting on tubes
- Instant generation of laser paths
- Easy and fast manual retouching
- Total control of head angles
- Cutting technology control at all points
- Import and machining of 3D models



CNC press brakes

Radbend can greatly increase the productivity of press brakes.

Compatible with all numerically controlled generations of bending machines, offline preparation can significantly increase the production time of press brakes.

Collision detection, bending sequence, and the calculation of finger-stops are used to generate a reliable document for the operator, as well as the NC program.

For brakes without a communication port, simply insert the values of the document into the controller of the machine to start production.

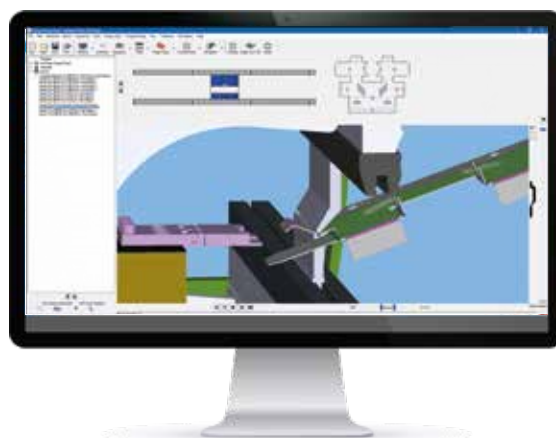
The software includes advanced features, such as automatic calculation of bending sequences, automatic tool selection, and automatic positioning of finger-stops.

All of these functions can be accessed quickly and easily, enabling simple programming for high productivity.

During the process of programming and simulation, Radbend calculates potential collisions with the tools or the press brake.

Radbend's simulation process ensures that error-free code is sent to the shop floor. If a collision is detected, Radbend issues a warning message and alerts users graphically by using specific colours (dependent upon the nature of the collision) on the simulation screen to make errors easy to spot.

If programming errors do occur, operators have all of the tools needed to analyse and resolve potential collisions during different phases of folding.



Radbend features at a glance

- Single programming tool for all your machines
- Collision detection
- Reduce unproductive machine time
- Availability of upstream manufacturing information
- Import of 2D or 3D parts
- Guarantee good results with initial parts
- Realistic simulation of the folding process
- Increases your independence in relation to your manufacturers





We listen

RADAN is at the heart of the sheet-metal industry, where the most efficient production techniques based on punching, cutting and combination machines produce parts ready to be folded on press brakes. Our software covers all of these requirements and is continuously updated and improved by our development teams, a strategy that goes back to the creation of RADAN in 1976.

Our range of modular and integrated software includes

- Radimport: to import your native 2D-3D files
- Radquote: for producing fast and accurate quotes
- RADAN 2D: 2D drawing in sheet-metal
- RADAN Designer: 3D modelling and specialised sheet-metal unfolding
- Radpunch, Radprofile, Radm-ax, Radtube and Radbend: to drive your CNC machines' productivity
- Radnest: for automatic nesting of parts on a sheet

Productivity | Reliability | Flexibility | Profitability



Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter. For more information, visit hexagonmi.com.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at hexagon.com and follow us [@HexagonAB](https://twitter.com/HexagonAB).