

# PRODUCTION SOFTWARE

MANUFACTURING SOFTWARE TO INCREASE PRODUCTIVITY





# QUALITY DRIVES PRODUCTIVITY

Offering a range of CNC simulation software, factory automation solutions and computer-aided manufacturing (CAD/CAM) packages specifically for different production methods, Hexagon Manufacturing Intelligence's production software solutions help manufacturers produce parts right the first time.

Hexagon develops and distributes CAD/CAM software for aiding the design and manufacturing processes, providing solutions for the production engineering, mould and die, sheet metal fabrication, stone and woodworking industries. Despite the diversity of industry, our CAD/CAM applications all address the rising challenges of achieving manufacturing efficiencies while delivering significant value to the operations where they are deployed.

Hexagon continuously invests in quality, customer service and research and development to provide its customers with cutting-edge software technology. Manufacturers around the world have put their trust in the quality, reliability and the ease of use of Hexagon's technology.

Understanding the sophistication and the limits of each machine tool is the key to driving it efficiently. Hexagon prides itself in the quality of its after sales service, working in partnership with its customers to optimise the efficient use of their CNC machinery through its worldwide customer support network.

## WE LISTEN TO YOUR NEEDS

Hexagon works in partnership with its customers for the long term, understanding the demands of their businesses and providing practical and innovative solutions. We have a support network of engineers who have the experience to understand your business. We will guide you through the modules and recommend the most appropriate combination of software, training and services to suit your needs.

# PRODUCT PORTFOLIO



## ALPHACAM

ALPHACAM is the CAM software of choice for the woodworking and stone cutting industries. The software portfolio provides customers with proven technology to increase productivity.

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## CABINET VISION

A complete engineering solution for the casegood industry. From entry level cutlist packages to fully integrated solutions, CABINET VISION can truly grow with your business.

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## EDGE CAM

EDGE CAM is a market leading production CAM solution, combining the power of sophisticated toolpath generation with seamless CAD integration.

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## RADAN

RADAN is the world's leading CAD/CAM solution for the sheet metal cutting industry, providing applications for punching, profiling, bending, design and production management.

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## VISI

VISI is a CAD/CAM solution for the mould & die industries offering 3D tool design, plastic flow analysis, sheet metal stamping and comprehensive multi-axis milling strategies.

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## WORKNC

WORKNC is the leading high-end CAM software solution for complex models in the mould, die and tooling industries for 2 to 5-axis CNC programming.

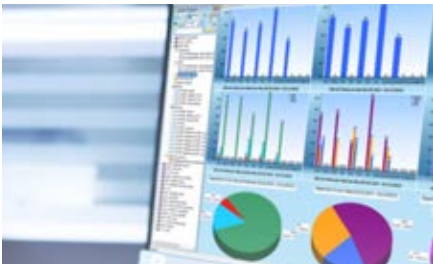
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### WORKXPLORE

WORKXPLORE is a 3D CAD viewer specifically developed to dramatically increase collaboration, productivity and effectiveness throughout your production activities.

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### WORKPLAN

WORKPLAN is a Manufacturing Execution Software (MES) solution designed specifically for the manufacturing industry. WORKPLAN will help you control your manufacturing processes and increase your productivity.

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### NCSIMUL

NCSIMUL manages the complete machining process from the NC program to the machined part. NCSIMUL allows users to fully master the shop floor and include automatic G-code reprogramming and G-code verification.

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### SMIRT

SMIRT significantly reduces die manufacturing time and cost by delivering 3D viewing, planning, costing, CAM, and scheduling capabilities software designed specifically for the die build stamping industry.

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### FASYS

FASYS supports the entire manufacturing workflow, from conception to final product by providing you with the relevant production information and securing the integration of all systems involved.

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**ALPHACAM – YOUR BENEFITS:**

- Intuitive and easy to use
- Intelligent automation manager which prepares and programs CAD files
- Material savings through nesting algorithms
- ALPHACAM STL - multi-axis machining of STL edges

# ALPHACAM

## CAD / CAM SOLUTIONS FOR THE WOODWORKING, STONE & COMPOSITE INDUSTRIES

ALPHACAM is CAD/CAM software for woodworking, stone, metal and plastic cutting. It offers features such as programming of solid models, graphical parametric design, a best-in-class nesting solution as well as many highlights from 2.5D module to 5-axis milling.

The Automation Manager integrated in ALPHACAM takes CNC programming to a completely new level: program creation is completely automated based on your CAD data irrespective of whether it is in 2D or 3D format, or if it is for custom parts or for assemblies.

The emphasis behind ALPHACAM is to provide customers with productivity, reliability and flexibility. This can be found in all our modules which include routing, milling and turning with 2-axis to 5-axis machining.

### THE COMPLETE SOLUTION

- **2D/3D MILLING:**

All modules have roughing/finishing functions with almost unlimited feeding, starting and stopping strategies as well as intelligent pocket and island milling with identification of residual areas and high-speed Waveform roughing.

- **3D ENGRAVING:**

ALPHACAM offers a 3D engraving command for the design of impressive texts and ornaments. During this process, the existing inner edges are profiled with a sharp edge using conical contour tools.

- **ALPHACAM ART:**

ALPHACAM Art is the easiest way to create a high-quality 3D relief from a 2D drawing. The Aspire Modelling technology can be used to create 3D objects from contours.

- **NESTING:**

The parts can be nested directly on-screen or can be controlled through a list via corresponding nesting jobs. Even re-nesting of parts in existing plates is possible.

- **SOFTWARE MODULES:**

ALPHACAM Essential: The entrance level program for comfortably cutting in 2.5D

ALPHACAM Standard: The module for machining complex parts in 2.5D and for multi-axis machining.

ALPHACAM Advanced: The module for programming of solids via ALPHACAM feature detection, also as complex 3D milling.

ALPHACAM Ultimate: Supports all production processes, including 5-axis interpolating milling. Ideally suited for demanding machining work.



#### **CABINET VISION – YOUR BENEFITS:**

- Fully automate and integrate your design through to manufacturing processes
- Design truly bespoke furniture
- Save time and materials
- Output to any CNC machine in seconds



# CABINET VISION

## DESIGN FOR MANUFACTURING SOFTWARE FOR CASEGOOD PRODUCTION

CABINET VISION is more than CAD/CAM software, it is a complete engineering solution for the casegood industry.

CABINET VISION is capable of custom cabinet and room design, photo realistic renderings, material optimisation, bidding and costing, cutlists and bill of materials. Combined with the powerful Screen to Machine™ Center, it can automatically create machine ready G-Code for CNC flat table routers, point-to-point machines, panel saws, drill and dowel machines, chop saws and other specialised CNC machinery.

CABINET VISION enables furniture, woodworking, or casegood manufacturers - from small workshops to large production plants- to fully automate and integrate their design through to manufacturing processes.

### SOFTWARE TO GROW YOUR BUSINESS

- **LAYOUT AND DESIGN:**

All modules have roughing/finishing functions with almost unlimited feeding, starting and stopping strategies as well as intelligent pocket and island milling with identification of residual surface and high-speed wave machining. 2D machining can be performed even in 3D levels in space.

- **RENDERING:**

With photo realistic renderings created directly from the design, it is easy to show clients exactly what their completed project will look like, thereby increasing sales close rates.

- **BIDDING AND PRICING:**

Get interactive and detailed production costs and markups using material prices, rate tables, and labour schemes for the presentation of professional quotes.

- **REPORTING:**

Choose between 200 reports such as panel stock cut lists, material summaries, door lists, cabinet labels, and more, or create your own production reports with our report editor.

- **MATERIAL OPTIMISATION:**

Maximise your material yield and reduce your waste. CABINET VISION allows you to quickly and easily convert your cut lists into patterns for import directly to your NC panel saw or manually printed patterns. Offcut management is included to manage materials from job to job.

- **CAD AND SUBMITTAL DRAWINGS:**

CABINET VISION can automatically generate elevation, plan view, assembly, and part sheet drawings, document production details using 2D CAD functionality, and generate clear assembly instructions using exploded views and assembly leaders.

- **SCREEN-TO-MACHINE™ TECHNOLOGY:**

S2M Center is the most powerful automated CAM solution in the woodworking industry. S2M Center's powerful filtering and machine set functionality allows output to multiple machines simultaneously, while automatically generating all required job data.



**EDGECAM – YOUR BENEFITS:**

- Higher productivity and quality
- Easy to learn and easy to use
- Unique automation options
- Modular, flexible sequential solutions
- Programming via a single interface
- Native CAD loaders from all major CAD systems

# EDGE CAM

## YOUR AUTOMATED CAM SYSTEM FOR CUSTOM & SERIAL PRODUCTION

EDGE CAM is a market leading computer aided manufacturing (CAM) system for NC part programming. With unparalleled ease of use and sophisticated toolpath generation, it's the only CAM system you'll need for milling, turning and mill-turn machining.

EDGE CAM utilises your in house knowledge and experience to drive the CAM process with automation tools to suit different applications – allowing you to maintain your competitive edge. Quick and efficient programming is made possible thanks to the extremely user-friendly workflow user interface.

Comprehensive collision monitoring/simulation functionalities ensure your manufacturing processes operate at the highest degree of safety during complex processing.

### EFFICIENT MILLING, TURNING AND MILL-TURN

- **EDGE CAM MILLING:**

EDGE CAM offers a broad palette of milling cycles for efficient processing of mechanical components to complex free-form surfaces.

- **EDGE CAM TURNING:**

Ranging from 2-axis lathes, multi-turret configurations and sub-spindle turning centres to complex milling/turning machines. EDGE CAM covers a large range of different machine tools.

- **EDGE CAM MILL-TURN:**

EDGE CAM supports common components of current multi-axis lathes. Thanks to complete machine simulation, a high level of safety is guaranteed for this complex processing area.

- **EDGE CAM STRATEGY MANAGER:**

Enormous savings thanks to complete NC programs at the touch of a button. You can freely define PCI macros for all your production processes.

- **EDGE CAM WIRE EDM:**

High flexibility and reliability, Wire EDM provides efficient and precise manufacturing of EDM components with 2 to 4 axis.

- **EDGE CAM INSPECT:**

The support of m&h touch probe systems is an additional, special feature. Simulate the test procedure in your turning-milling machine and select from different measurement cycles.

- **WAVEFORM ROUGHING:**

Waveform maintains a constant chip load for high speed machining. The tool moves in a smooth path to avoid sharp changes in direction, maintaining a constant/high feed rate.



**RADAN – YOUR BENEFITS:**

- Complete solution for sheet metal machining - from automating the data flow of the design to work preparation and production
- Unique combination of applications for punching, profiling, bending, designing and production management
- Automatic importing & conversion of CAD data

# RADAN

## YOUR CAD/CAM/MRP SYSTEM FOR THE SHEET METAL INDUSTRY

RADAN is a leading and machine-independent CAD/CAM/MRP system for the sheet metal industry. The RADAN product family is a completely integrated solution for the design, handling and production of sheet metal parts. It can control all sheet metal machines available on the market. RADAN is used in designing, work preparation and planning of the machine utilisation as well as for NC programming.

RADAN meshes with your ERP system to form an optimally customised MRP module. It prepares you for future machine purchases and process automation solutions - and is ready for Industry 4.0. Thanks to its specific modules, you can integrate RADAN to meet your individual requirements and create a customised system solution for significantly increased added value.

### THE RIGHT SOLUTION FOR EVERY PURPOSE

- **CAM FOR PUNCHING/NIBBLING:**

RADAN Punching is the machine-independent programming system for punching/nibbling machines.

- **CAM FOR PROFILING:**

RADAN Profiling is a machine-independent CAM system for programming laser, plasma, gas and water jet cutting machines.

- **CAM FOR COMBINATION MACHINES:**

You can use RADAN Combi to program your punching/laser combination machines. Combi is the perfect solution for customers utilising both punch & profile technologies.

- **CAD FOR SHEET METAL DESIGN:**

RADAN offers an integrated 2D and 3D CAD solution for sheet metal parts, including functionality for the handling of 3D sheet metal parts.

- **CAM FOR PIPE CUTTING:**

RADAN Radtube is the CAM solution for driving dedicated tube cutting machine tools as well as the rotary axis on flat bed lasers. Whatever the size of your engineering business, Radtube provides an affordable solution to your CNC part programming needs.

- **CAM FOR 5-AXIS LASER CUTTING:**

Radm-ax is an industry leading 5 axis laser CAD/CAM system developed specifically for the general engineering, automotive and aerospace industries. Radm-ax offers an intuitive environment for the comprehensive programming of multi-axis laser or water-jet cutting machines.

- **CAM FOR PRESS BRAKES:**

RADAN Radbend is the ideal solution for the simulation and offline programming of press brakes. Utilising either 2D or 3D geometry, Radbend automates the sequence of operations typically done manually at sheet metal manufacturing facilities.

- **ONLINE-OFFLINE QUOTE CREATION:**

RADAN Radquote is a sheet metal quotation program that will enable you to quickly and easily create quotes for sheet metal parts and purchased parts. It gives you a full breakdown of the 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 quotation letters and emails and create internal reports for analysis.



**VISI – YOUR BENEFITS:**

- Industry specific applications for plastic injection tool design including material flow analysis and progressive die design
- Intuitive and easy to use
- Comprehensive 2D, 3D and 5 axis machining strategies with dedicated high speed routines
- Wire EDM toolpaths and proven CNC code for all wire erosion machine tools

# VISI

## CAD/CAM FOR THE DESIGN AND DEVELOPMENT OF INJECTION MOULDS AND PROGRESSIVE TOOLS

VISI is acknowledged as one of the world's leading CAD/CAM software solutions for the mould and die industries.

VISI offers a unique combination of applications including fully integrated wireframe, surface and solid modelling, and comprehensive 2D, 3D and 5 axis milling strategies with dedicated high speed routines. Industry-specific applications for plastic injection tool design, including material flow analysis and progressive die design with step-by-step unfolding, provide the toolmaker with unsurpassed levels of productivity.

The extensive range of CAD translators ensures that users can work with data from almost any supplier. Very large files can be handled with ease and companies working with complex designs will benefit from the ease with which their customer's CAD data can be manipulated.

### THE MODULAR CAD/CAM SYSTEM FOR TOOLMAKERS

- **VISI MODELLING:**

VISI Modelling is the foundation of all VISI products and provides a robust and powerful solid and surface modelling system based around the industry standard Parasolid® kernel. VISI Modelling offers complete flexibility to construct, edit or repair the most complex 3D data.

- **VISI MOULD:**

The VISI Mould module helps in creating a parametric 3D mould. A dynamic preview displays the assembly status, including options to edit all parameters in edit mode. Normal libraries of all common manufacturers are available for completing the assembly.

- **VISI ELECTRODE:**

VISI Electrode is an automated module for the creation and management of electrodes and their holders for the manufacture of detailed and hard to machine features on mould and press tools. Comprehensive holder design, simulation and collision checking ensures that the electrode will operate right first time.

- **VISI FLOW:**

VISI Flow is a unique prediction tool, ideal for pre and post production analysis and concurrent engineering of injection moulded plastic components.

- **VISI PROGRESS / BLANK:**

Multiple modules are available for processing 3D sheet metal components including blank development, 3D strip layout and full tool design. VISI Progress can unfold both surface and solid models using a powerful geometry based unfolding algorithm.

- **VISI MACHINING- 2D TO 5-AXIS:**

VISI Machining offers all you need to increase productivity, maximise cutting capacity and reduce delivery times. VISI creates intelligent toolpaths on the most complex 3D parts. Dedicated high speed milling techniques and built-in smoothing algorithms create highly efficient NC code, reducing cycle times on your machine, and continuously producing high quality components.

- **VISI PEPS WIRE:**

VISI PEPS Wire combines the VISI CAD/CAM solution with the industry-leading PEPS Wire EDM solution, developed specifically for the precision engineering, tool-making, mould and die, press and extrusion tool industries. Fully feature based, VISI PEPS Wire's automatic recognition of wire erodible parts delivers reliable results for wire features, such as tapered and 4 axis cuts, directly from the solid model.



**WORKNC – YOUR BENEFITS:**

- Easy programming
- Highly efficient roughing strategies
- Automatic 5-axis toolpath generation
- Cutting path calculation including collision control
- Maximum surface quality



# WORKNC

## CAM SOLUTION FOR HIGH-PRECISION MOULD, DIE AND TOOLING INDUSTRIES

WORKNC is the closest system to “One Button CAM” with automated, efficient toolpaths bringing dramatic productivity gains through shorter machining times, longer tool life, improved surface finishing and accuracy, better machine utilisation, and fast and easy CNC programming. WORKNC’s multi-threaded processing takes advantage of multi-core computers giving fast calculation and processing times. Preparation times are also reduced thanks to predefined machining sequences and batch mode toolpath calculations.

WORKNC offers smooth import of model data of all leading CAD manufacturers. This avoids most compatibility and data management issues. In addition, you can also improve all design and production processes through reliable and easily programed cutting paths, resulting in increased productivity and safety.

### ADVANCED CAM SOLUTION FROM 2 TO 5-AXIS MILLING

- **2D MACHINING & DRILLING:**

Quickly machine pockets, holes, slides, ejector plates and prismatic components.

- **3+2 AXIS ROUGHING:**

Roughing and re-roughing toolpaths in WORKNC enable large volumes of stock to be removed in a single pass with large depths of cut, while dynamic stock management gives WORKNC the sensitivity to work with small diameter tools too.

- **WAVEFORM ROUGHING:**

Waveform maintains a constant chip load for high speed machining. The tool moves in a smooth path to avoid sharp changes in direction, maintaining a constant/high feed rate.

- **FINISHING:**

WORKNC’s multiple finishing and remachining strategies gives users the ability to easily tailor machining operations to suit their individual requirements. Coupled with the powerful graphical toolpath editor and the ability to create sets of knowledge-based automatic cutting strategies, WORKNC will deliver extremely short programming times and greatly improved quality and productivity.

- **5-AXIS MILLING:**

The ease of programming brings 5-axis machining well within the reach of every company by eliminating programming complexity and making it practical to carry out 5 axis programming on the shop floor. The intelligent toolpaths are automatically and dynamically controlled to avoid collisions and to manage the rotation limits of each specific machine tool.

- **AUTO 5:**

Engineers can automatically turn 3 and 3+2 axis machining toolpaths into full 5 axis simultaneous toolpaths using WORKNC Auto5. This unique module offers companies the benefit of smooth, fluid 5 axis toolpaths enabling the use of shorter, more rigid cutters, and allowing more of the job to be finished in one setting.

- **ADVANCED TOOLFORM:**

A milling strategy using state of the art tool geometries for high speed processing. This routine allows the use of barrel cutters or a combination of lens and barrel cutters leading to significantly reduced cycle times and improved surface finish quality.



#### **WORKXPLORE – YOUR BENEFITS:**

- Open and quickly process 3D files
- Multiple CAD interfaces are available
- Create dynamic visualisations
- Various tools make your work with 3D models easier – ranging from a comparison function for 3D files to simple and complex animations and exploded views

# WORKXPLORE

## YOUR HIGH-SPEED CAD VIEWER FOR ALL COMMON DATA FORMATS

WORKXPLORE is a fully functional high-speed CAD viewer with analysis functionality. It was developed to efficiently import file formats of any type for analysis purposes. It features unsurpassed comprehensive performance spectrum, functionality and user-friendliness. The software saves the 3D CAD data in a proprietary and compact format, which makes it possible for the users to calculate surfaces and volumes as well as to measure thickness, dimensions, angle and much more - without the need to access the original CAD data. WORKXPLORE has been designed for users with limited CAD experience, enabling them to process any type of 2D/3D CAD files.

### HIGH-SPEED VIEWER FOR DISPLAYING AND ANALYSING 3D CAD DATA

- **3D MEASURING:**

Even non-expert CAD users can quickly get to grips with the software's measurement functions and immediately obtain good results, by making use of the software's standard settings.

- **ANALYSIS:**

WORKXPLORE's specialist analysis tools can be used to help make quotes, diagnostics, assembly notes or for preparing 3D models for production.

- **ANNOTATION:**

The need for 2D drawings is reduced as users can directly add dimensional and geometric measurements, annotations and labels to the 3D model.

- **PUBLICATION:**

It is vital for company staff to be able to use communication tools that capture their expertise and share this knowledge with other staff members, whatever their CAD software skill level. WORKXPLORE allows users to easily share their CAD models throughout the entire design and manufacturing chain with all project members, whether they are product managers, marketing, sales, outside manufacturing consultants, customers or suppliers.

- **ANIMATION:**

WORKXPLORE includes a fully functional animation tool which allows users to generate exploded views or animated assembly movements. Setting up animations is achieved by simply initiating basic movements such as translation, rotation or following a guide.



#### WORKPLAN – YOUR BENEFITS:

- Transparency of production and costs
- Rapid workload analysis and visualization
- Real-time project summary
- Integrated quality improvement program
- Scalable system to grow with your business

# WORKPLAN

## MANUFACTURING EXECUTION SYSTEM (MES)

WORKPLAN is a MES software solution for project management and production, which is specifically designed for tool and mould design. WORKPLAN is designed to automate business processes and to support management. Our software manages all of your business activities from the creation of quotes and sending of order confirmations to final invoicing.

Being the first to deliver a well-pitched job quotation will give you a decent head start over the competition. But to stay in front, you must provide high quality, at a competitive price, with shorter delivery times. To do this you have to optimise your business and production processes.

WORKPLAN's flexibility and adaptability is its real strength - it's the only MES software that can truly grow with your business.

### MAXIMISE YOUR KNOW-HOW

- **QUOTATIONS:**

The Module Estimator is specifically designed to prepare quotes for different versions and variants of the same part while recording of all revised versions.

- **INFORMATION MANAGER:**

All documentation and data is stored centrally, therefore available at any time. Receive automatic email reminders and manage and track all your actions based on your personal task list.

- **TIME MANAGEMENT:**

Collate employee hours and machine hours in real time. Provide an overview of the tasks to management, granting an overview over which task is being performed on each machine and by which employee. The workshop view allows real-time supervision of the activities.

- **PURCHASING AND STOCK MANAGEMENT:**

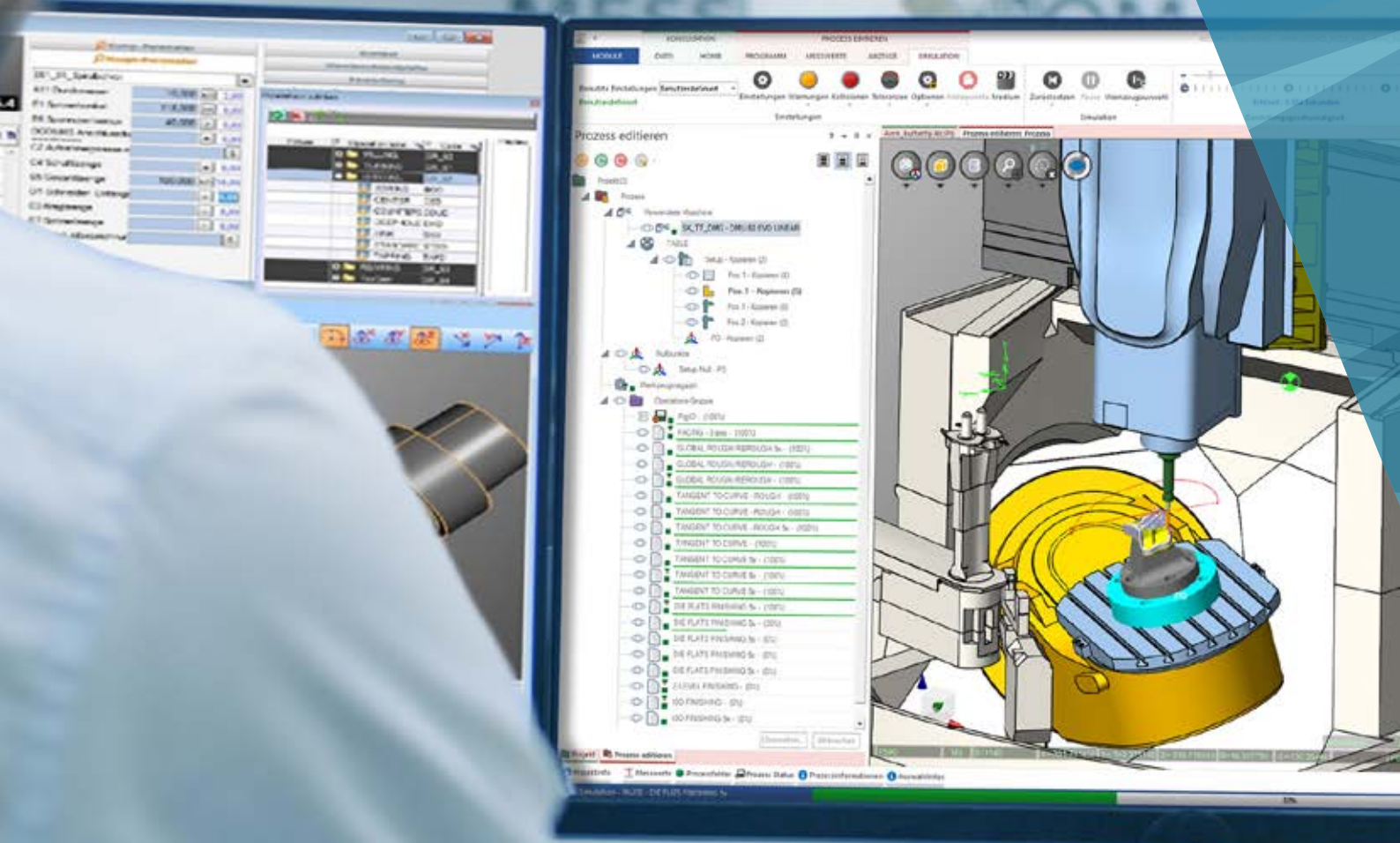
Get an overview of your stock availability and goods flow thanks to helpful functions such as price management for stock movements, definition of stock, automatic generation of price queries, etc.

- **PLANNING & SIMULATION (SCHEDULER):**

Easily create a schedule for resources or generate GANTT charts based on available work capacities. Export the results to MS Excel or MS Project for easy distribution to all parties involved.

- **QUALITY:**

Keep your quality management under control, including ISO compliance, tracking of quality issues and continuous improvement through measurement.



#### **NCSIMUL – YOUR BENEFITS:**

- CNC simulation for G-code verification, machine simulation and toolpath optimisation
- Switch programs between CNC machines
- Reduce the operating cycle of your programs
- Enhance the quality of your machining operations
- Collaborate easily through the mobile-friendly NCSIMUL player

# NCSIMUL

## G-CODE SIMULATION / VERIFICATION SOFTWARE

NCSIMUL manages the complete machining process from the NC program to the machined part. Its capabilities allow users to fully master the shop floor and include automatic G-code reprogramming and G-code simulation. NCSIMUL virtually builds the real-life machining environment to eliminate errors, decrease set-up times, reduce manufacturing costs, and increase shop floor productivity.

The DNC program management, real time machine monitoring and technical content publishing are added benefits that complete the platform and enhance production.

### YOUR CNC DIGITAL TWIN SOLUTION

- **NCSIMUL MACHINE:**

NCSIMUL Machine is a high-end CNC simulation software for G-Code verification, machine simulation and tool optimisation. It detects programming errors and any potential collision from the same NC code that drives the CNC Machine. Available for turning, drilling, milling (3 to 5 axis), multi-tasking or even complex machining, NCSIMUL Machine is the most advanced machining verification software for simulating, verifying and optimising CNC programs. Based on the real characteristics of your CNC machine, the result is a dynamic verification software that includes the exact environment for all machines, tools and materials.

- **NCSIMUL OPTITool:**

NCSIMUL Optitool analyses cutting conditions, dramatically reduces "air cutting", optimises feed rates and allows users to create better cutting strategies. The sum benefits are a reduction in the production cycle times, enhancement of cutting operations and fast development of new G-code optimised files for future applications. This module allows you to optimise the tool lengths, air cutting and cutting conditions of your NC programs (from 3 to 5 axis simulation software) and globally increase the quality of your machining operations.

- **NCSIMUL 4CAM:**

NCSIMUL 4CAM automatically converts your CAM and NC programs to different machines. This not only enables you to switch quickly between the different machines, kinematics and controls and better utilise the shop floor, but also to commission new NC machines much faster by using existing NC programs.

- **NCSIMUL MONITOR:**

NCSIMUL Monitor returns machine status, either manually from the NC console or automatically. It delivers native support for OPC, the international interoperability standard for industrial automation. This means that a machine's status can be reported in real time with details of output, failures, downtime, setups, etc. This data can be used to generate activity reports in table or graph form to enable specific situations to be analysed and more efficient production planning. Status reporting also enables the execution of quality scenarios and more sophisticated supervision processes. Interfaced with an ERP or Production Management package providing links to work/planned orders, the module provides feedback on productivity rates (OEE, ORR, EIRR)\* in a single click.

\* Overall Equipment Effectiveness (OEE), Overall Rate of Return (ORR), Economic Internal Rate of Return (EIRR).



#### **SMIRT – YOUR BENEFITS:**

- Industry accepted solution, with short learning curve
- Project management & information sharing
- Large assembly management
- Drag & drop toolpath technology, with automatic hole drilling
- Cost estimating from part data



# SMIRT

## SOFTWARE SOLUTIONS FOR THE DIE BUILD STAMPING INDUSTRY

SMIRT delivers powerful viewing capabilities designed explicitly for the Die Build stamping industry. Developed specifically for the shop-floor environment, SMIRT provides machinists and other users with powerful easy to use viewing, costing, CAM, construction planning and scheduling tools that enhance productivity and increase the bottom line for our customers.

SMIRT provides the shop floor with a graphical outline of the complete die build process and turns the die assembly into a productionised workflow process. This allows all personnel to build the die following a tested and proven road map the customer has developed. Any variations in the build process are quickly identified and brought to everyone's attention. Once the build is complete, the information is readily available for a thorough review providing valuable data to improve the process for subsequent builds.

### OPTIMISE YOUR DIE MANUFACTURING PROCESS

- **INFORMATION FROM ANY CAD SOURCE:**

SMIRT lets die makers, pattern makers, machinists, foremen and other users extract the information they need to build a die directly from a solid model without the need to generate plots/drawings (a true paperless environment). Powerful annotation and information sharing tools make it possible to improve and speed up the information flow through the entire organisation

- **NC MILLING / DRILLING:**

SMIRT NC is designed to create toolpaths for planar faces, profiles, and drilling holes. The "drag & drop" technology is used to create tool paths directly on the solid geometry with no manual entry of coordinate values.

For 3D geometry, SMIRT creates automatic 3 axis and 3+2 axis milling tool paths for small or large components or castings. The unique 'Milling Method' strategy simplifies the overall process by automatically selecting 3D surfaces to machine, filling holes, extracting tools from the database and creating boundary curves, along with creating the initial casting stock or initial solid block.

- **DIE BUILD:**

The complete die design can be reviewed by the engineering department and then processed through SMIRT. A graphical flow chart of the build process is generated and released to the rest of the departments. The entire process for each die is controlled and communicated to everyone involved and ensures consistent techniques are used throughout the facility.

- **COSTING:**

SMIRT combines a graphical CAD interface specifically designed for die estimation with an input/output method that links the CAD data with formulas, standard components, castings and rate structures. This will generate an accurate 'cost to build' for the die assembly.



**FASYS – YOUR BENEFITS:**

- 2D/3D tool and equipment management based on DIN 4000/4003
- Central data management with interfaces to different CAD/CAM systems
- DNC solution for all common CNC controllers and pre-setting devices

# FASYS

## EFFICIENT TOOL AND OPERATIONAL RESOURCE MANAGEMENT

Whether it is design, planning, NC programming or during tool setting at the machine, FASYS supports the entire manufacturing workflow from conception to final product by providing you with relevant production information and securing the integration of all systems involved.

Optimal access to all production-relevant information is possible by using centralised equipment and tool management, organisation of tool assembly, as well as setting up all relevant control stations in the production islands. FASYS solutions help with the reduction of set-up and ancillary costs and create transparency at all production levels.

### CREATE A TRANSPARENT MANUFACTURING ORGANISATION

- **3D TOOL AND EQUIPMENT MANAGEMENT:**

All relevant production data in accordance with DIN 4000 are available at a glance and can be centrally classified, managed and linked with each other. Connection conditions on the workpiece / machine side (DIN 4000-95) describe how the individual components can later be assembled into a complete tool.

- **CAD/CAM DIRECT INTERFACE:**

The integration of NC programming systems into FASYS is achieved with the assistance of the CAM interface. The solution supports the transfer (check-in and check-out) of files, tools, cutting data and graphics. During the CAM process, all data records involved are automatically blocked for access by other users and in the DNC.

- **DNC PRODUCTION CLIENT:**

FASYS supports the connection of multiple machines or presetting devices to a single PC. The production oriented Windows application provides access to all required documents (job papers, NC program, set-up sheet etc.) from the production island.

- **TOOL CYCLE:**

For an optimal tool cycle, all tools are managed based on identification number as well as Duplo index, and identified uniquely via ID chip or holder number. Standard interfaces to common presetting devices (e.g. Zoller, Kelch and others) are available. The actual data generated by the presetting device is adopted and subsequently transferred with the tool cart or – in DNC – directly to the CNC machines.

- **STOCK MANAGEMENT:**

All operational resources that exist physically are administrated via FASYS inventory management. The system organises stock in cabinets, lift systems or dispensers, monitors minimum inventory and provides an optimal interface to common ERP/PPC systems.

Hexagon Manufacturing Intelligence helps industrial manufacturers develop the disruptive technologies of today and the life-changing products of tomorrow. As a leading metrology and manufacturing solution specialist, our expertise in sensing, thinking and acting – the collection, analysis and active use of measurement data – gives our customers the confidence to increase production speed and accelerate productivity while enhancing product quality.

Through a network of local service centres, production facilities and commercial operations across five continents, we are shaping smart change in manufacturing to build a world where quality drives productivity. For more information, visit [HexagonMI.com](https://www.hexagonmi.com).

Hexagon Manufacturing Intelligence is part of Hexagon (Nasdaq Stockholm: HEXA B; [hexagon.com](https://www.hexagon.com)), a leading global provider of information technologies that drive quality and productivity across geospatial and industrial enterprise applications.

-  COORDINATE MEASURING MACHINES
-  3D LASER SCANNING
-  SENSORS
-  PORTABLE MEASURING ARMS
-  SERVICES
-  LASER TRACKERS & STATIONS
-  MULTISENSOR & OPTICAL SYSTEMS
-  WHITE LIGHT SCANNERS
-  METROLOGY SOFTWARE SOLUTIONS
-  CAD / CAM
-  STATISTICAL PROCESS CONTROL
-  AUTOMATED APPLICATIONS
-  MICROMETERS, CALIPERS AND GAUGES
-  DESIGN AND COSTING SOFTWARE