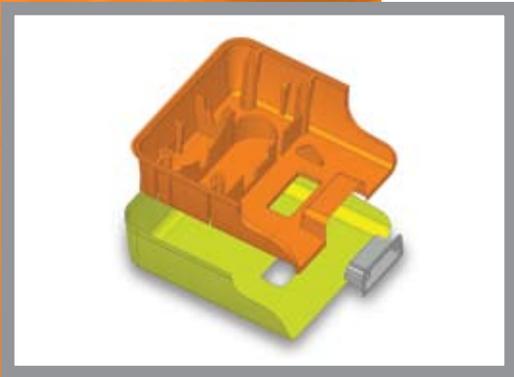


*Cimatron***E**

CAD/CAM Solution for

Mold Making

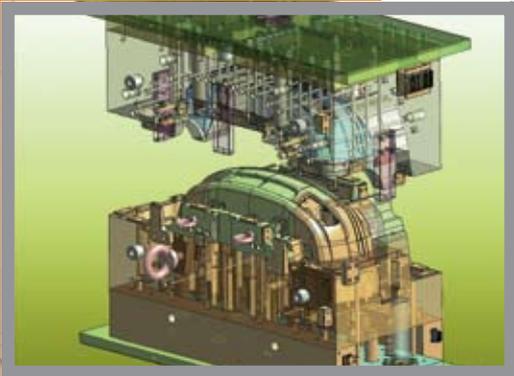
From Quoting to Delivery



Use an integrated solution
dedicated to mold making

Deliver high quality molds at
record times

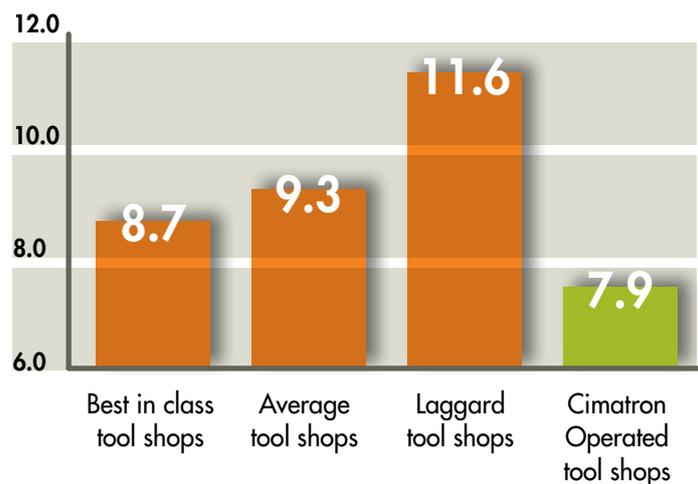
Produce molds at any
complexity and size



 *Cimatron*
G R O U P

Produce high quality molds at record times; increase your business competitiveness and profitability.

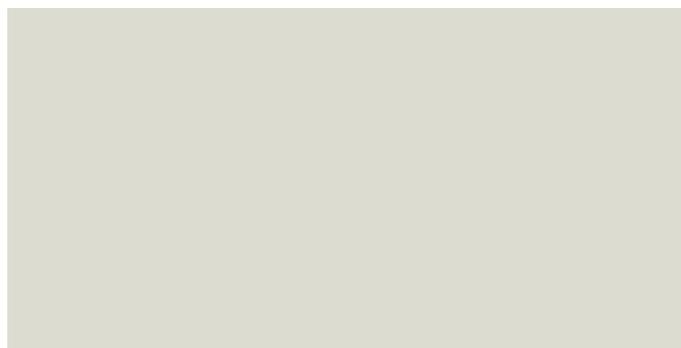
Weeks to Customer Delivery



Cimatron Customers Deliver Tools Faster

Findings from the Aberdeen Group's Mold and Die Shop Benchmark study show that Cimatron customers are able to provide significantly faster delivery times than those offered by the rest of the industry.*

* Almost one week faster than shops classified as Best-In-Class, and as much as four weeks earlier than shops classified as Laggards.



The Benefits of Using Cimatron

Designed to meet the unique challenges faced by mold makers today, Cimatron's mold making solution enables you to:

- Win more jobs and increase profitability with faster, more accurate and professionally looking quotations.
- Undertake any project with the confidence to handle even the most complex parts.
- Dramatically reduce design time with powerful mold design functions and concurrent design capabilities.
- Automate repetitive and time consuming tasks and utilize commonly-used part catalogs and user-defined libraries to reduce delivery time and cost.
- Streamline processes and easily manage changes by using a single integrated solution from design to manufacturing.





What Makes Cimatron ideal for mold makers?

An integrated solution from quoting to delivery

Cimatron's CAD/CAM solutions address the entire mold making process—from quoting to design, applying engineering changes, NC and EDM programming. Nothing is lost in translation, so you can deliver higher quality tools at lower cost and shorter cycle times.

One-stop dedicated mold design solution—complete any job at record time

Mold makers no longer need to spend valuable time attempting to construct the unique features of a mold using general-purpose CAD applications or switching between multiple systems. With built-in data converters, highly flexible mold base configuration options, powerful mold-specific design functions, and automated BOM creation, you can get the entire design done in a single environment, allowing you to complete even the most complex job at unprecedented speed.

Flexible automation—the ideal mix of automation and user control

Cimatron's CAD/CAM solutions save mold makers time with high level of automation, while empowering the experienced user with full flexibility to control the entire process. Cimatron's Intelligent Toolbox puts the right tool at your disposal at the right time—supporting and speeding up your natural workflow.

Design in 2D or 3D, using surface or solid operations—it's your call

2D or 3D, surface or solids are no longer a dilemma; Cimatron supports you whichever way you prefer to do your design work. Perform surfacing operations on solids and solid operations on surfaces using a complete hybrid environment to fit your preferences and the task at hand.

Machine any part—from simple to complex, and everything in between

From simple 2.5-axis milling and drilling to complex 5-axis machining and micro milling, Cimatron provides the full range of NC technologies needed to get the job done.



“

Cimatron has the best technical support I have ever seen.

Starbase Technologies, USA

”



Partnering for Success

Tooling is your business. It is also ours. With over 25 years of working with the tooling industry, we understand that success requires not only the best products, but also the know-how, process, and resources to help you make the most out of them.

Implement at your own pace with a modular or fully integrated solution

While Cimatron provides a complete integrated solution that covers the entire mold making cycle, you can implement individual modules of the system at your own pace to address your most urgent needs and match your available resources.

Upgrade to Cimatron without losing productivity

The tooling experts at your local Cimatron office provide extensive training and implementation support to guarantee successful deployment and complete customer satisfaction. A proven implementation methodology includes a step-by-step integrated training and migration plan to ensure quick productivity ramp-up with minimum disruption to your business.

Tooling expertise and world-class customer support

With more than 40,000 installations worldwide, Cimatron is focused on serving the needs of the tooling industry. Cimatron's subsidiaries and extensive distributor network are located in over 40 countries to serve customers worldwide with complete pre- and post-sales support. Ongoing support is provided by your local office to ensure the highest level of responsiveness. Employees and representatives worldwide are tooling experts that utilize their industry knowledge to assist customers with unparalleled dedication and expertise.

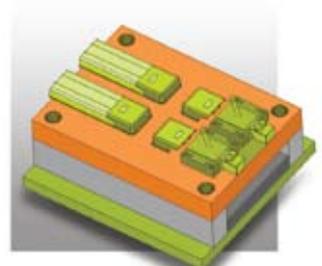
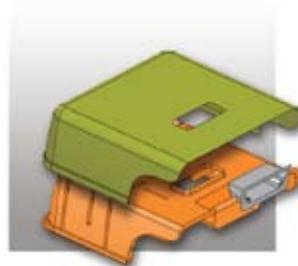
Cimatron has a complete solution that helps you streamline the entire mold making process from quoting to design and manufacturing.

Choice of a fully integrated or modular solution

Cimatron's CAD/CAM functionality covers the entire mold making cycle—from quoting to design, applying engineering changes, NC and EDM programming—streamlining the entire mold making process. The system is available as separate modules or as a complete integrated solution.

Quoting

Design



1 Data Import

2 Quoting

3 Parting

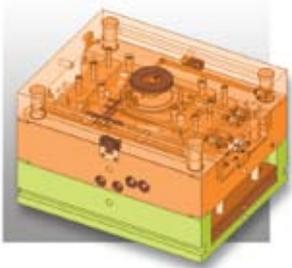
4 Preliminary Design

Cimatron allows us to design and build molds more efficiently so we can maintain our industry leadership. We have completely turned off any other software we were using.

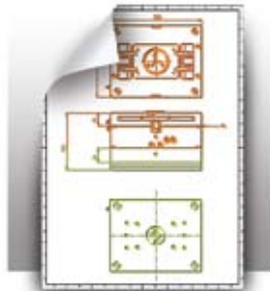
PTA Corporation, USA

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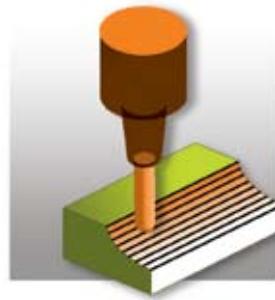
Manufacturing



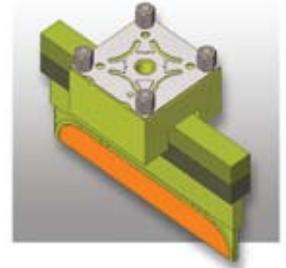
5 Mold Tool Design



6 Drawing



7 NC Programming



8 Electrode

Quoting

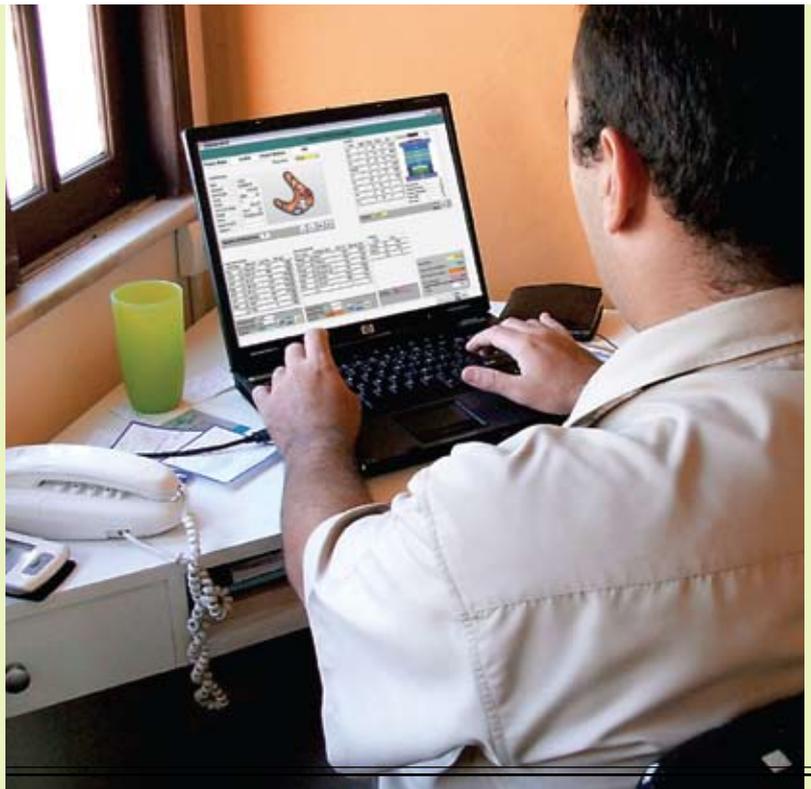
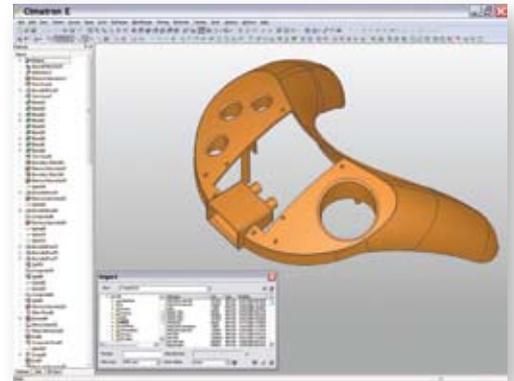
1



Data Import

Import your customer data and start working within seconds

- Start working as soon as you get your customer's part data. Heal and stitch data or work with non-stitched models and poor-quality imported data.
- Quickly and reliably import your customer part data with automatic data validation and highly accurate conversion from all standard formats, including DWG, DXF, IGES, STEP, VDA, Parasolid and SAT (ACIS).
- Take advantage of native read/write options for popular CAD systems, including CATIA, Pro/Engineer, SolidWorks and Unigraphics.



“Cimatron enables us to do our design work better and faster. It makes us more productive - we can do more business with the same resources.”

C&C Design, USA

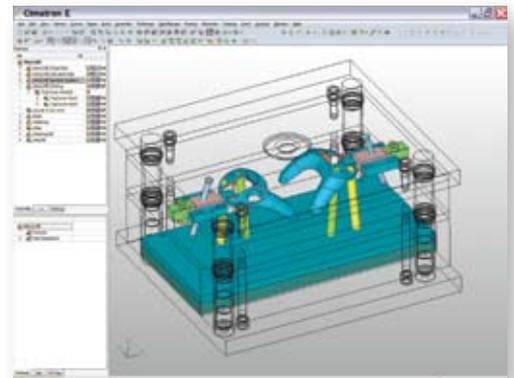
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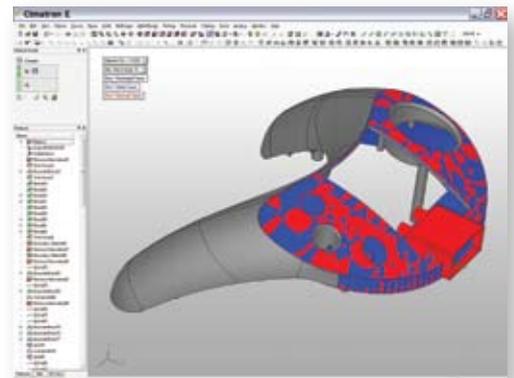
Quoting

Win more business with quick and accurate cost estimates

- Utilize *QuickSplit* to spot undercuts and other problem areas that might require additional work.
- Get a quick and accurate estimation of the mold base cost with preliminary designs that include the placement of primary mechanisms such as sliders and runners.
- Incorporate preliminary design images to produce highly professional-looking quotes.
- Use *QuickCompare* to clearly visualize and analyze engineering changes (ECO) for accurate and efficient cost estimates.



Get quick and accurate cost estimation with preliminary designs



Use *QuickCompare* for estimating ECO costs

Design

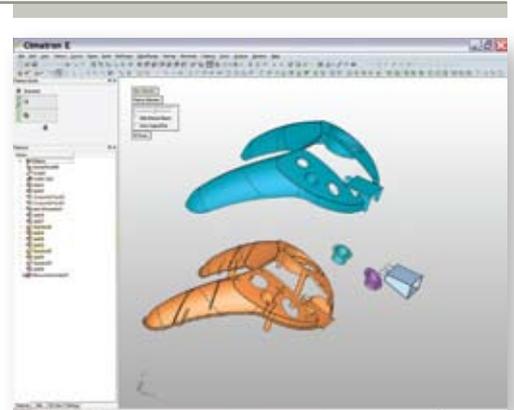
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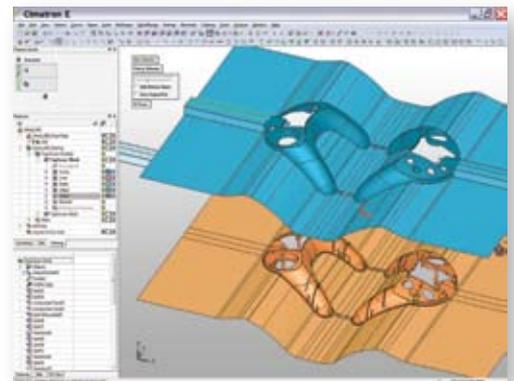
Parting

Use *QuickSplit* advanced tools to optimize parting and cavity design

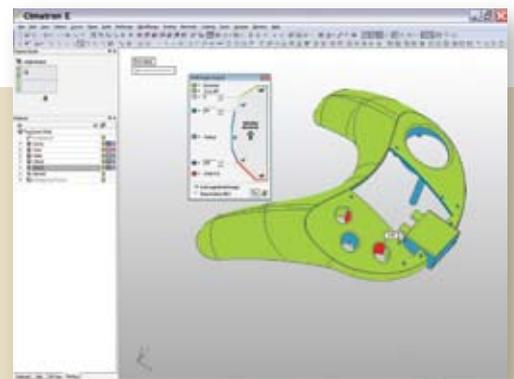
- Easily modify the model to allow manufacturability, no matter what package it was built in.
- Quickly split either closed or open models without lengthy solid body stitching.
- Define multiple opening directions—automatically assigning faces to the correct directions and supporting any number of sliders and lifters.
- Ensure flawless parting with a click-of-a-mouse analysis of draft angles and undercuts.
- Work on any model (DI) - solid or not, using rich geometrical tools.
- Design quality parting surfaces with a strong package of surface functionality.
- Save time and avoid repetitive redesigns with built-in parting line visualization and motion simulation.
- Streamline the design process with automatic transfer of the geometry properties and related information to the mold design environment.



Use *QuickSplit* to define and visualize multiple opening directions



Create parting surfaces

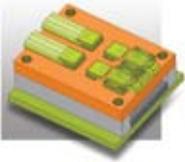


Click-of-a-mouse analysis of draft angles and undercuts

“Designing with Cimatron 3D has taken 2-3 days of modeling out of the process.”

Vaupell, USA

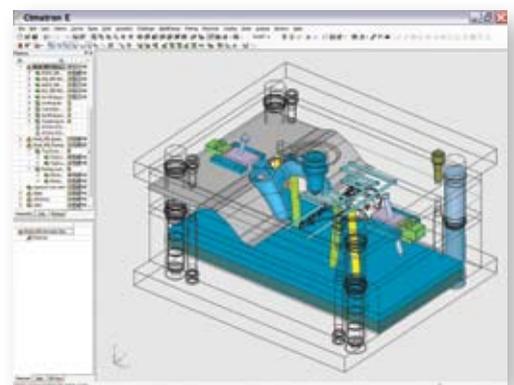
4



Preliminary Design

Create quick preliminary 3D designs to evaluate strategies and gain customer approval

- Design any size mold of up to thousands of surfaces and components—handling any mold layout including multi-cavity and family molds.
- Easily place all the components of your mold—including plates, sliders, and cooling, ejection, and runner systems.
- A preliminary Bill of Material (BOM) is generated so material can be ordered and initial machining may get started in parallel to final design approval.



Design

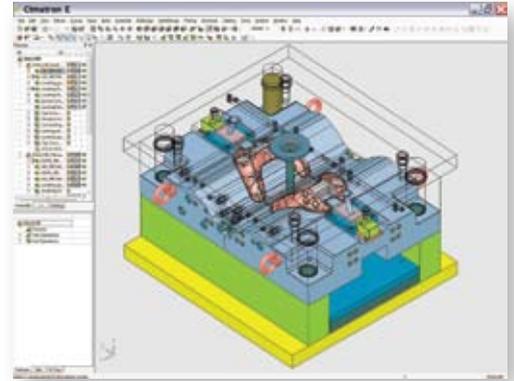
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Mold Tool Design

Design high quality tools faster and at lower cost

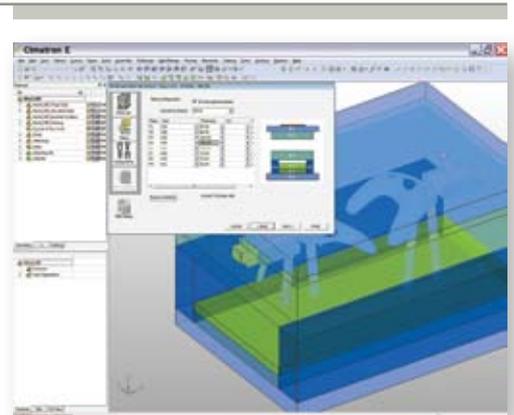
- Validate your design with built-in measurement, analysis, and collision detection capabilities.
- Allow multiple users to simultaneously work on the same assembly, significantly compressing design cycle times.
- Automatically transfer your design data to Cimatron's NC environment to speed up tool manufacturing.
- Use *QuickCompare* to analyze engineering changes (ECO), then apply local changes within seconds, even in a close-to-finish assembly holding thousands of components.



Mold Base Configuration

Load an entire mold base plate set in just minutes utilizing standard and user-defined catalogue parts

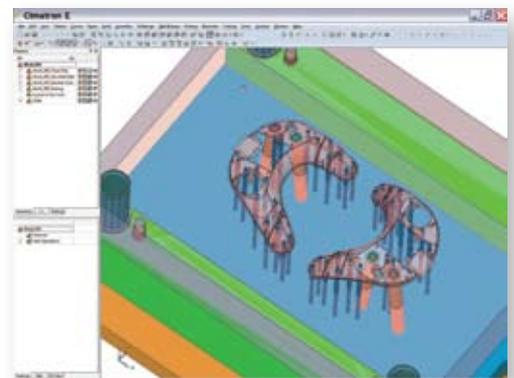
- Save days of work with automated design of the mold base assembly using standard catalogue parts and user-defined mechanisms (e.g., sliders, lifters) from your library.
- Instantly modify the mold base at any stage of the design process.



Ejection Systems Design

Leverage hybrid 2D/3D capabilities for quick and easy positioning of ejectors

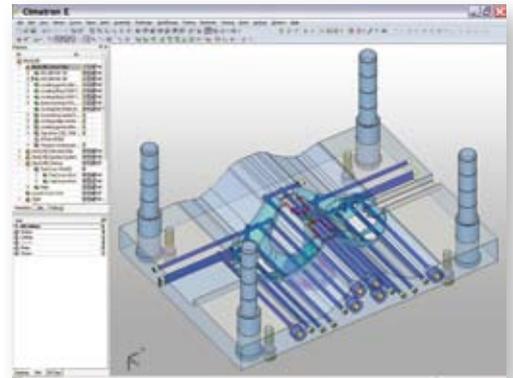
- Place hundreds of ejectors in a single step—the systems will automatically find the right spot, analyze the plates they go through, and take care of the trimming.
- Create pockets that are tight around the upper end of the ejector and loose along the body.
- Take advantage of built-in integration to drafting, automatically marking the ejectors in your drawings.
- Insert ready to use ejection systems from any standard catalog.



Cooling System Design

Utilize specialized tools to simplify the creation of complex cooling systems

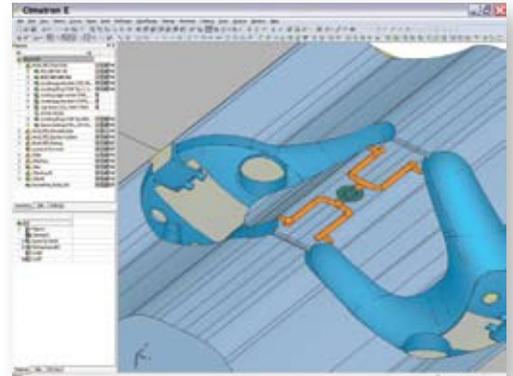
- Simplify the creation of complex cooling systems and all required cooling elements (channels, plugs, connectors, baffles, nipples, etc.) with dedicated design tools.
- Ensure that channel geometry accounts for the exact shape created by the drilling tools, including extensions and drill tips.
- Leverage the 3D environment to detect any interference and get alerts if cooling channels are positioned too close to other key components.



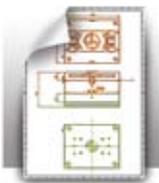
Runner Design

Quickly create highly efficient runners

- Easily integrate your runners into the mold.
- Transfer runner path data to your NC program.



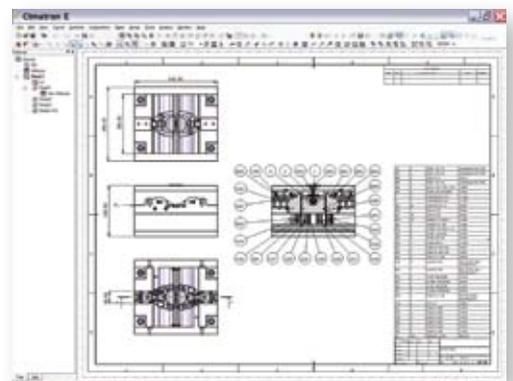
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Drawing

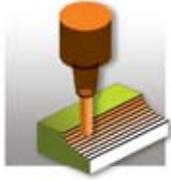
Create and reuse drawing templates incorporating customer specifications

- Use powerful drafting options for mold drawings, including the ability to create sections on open objects.
- Easily add Bill of Material and Table of Holes to your drawings.
- Eliminate repetitive manual steps with automated placements of center lines, coordinate labels, and other drawing elements.
- Generate drawings with all the information needed for ordering components, shop floor operators, quality assurance, and customer documentation.
- Define drafting views on-the-fly during the modeling process; then quickly convert them into drawings.
- Create and reuse templates incorporating customer standard drawing specifications.



Manufacturing

7



NC Programming

Use Cimatron's NC module to turn your mold design into a prototype or fully functioning production mold tool with unprecedented accuracy and speed.

Cimatron NC is the natural choice for mold makers, available as either a stand-alone module or fully integrated with the mold design modules for a complete end-to-end solution.

Using Cimatron NC as part of an end-to-end integrated solution, you can:

- Save time and eliminate errors by seamlessly transferring all geometrical attributes from the design phase to the NC programming phase without any data conversion.
- Easily manage engineering changes with built-in associativity — changes you make in the tool design flow directly to the affected NC procedure.
- Compress delivery cycles with concurrent engineering capabilities that allow you to begin manufacturing selected tool assembly components while continuing the design of others.

Rich Built-in CAD Functionality

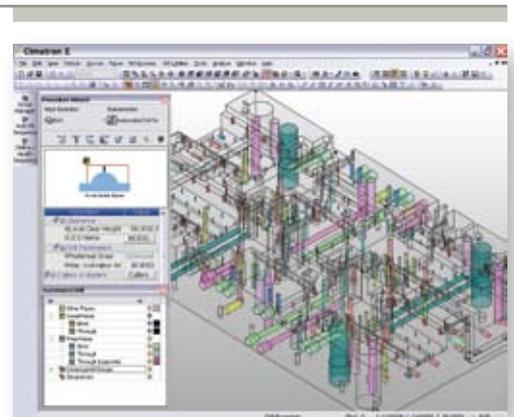
All the CAD you need for best machining results

- Built-in CAD mode with robust surfacing capabilities allows the NC programmer to optimize machining by adding surfaces and contours and easily correcting geometry issues such as capping holes, applying drafts, rounds and surface extensions.

Automated Drill

Save up to 90% of drill programming time

- Adaptive, accurate and easy-to-use drilling functionality for applications ranging from plate machining to 5-axis production and gun drilling.
- Hundreds of holes can be recognized in seconds and are automatically assigned the appropriate drilling sequence.
- Stock recognition capabilities take into consideration the stock existing above the hole before it is drilled, enabling the assignment of an optimal drilling sequence.
- Users of Cimatron's fully integrated solution enjoy automatic transfer of hole properties assigned during the tool design phase, such as thread, accuracy and surface quality – saving huge amount of time and eliminating errors.



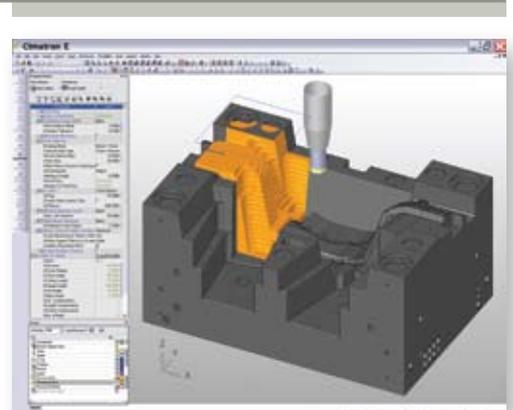
“Cimatron really gives me the flexible tools I need to carry out 2D and 3D milling, electrode extraction and documentation. CimatronE is a strong, versatile solution that efficiently handles all the jobs in our tool shop.”

Oticon, Denmark

Efficient Roughing Functionality

Maximize material removal rate while prolonging tool life

- Built-in NC-Preview function enables to preview machining results in a matter of seconds, allowing programmers to optimize machining strategies and eliminate errors early in the process.
- Stock is continuously updated throughout the various orientations, generating an efficient toolpath for any selected machining strategy.
- Tool shank and holder collision checking against the auto-updated stock is performed automatically at all stages of Rough and ReRough operations.
- For highly-productive High-Speed Milling (HSM) and long tool life, the system generates an all-rounded toolpath with constant tool load, trochoidal milling, advanced clean between passes, efficient rough between layers, and state-of-the-art ridge removal.



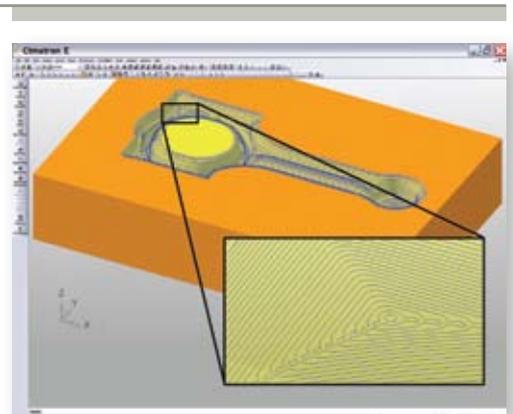
Preview machining results in seconds

High Quality Finishing

Achieve polish-less surface quality

Robust 3 to 5-axis finishing application, providing optimized machining strategy for any model shape. Based on slope and curvature analysis, part geometry, and tool accessibility, finishing machining strategies include:

- Adaptive Z layers
- True spiral motions
- All rounded motions
- Flow-line machining
- Cleanup (rest machining) and pencil
- Slope controlled finishing
- Optimized CBP (Clean between passes)
- Unique Ridges handling by Zero Overlap trochoidal



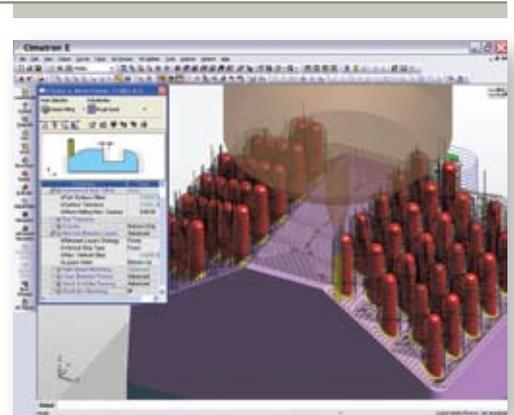
Manufacturing

Advanced Micro Milling

For miniature and high precision milling

Cimatron is a pioneer in the field of micro milling, offering dedicated micro-machining strategies for cost-effective manufacturing of molds for very small, high precision parts.

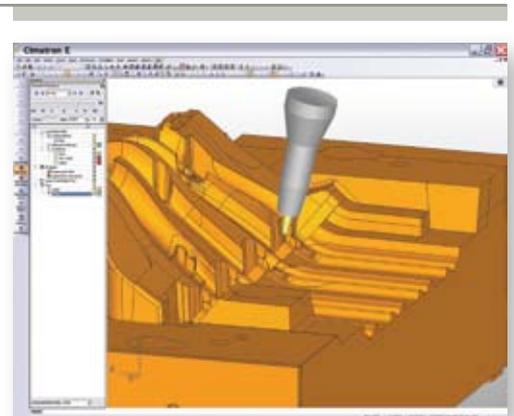
- Generate superb surface quality with tolerances as tight as 0.0001mm, using cutting tools with diameters down to 0.1 mm.
- Use Cimatron's micro milling capabilities to support cutting-edge Direct Milling.



Full 5-Axis functionality for mold making

Reduce setup time, shorten machining time, and improve surface quality

- Advanced simulation capabilities—including material removal, remaining stock, and complete machine kinematics—allow operators to review the machining process prior to manufacturing and eliminate unnecessary tryouts.
- A large library of machining strategies support a complete range of cutters including tapered cutters, lollipop tools, and slot mill cutters.
- Supports positioning and continuous milling, providing full control over the tilt and lead angles as well as gouge and collision check of the various tool shank and holder against the part.
- Touch-of-a-button 5-axis tilting solution is especially suitable for rapid machining of parts with deep cavities, narrow ribs and tiny corner radiuses, using shorter and more rigid tools for best surface quality and reduced machine time.
- Utilize a single setup for multi-side operations.



The Right Balance of Automation and Manual Control

Enjoy the speed of automation without losing flexibility

- Cimatron offers automation options to create programs in minutes, while still enabling operators to use a rich set of advanced parameters to control toolpath strategy and machining conditions.
- Initial steps can be quickly accomplished with user-friendly guides and reusable templates while control remains firmly in the hands of the experienced programmer.
- Advanced template functionality further automates programming, allowing the reuse of specific procedures and even complete machining processes.
- Easy template management helps retain crucial company knowledge—capturing expertise and know-how for future use.

NC Setup and Tool Table Reports

Facilitate information flow between NC programmers and the shop floor

- NC Setup and Tool Table reports can be generated automatically as you post-process a program or as separate action.
- Reports provide the machine operator with all relevant information including minimal and maximal dimensions, a picture of the setup, the entire tool list with all relevant parameters, and complete statistics of expected machining time per tool and for the entire job.
- Customizable reports for the shop floor can be modified to include company logo, machine time, machine limits, and other user-specific data and parameters.

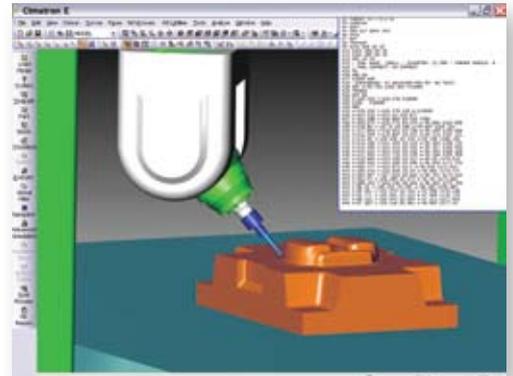


Manufacturing

Simulation & Post-Processor Support

Machine with confidence and predict results

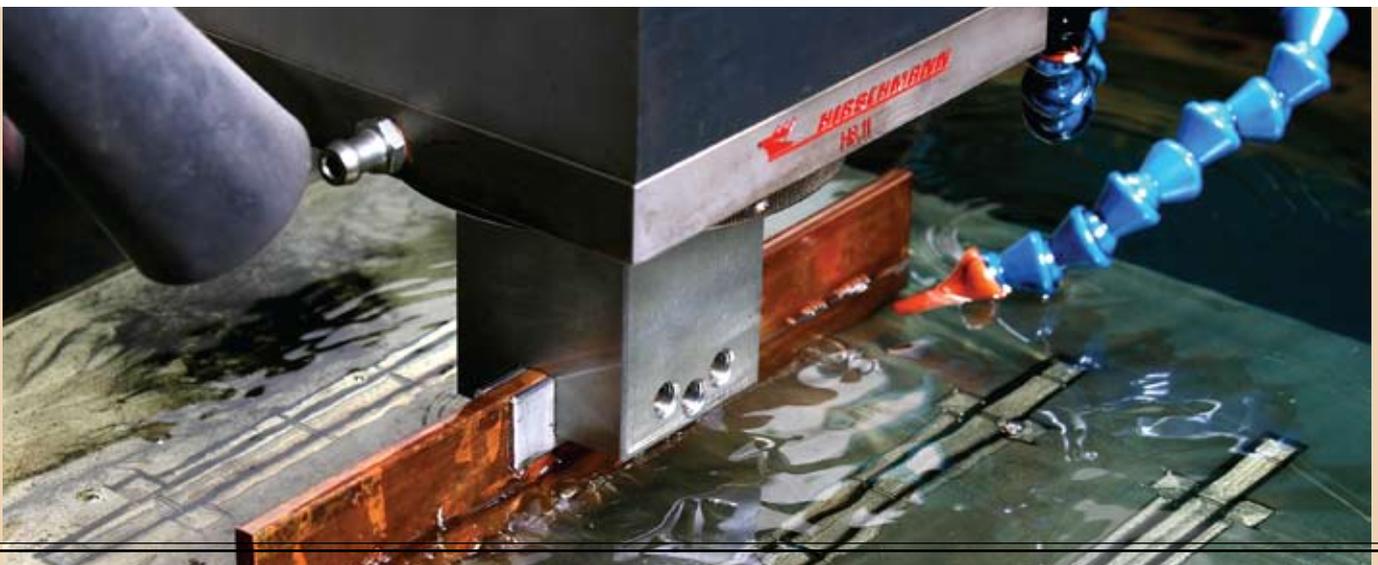
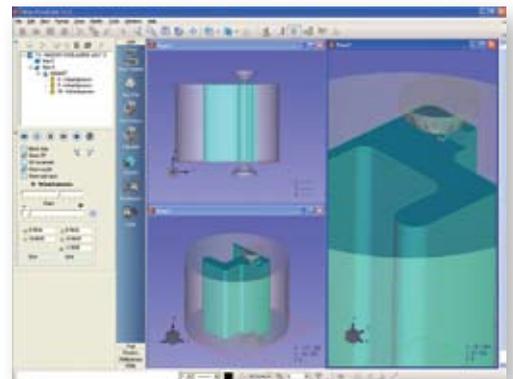
- Simulation and verification allow you to view the cutting process and its results prior to machining, with color-coded display to help you analyze the remaining material around the part.
- A state-of-the-art post-processor generator can be easily customized to any specific need.
- A rich library of post-processors is offered for practically all 3-axis and 5-axis machines as well as all leading controllers.
- Advanced simulation generated with the G-code, simulates real machine kinematics and tool path motion, checking tool shanks and holders against the part. The ability to predict machine behavior enables errors to be corrected and eliminated ahead of time.



WireEDM Programming

Quickly and easily program your Wire EDM machines

- Supports 2-axis and 4-axis wire modes.
- 4-axis mode handles single contour with either constant or variable conic, automatically synchronizing upper and lower profiles while giving you a manual override option.
- A built-in database of EDM machines assures optimal CNC performance.
- CAM Process Manager guides you through the entire EDM process.
- Process templates for Knowledge Based Machining allow you to define your own custom settings and combine multiple processes into a single template, including complete wire path simulation.



8

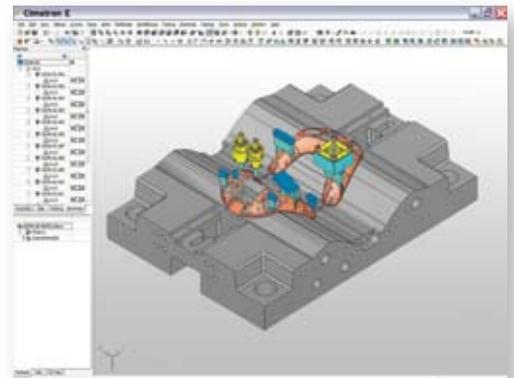


Electrode

Electrode Design

Reduce design time by 80%

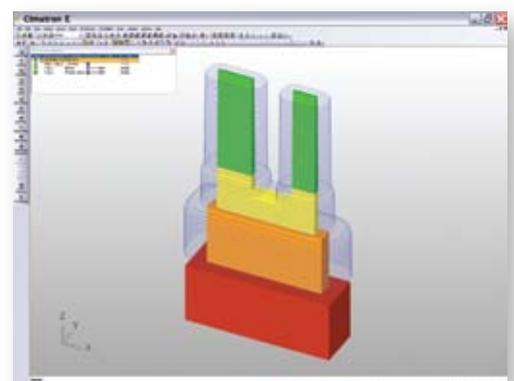
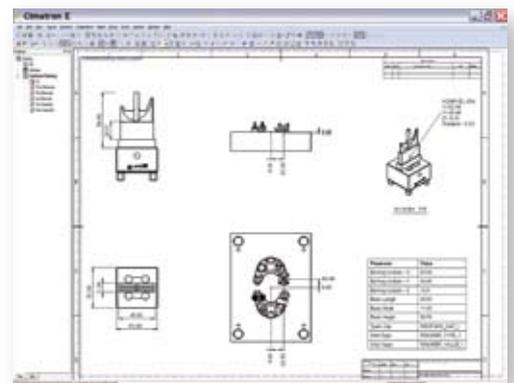
- Work your way quickly and efficiently throughout the entire design process using advanced tools for easy selection of burning surfaces, automated creation of holder and blank geometry, and highly versatile surface creation tools.
- Dramatically shorten design time by automated selection of open edges to be extended or shut.
- Establish best practices and eliminate repetitive tasks using libraries of standard and custom blanks and holders and user-defined templates.
- The system enables to check for possible collisions of the complete electrode with the part or the fixture.
- Automatically create inspection drawings for each of the electrodes and allow shop floor staff to verify electrode dimensions prior to burning.
- Easily create a setup & burning sheet for each of the electrodes, with corresponding locations and rotations, as well as a drawing of the complete EDM process.



Electrode Manufacturing

Create complete machining procedures at click of a button

- Use a wide range of 2.5 and 3-axis strategies to machine any electrode—from the simple to the very complex.
- Leverage real-time knowledge of actual remaining stock and adaptive machining strategies to generate highly efficient toolpaths.
- Built-in features support machining of very thin elements—optimized for manufacturing of fine ribs.
- Use single electrode geometry to generate rough, semi-rough and finish electrodes with different rough offsets, spark gaps, and orbiting parameters.
- Support for high-speed milling in rough and finish procedures is featured.
- Easily create and reuse process templates, allowing user-defined milling strategies to be automatically selected based on electrode geometry. The system uses color-coding of functional faces to further automate and simplify NC programming.
- Automated EDM Setup allows definition of general and machine-specific burning parameters—eliminating errors and reducing setup time.





CAD/CAM Solution for Mold Making, From Quoting to Delivery

About Cimatron

With over 25 years of experience and more than 40,000 installations worldwide, Cimatron is a leading provider of integrated, CAD/CAM solutions for mold, tool and die makers as well as manufacturers of discrete parts. Cimatron is committed to providing comprehensive, cost-effective solutions that streamline manufacturing cycles, enable collaboration with outside vendors, and ultimately shorten product delivery time.

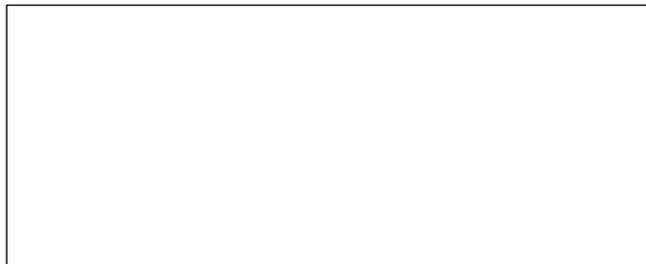
The Cimatron product line includes the CimatronE and GibbsCAM brands with solutions for mold design, die design, electrodes design, 2.5 to 5 axes milling, wire EDM, turn, mill-turn, rotary milling, multi-task machining, and tombstone machining. Cimatron's subsidiaries and extensive distribution network serve and support customers in the automotive, aerospace, medical, consumer plastics, electronics, and other industries in over 40 countries worldwide.

Cimatron is publicly traded on the NASDAQ exchange under the symbol CIMT.

For more information, please visit our web site at:

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