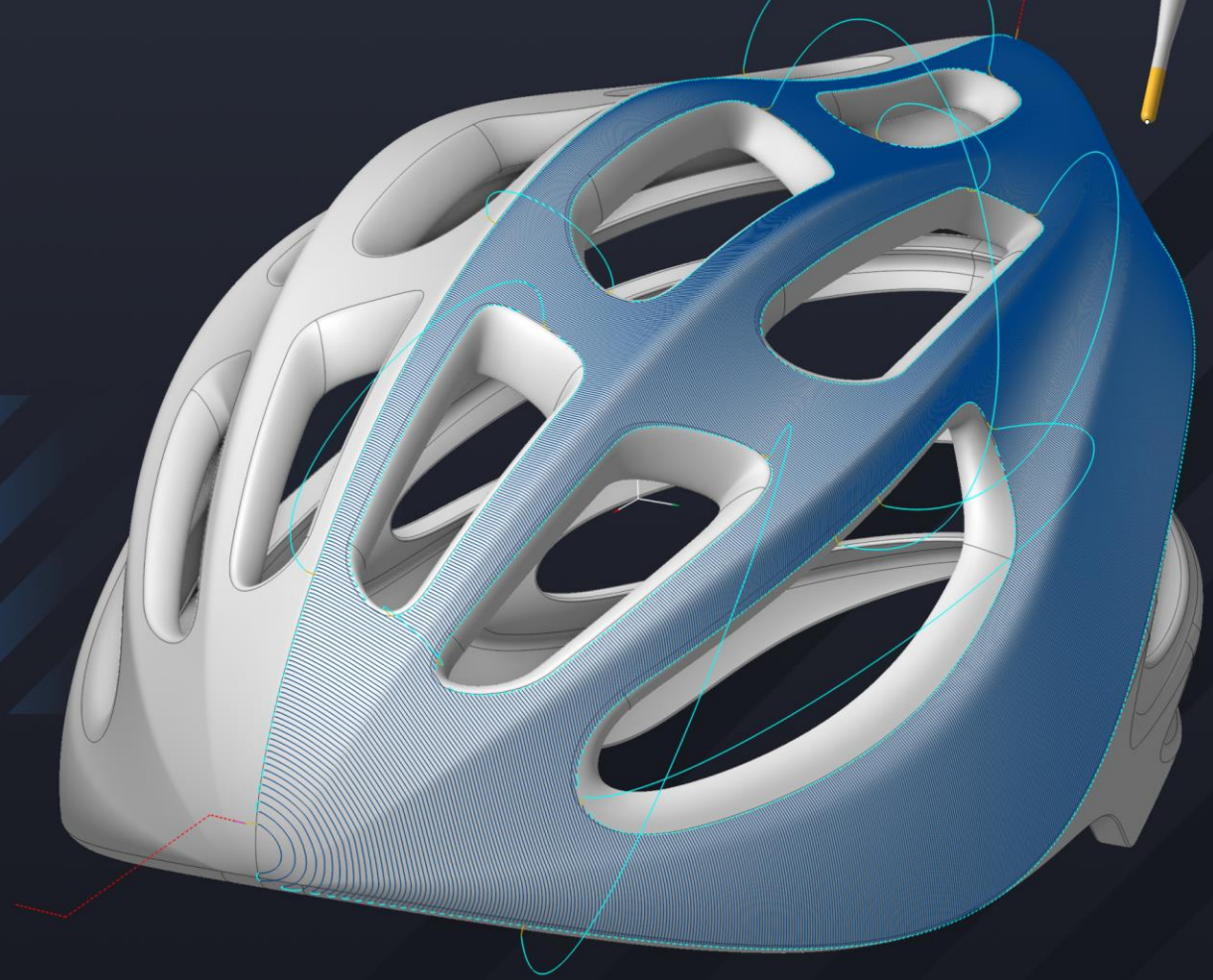
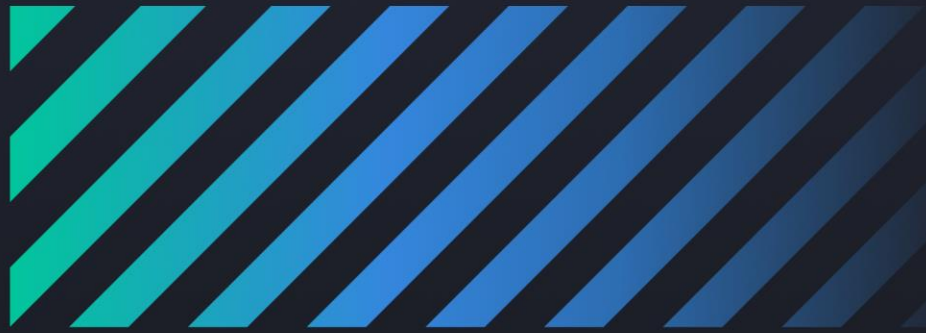


ency



CAD/CAM for a new generation



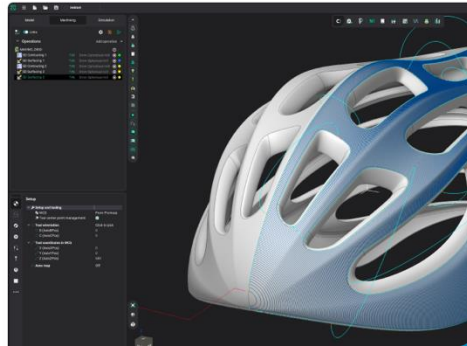
What we make



ENCY

CAD/CAM for a new generation

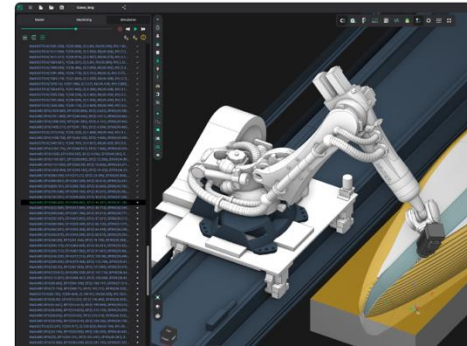
Delivering sophisticated CAM technology with an intuitive user interface and natural workflow



ENCY Robot

A complete offline robot programming solution

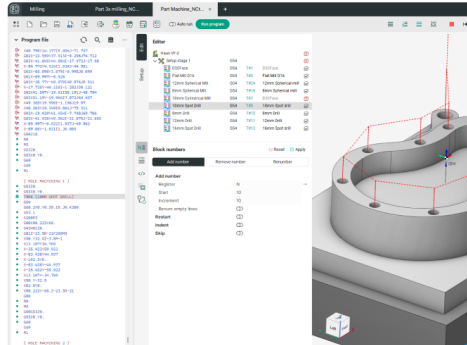
The ultimate toolpath calculation, kinematics management and simulation software for robots



ENCY Tuner

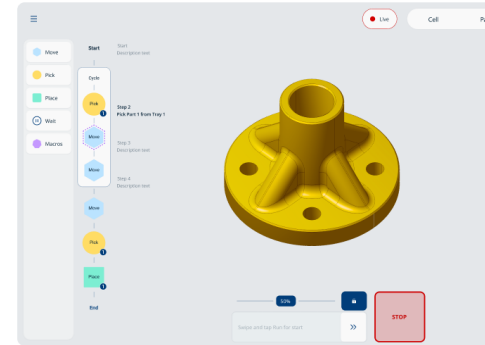
Shop-floor G-code simulator and NC program editor

G-code simulation, fine-tuning and re-engineering for CNC machines and industrial robots



ENCY Hyper

Real-time robot programming software



Ecosystem

- Post Processors, Digital Twins
- MachineMaker, Robot calibration App, Project Library, etc.
- ENCY Clouds & AI
- API, Add-Ins

All ENCY products are built on a unique interactive platform that immerses users in a realistic production environment. Equipped with a variety of innovative technological features, it delivers a distinctive and engaging user experience.

Our values

ENCY is a groundbreaking European CAD/CAM/OLP system designed to transform your workflow. ENCY is more than just software for automating CNC machine and industrial robot programming. It is a state-of-the-art platform for seamless collaboration.

Mission

To redefine the possibilities of CAD/CAM for a better future.

Vision

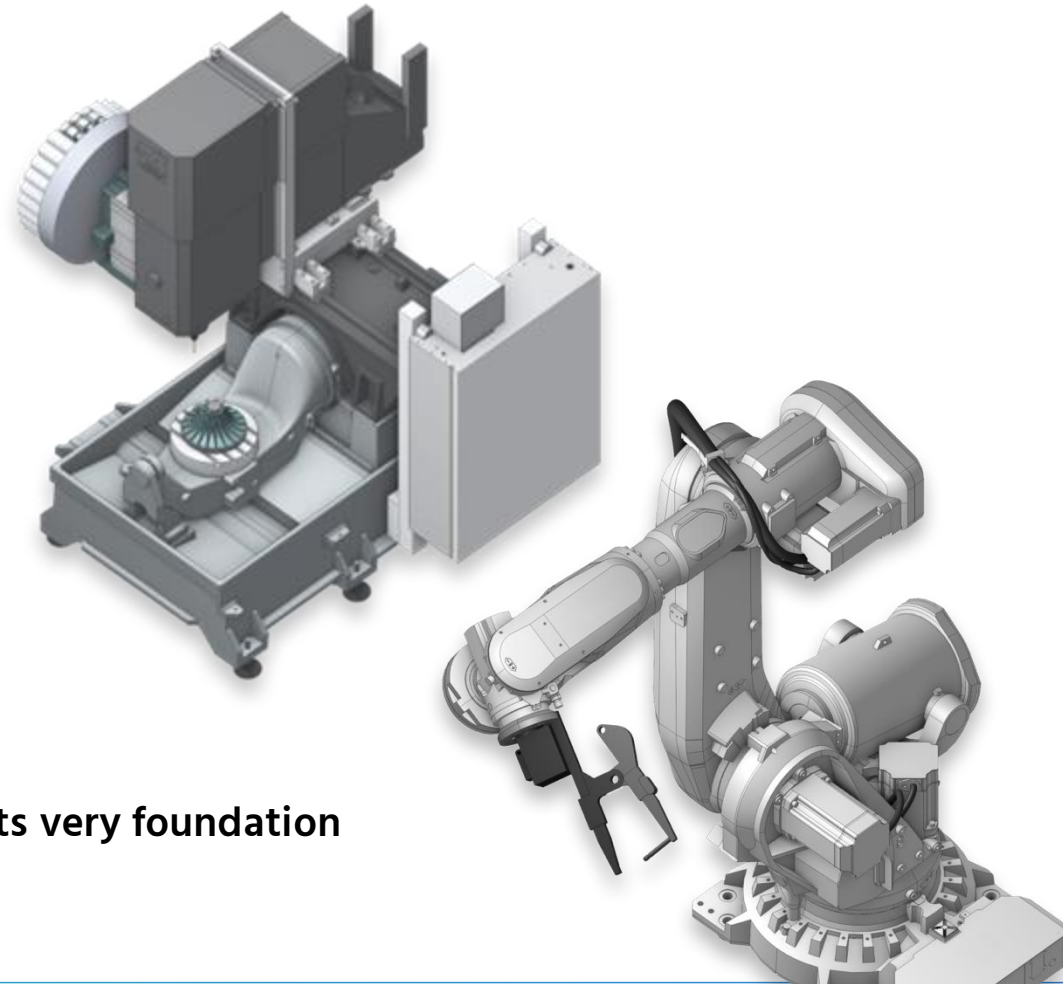
To create a seamless CAD/CAM workflow which results in transition from design to finished part in a shortest time in the industry.



ENCY Platform

A unified technology solution makes it easy to program both CNC machines and industrial robots

- One platform for both worlds:
CNC machines and Industrial Robots
- Unique user experience and interface
- Machine-Aware technology
- Best-in-Class Manufacturing AI Assistant
- Tools for Remote Support and Team Collaboration
- Digital Twin & Cloud-based apps
- Phenomenal interactivity, Efficiency and Safety
- Technological independence

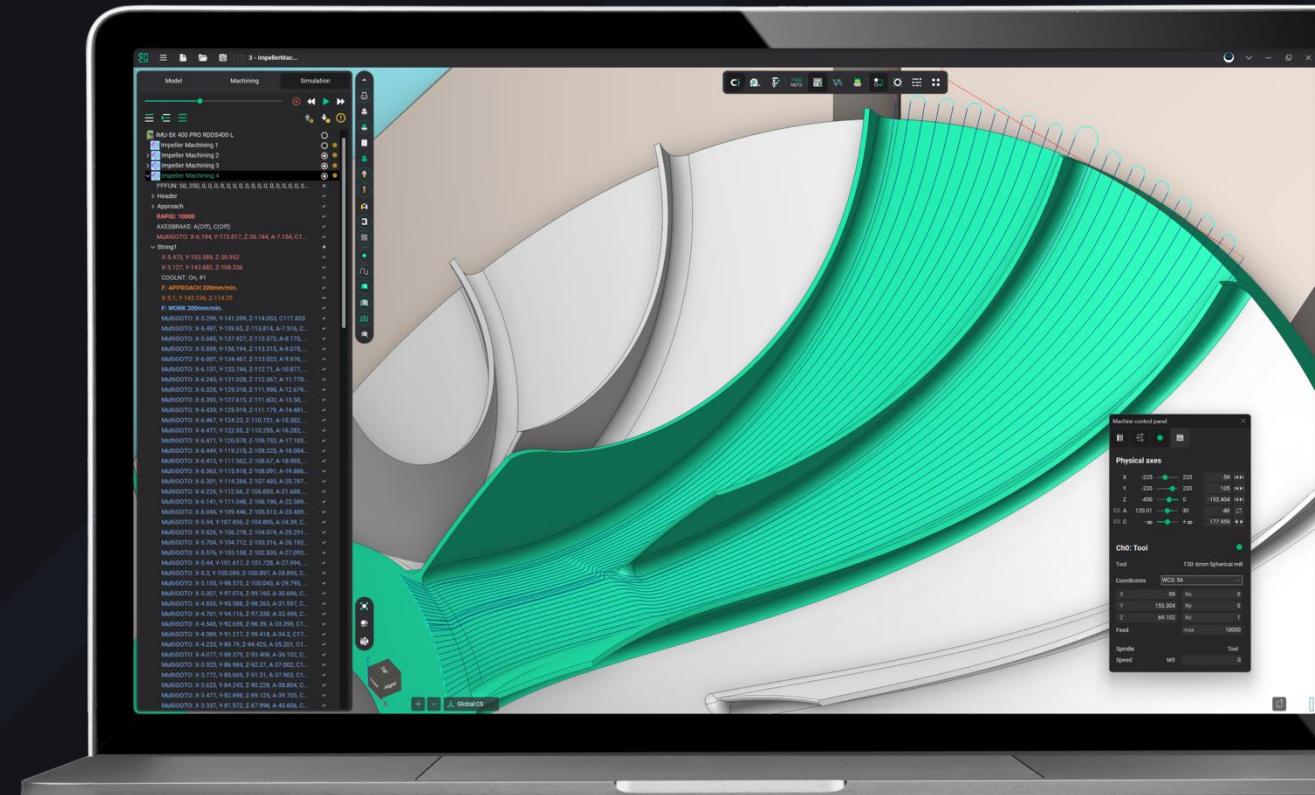


The advantages of our software are embedded in its very foundation

The interface and user experience

UI/UX designers are essential to ENCY software development, ensuring the interface delivers a natural and intuitive experience for CAM programmers.

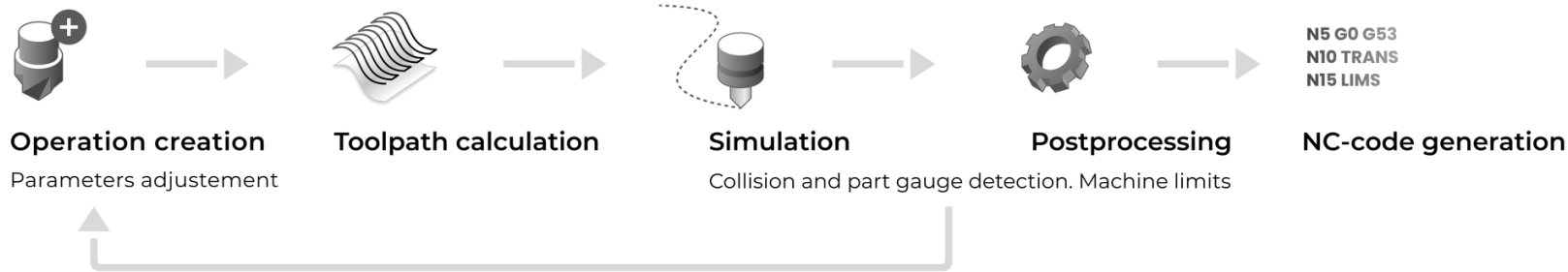
- Crisp, crystal clear and simple interface
- An elegant dark mode designed to reduce eye strain
- 4K displays support
- Smart hints for quick system learning



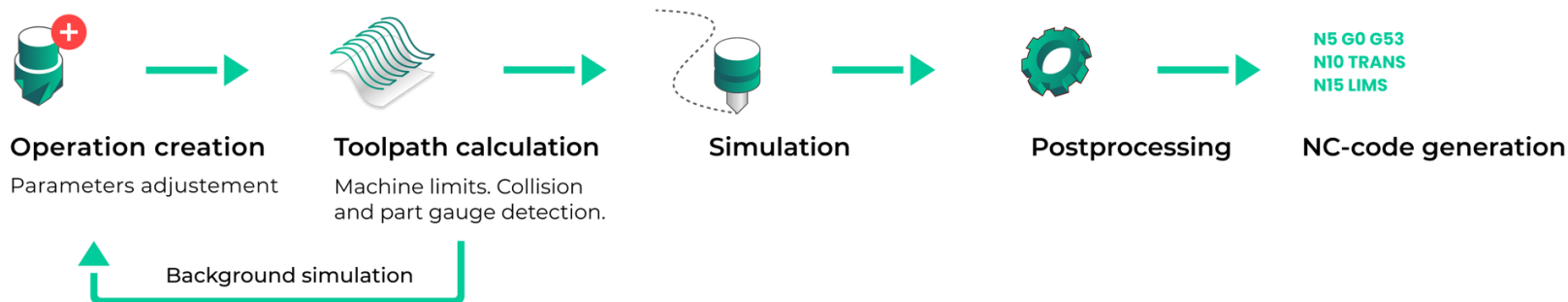
Machine-Aware Technology

ENCY integrates machine and robot movement capabilities and limitations into the initial programming phase, unlike most other CAD/CAM systems that consider these aspects later during simulation.

Traditional CAM



ENCY



ENCY Machine-Aware Technology reduces programming time by 50% compared to a traditional workflow.

ENCY Design

Specifically tailored for the requirements of CAM programmers, our CAD module simplifies the import of CAD files in diverse formats, facilitates 2D sketch creation, delivers parametric 3D modeling features, and includes geometric dimensioning capabilities.

CAD functionalities

- 2D Sketching
- Dimensioning
- 3D Solid Modeling

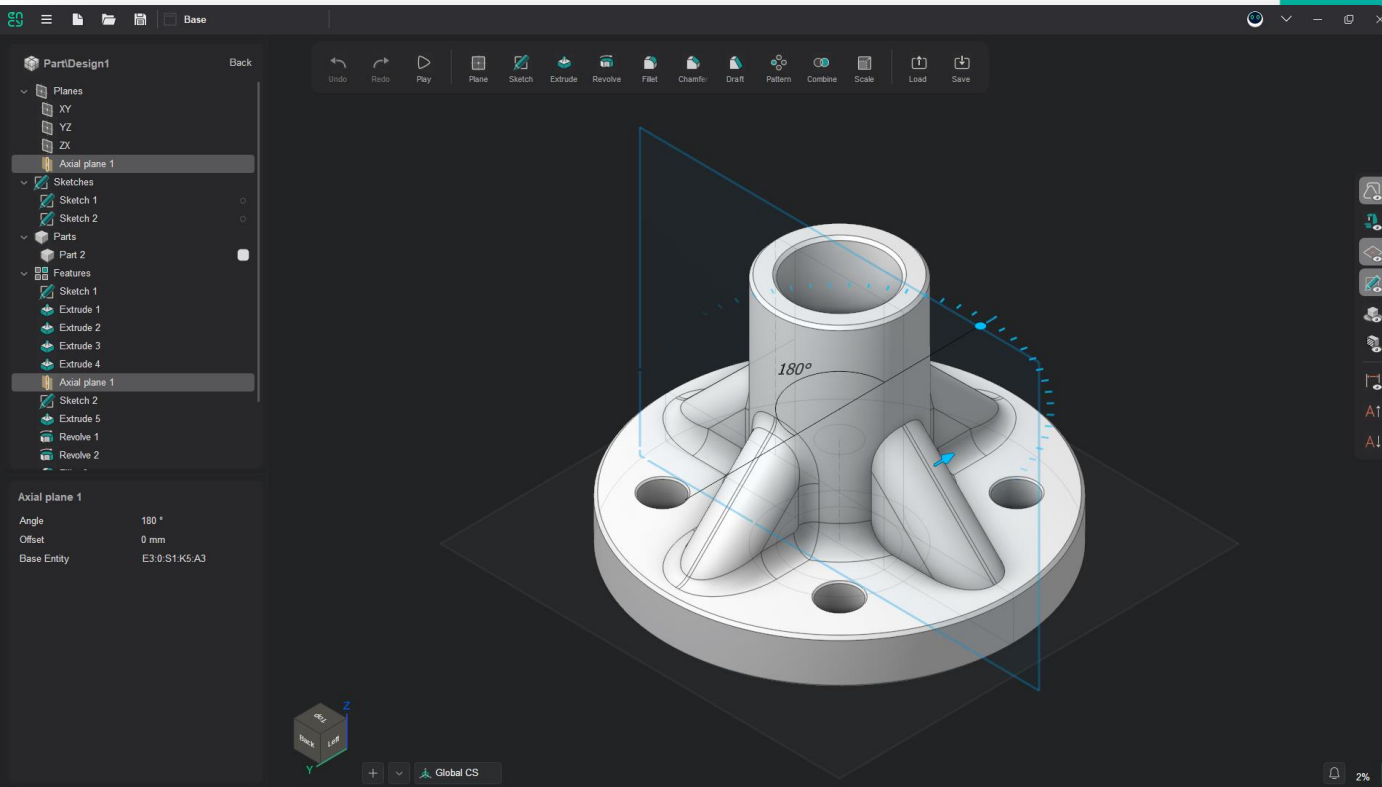
CAD file import

IGES, STL, VRML, PostScript, DXF, Rhinoceros, Parasolid, STEP, SolidWorks, Solid Edge, PLY, AMF, JTOpen, PLMXML

CAD integration

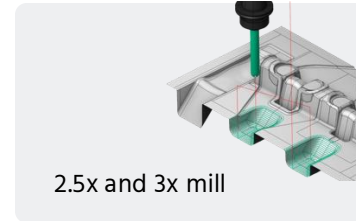
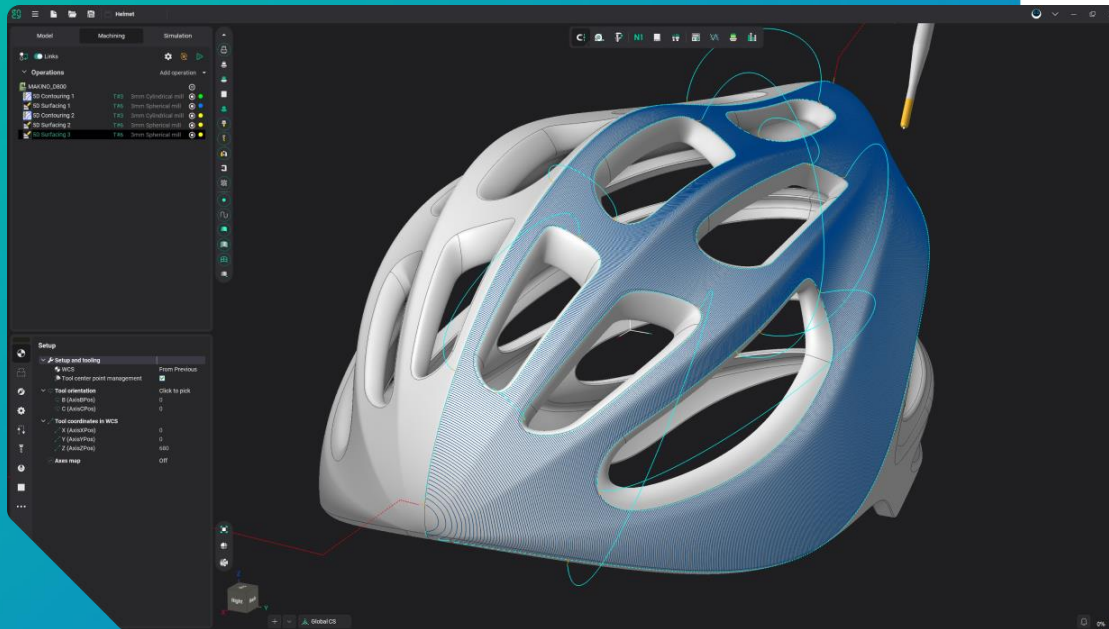
SolidCAM, SolidWorks, NX, Teamcenter, Alibre, CADbro, FreeCAD, Autodesk Inventor, CAXA 3D, IronCAD, KeyCreator, MegaCAD, Rhino, Solid Edge, SpaceClaim, ZW3D

CAD/CAM associativity

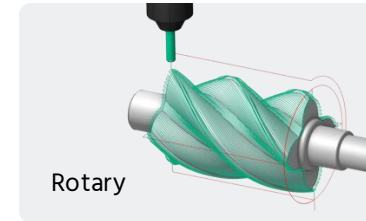


ENCY

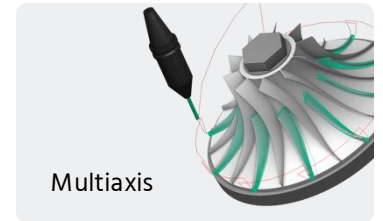
CAD/CAM for a new generation



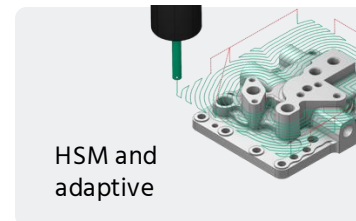
2.5x and 3x mill



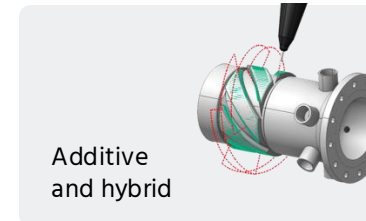
Rotary



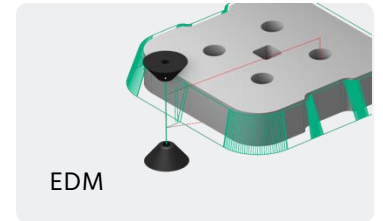
Multiaxis



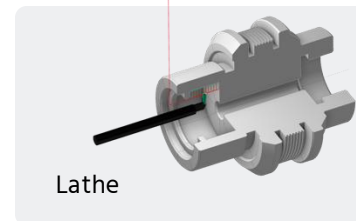
HSM and adaptive



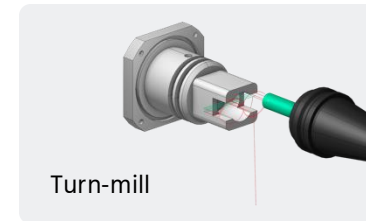
Additive and hybrid



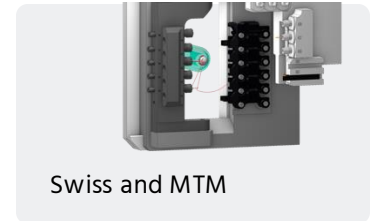
EDM



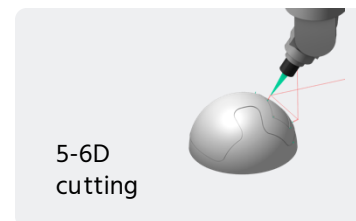
Lathe



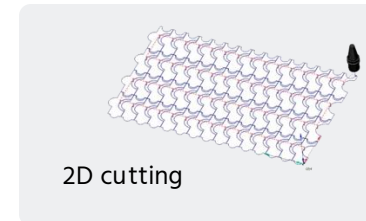
Turn-mill



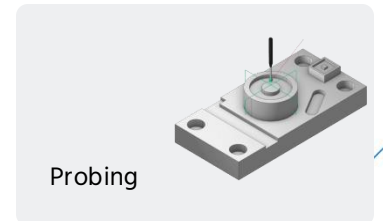
Swiss and MTM



5-6D cutting



2D cutting



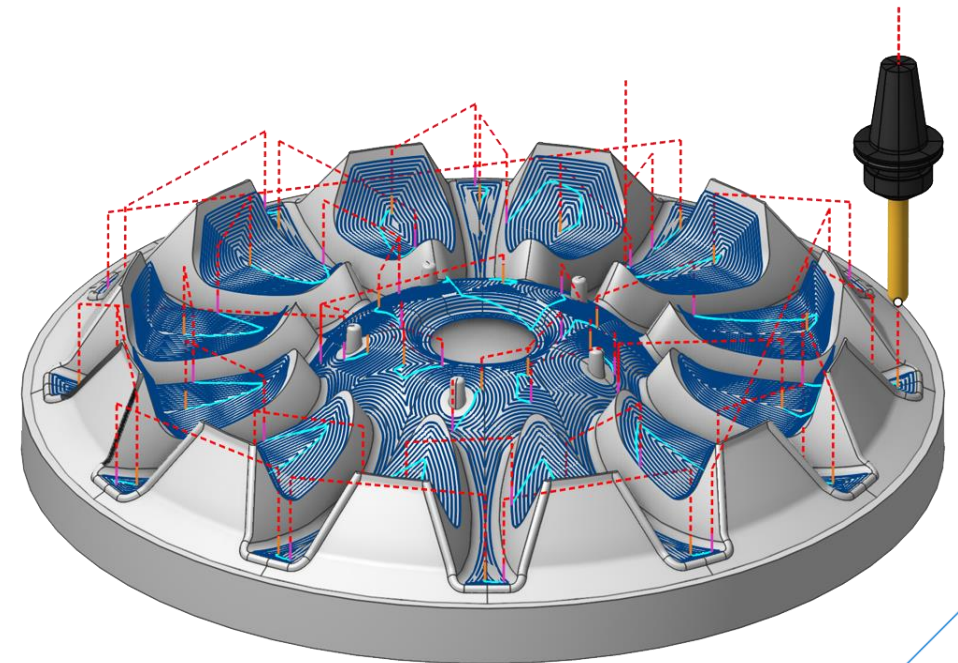
Probing

3D Milling

ENCY offers a powerful set of 2.5D milling operations for facing, roughing, contouring, finishing, engraving, hole making and 3D machining strategies for roughing, semi-finishing, finishing, and remachining.

Features

- Simple operations for 2.5D milling of flat geometry, including an option for automating the machining of chamfers
- Hole machining cycles: drilling, centering, boring, countersinking, tapping, thread milling, and hole pocketing on of holes and creation of hole machining operations
- A wide range of operations for 3D roughing, semi-finishing, and finishing of parts with complex shapes: Face milling, Roughing waterline, Finishing waterline, Roughing plane, Finishing plane, Flat land, Optimized plane, Complex, 3D Contouring
- Intelligent strategies for remachining: Corners cleanup, Pencil, Chamfering
- High-performance Adaptive machining strategy



ENCY Adaptive: High-Speed Machining

This high-speed machining strategy is specifically designed for roughing to substantially decrease cycle times and extend tool life. Its technology automatically regulates chip loads and lateral cutting forces while maintaining the cutter engagement angle and machine axes acceleration within optimal ranges.

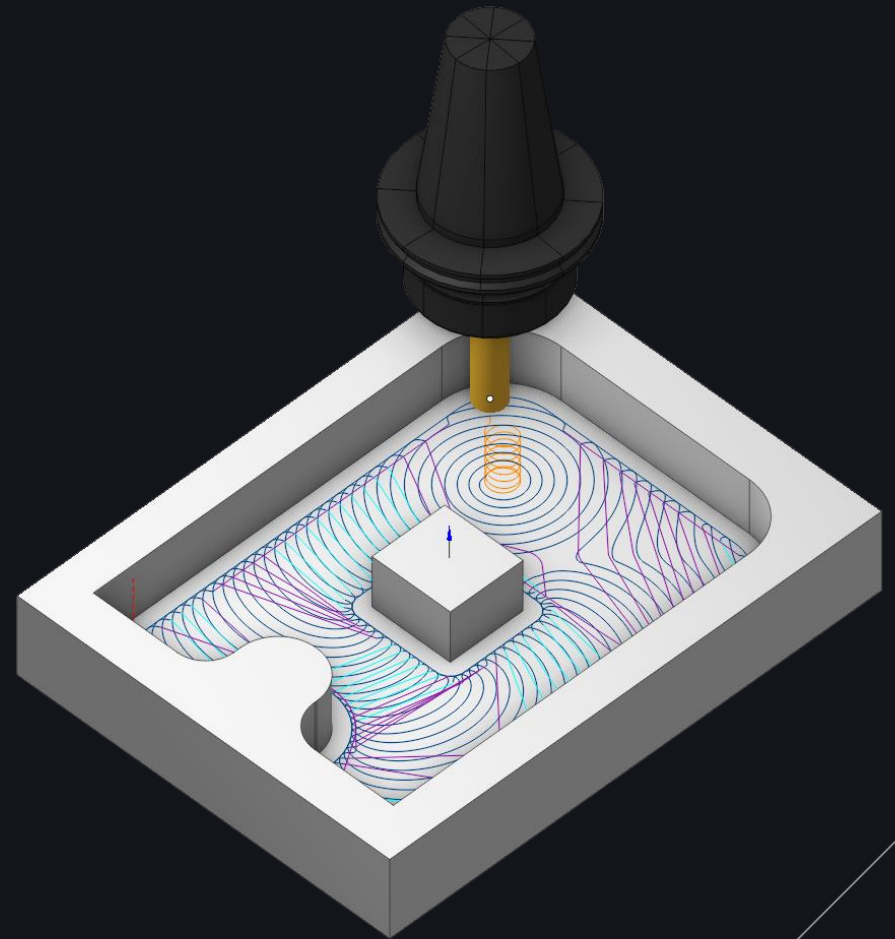
With Adaptive strategy, the machine can make deeper cuts at higher feedrates, which are also automatically optimized throughout the toolpath for maximum efficiency. In comparison to traditional machining methods, Adaptive strategy provides the following benefits:

70%

reduction in cycle time

100%

increase in tool life

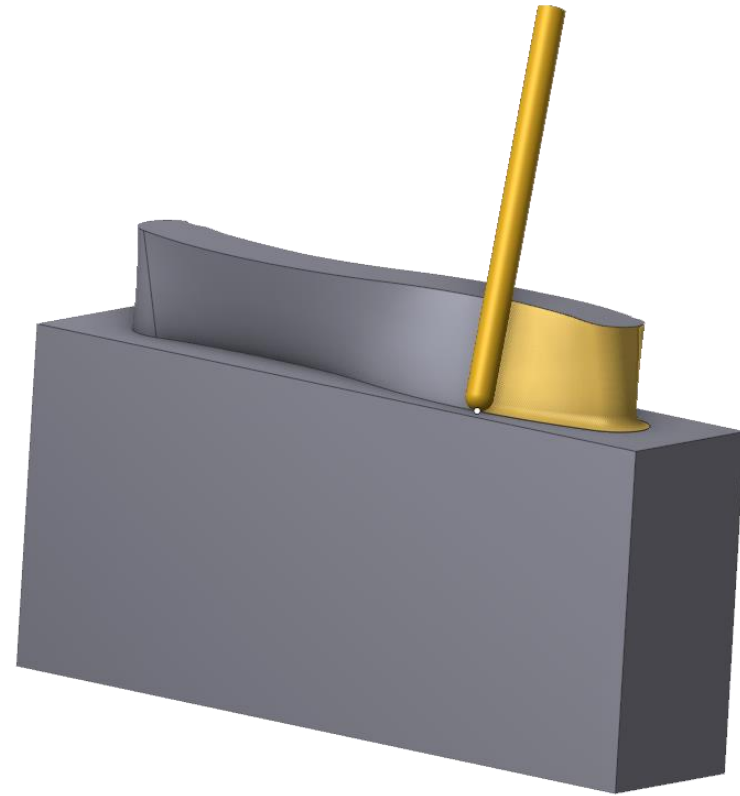


Multiaxis and Rotary Machining

Machine-optimized simultaneous 5-axis, 4+1, and 3+2 toolpaths to machine complex-shaped parts.

Features

- «3+2» machining is included by default in all milling packages
- Extensive tool control for machining complex geometries
- Optimized point distribution for faster look-ahead processing, increased surface quality, and smooth trajectories
- TCP and Coordinate system transformation cycles support
- A wide range of operations for 4-axis (rotary) machining: Rotary waterline, Rotary roughing, Rotary finishing, Morph 4D, 4D Surfacing, 4D Contouring
- Powerful and flexible strategies for simultaneous 5-axis milling: Scallop, 3D Helical, Morph, Undercut waterline, 5D Surfacing, 5D by meshes, 6D Contouring, Swarf

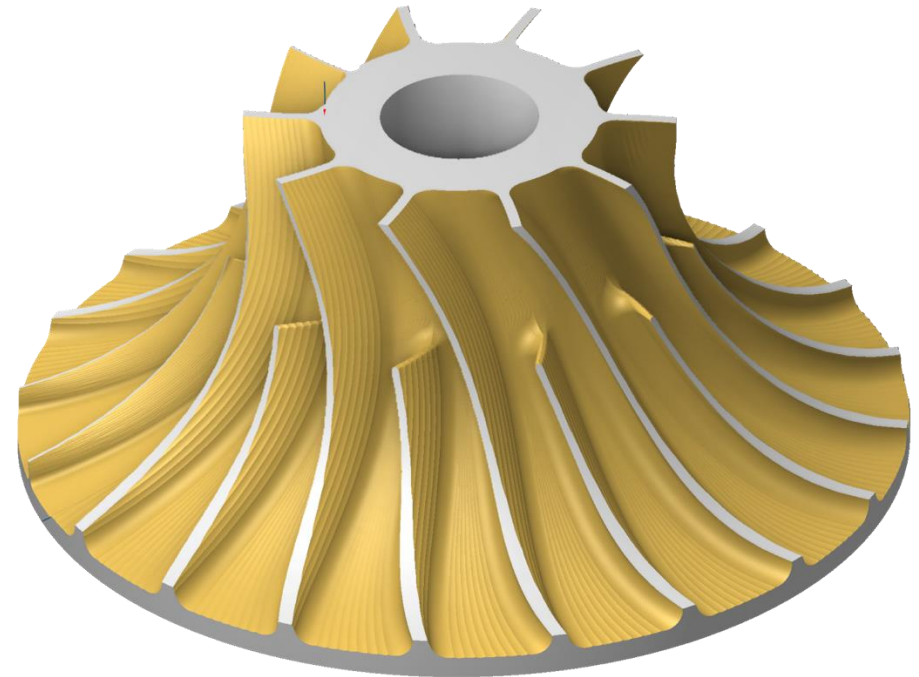


Impeller Pro

Specialized high-tech CAM solution for aerospace, energy, and automotive industries.

Features

- One operation for the entire cycle: Roughing, Blade finishing, Hub finishing, Fillet finishing
- Custom-designed workflow for simplifying the machining programming process
- Highly automated UX
- Capability to machine all available configurations of impellers and blisks
- Tested on 30+ configurations of impellers and blisks
- Automatic tool axis control without the need for auxiliary CAD geometry

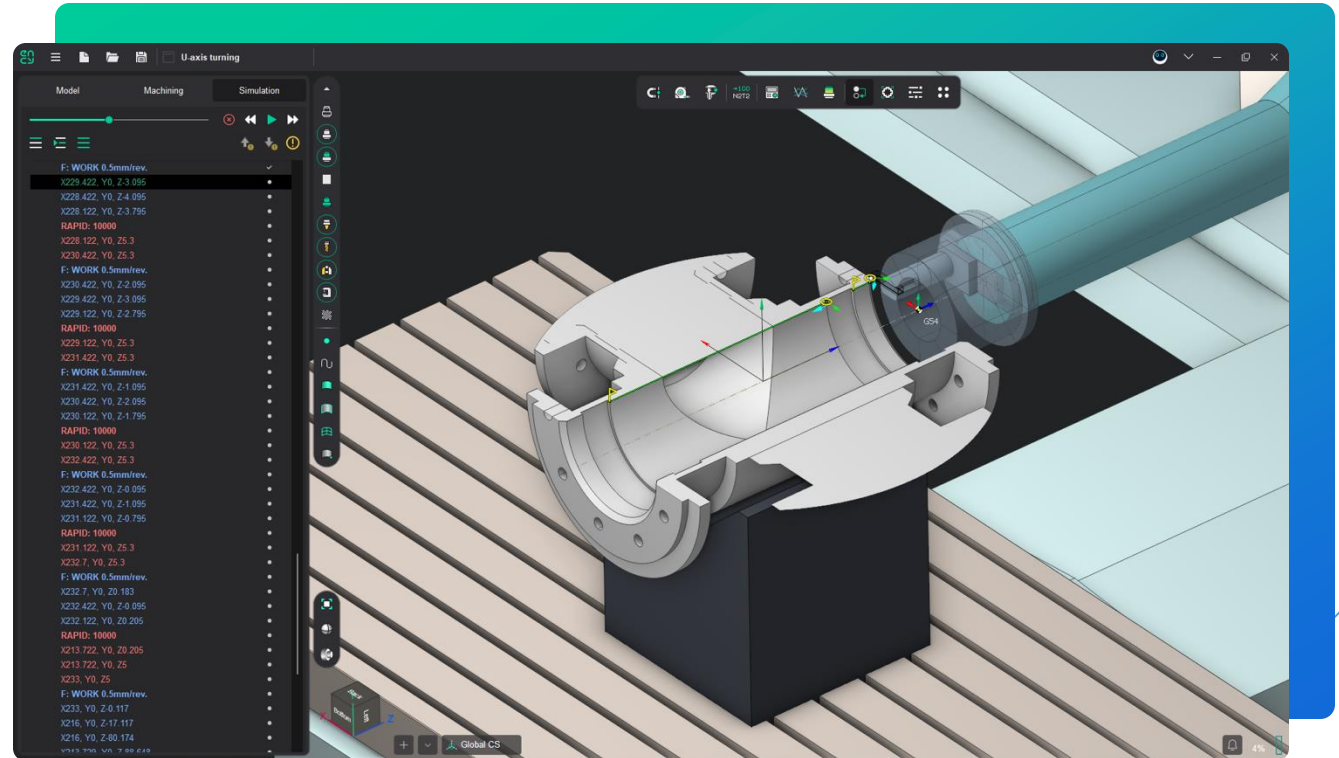


U-axis Turning

ENCY supports U-axis turning, allowing large unbalanced parts such as valve bodies to be machined in one continuous cut while holding the workpiece firmly in place.

Features

- No add-ins required
- Trevisan post processor and digital machine package available

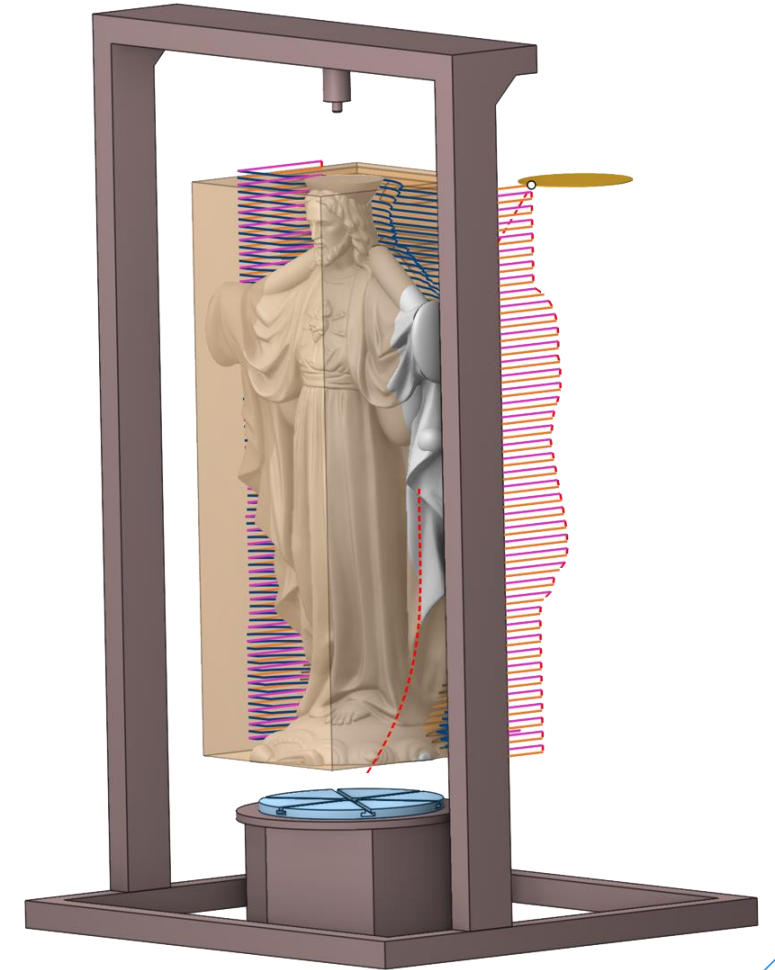


Disc Tool Machining

ENCY supports disk tools for sawing and machining materials such as wood, stone, etc.

Features

- Supported tools: Saw blade, Milling tool
- Control of the orientation of the tool axis on any part of the path
- Simulation of machining with a disc tool
- The Disc Roughing operation aims to prepare stone material. It begins by making cuts in the material with a disc tool to create a remove area. The thinned-out material is then manually removed using the spalling method. Typically, a finishing operation follows using an appropriate tool.
Strategies available: By layers, Adaptive
- Disc Cutting 2D operation for sawing sheet materials, machining flat furniture facades, plates
- Disc Cutting 6D operation for sawing both flat and volumetric parts

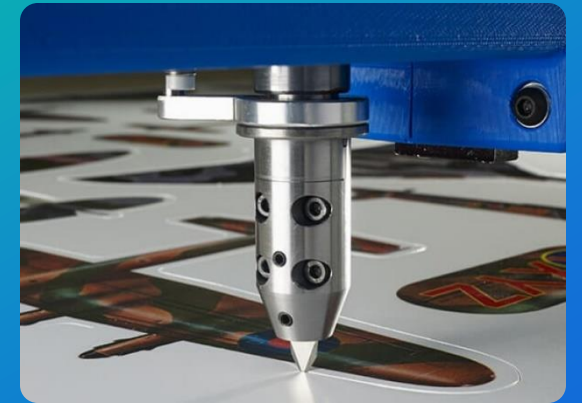


2D Cutting

Using ENCY you can easily program plasma cutting, laser cutting, hydro- and waterjet cutting, oxygen cutting and knife cutting.

Features

- A set of specialized operations for 2D cutting
- Automatically adding tabs
- Corner rolling strategies
- Cutting while considering the nesting of contours
- Optimal approach and retract
- Limiting transitions over machined areas
- Full simulation of the cutting process

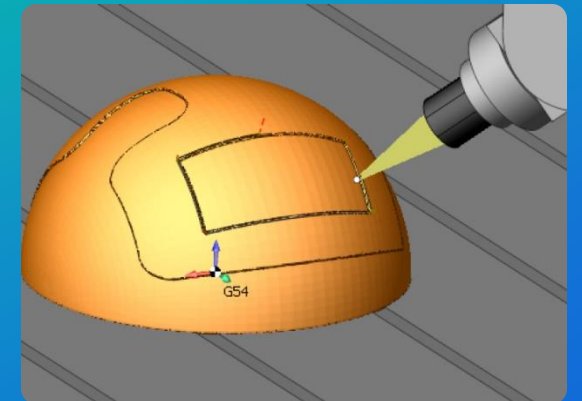


6D Cutting

ENCY software is the first choice for multi-axis cutting and trimming with a milling cutter, laser, water, plasma, ultra-sonic and knife.

Features

- Fast toolpath calculation
- Control of tool orientation at each point: tilt and lead angles
- Interactive editing of the toolpath
- Support for 6th rotary axis located on the machine table
- Double-sided knives and blade direction control
- Retraction and rotation of the knife in the air at sharp angles
- Bypassing singularities

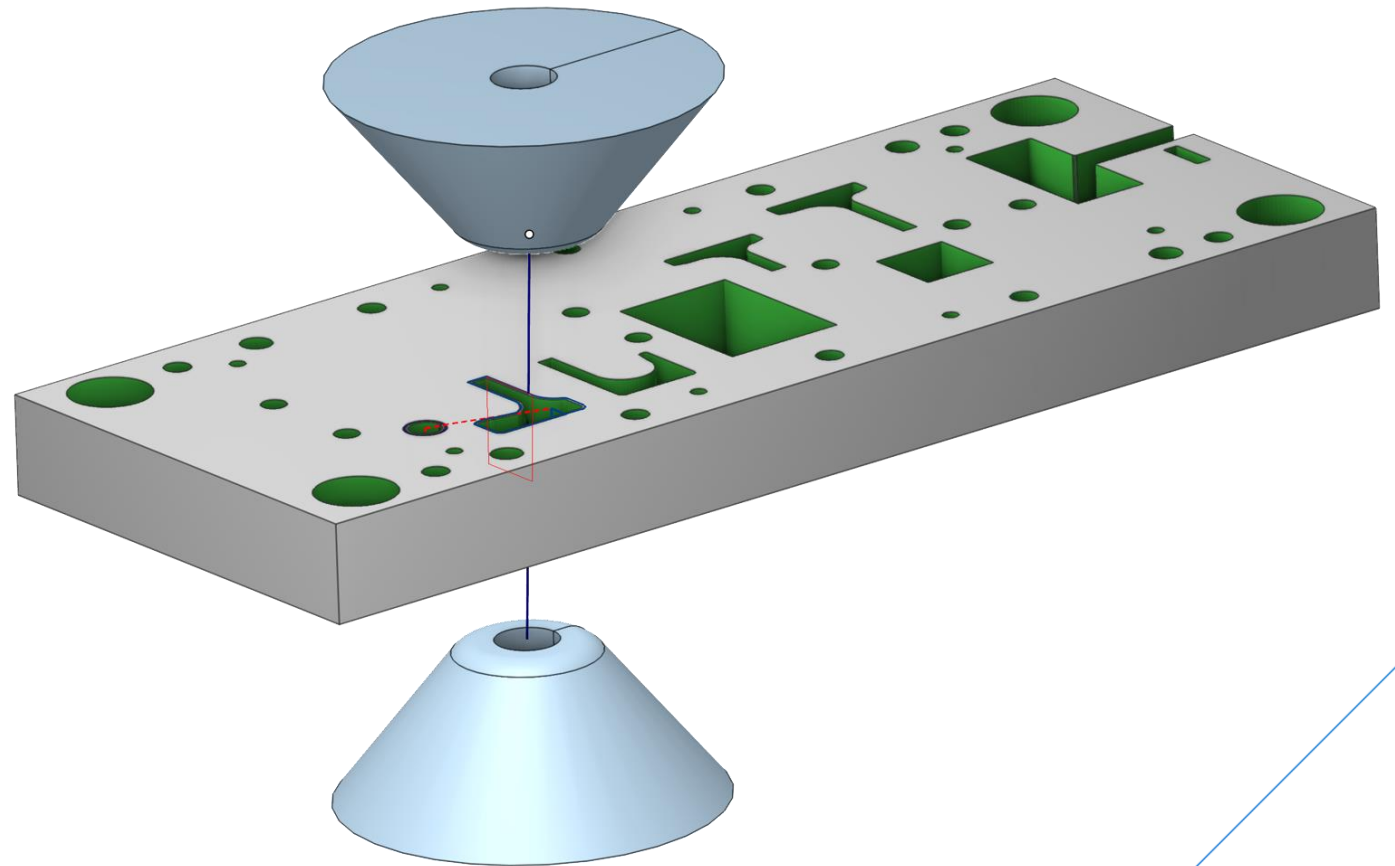


Wire EDM

ENCY's suite of 2-axis and 4-axis wirepaths lets you choose the best method for the results you need, with control over the wire motion, angle, entries and exits.

Features

- Simple and fast programming using operations: 2D Wire Contouring, 4D Wire Contouring
- Coreless Pocketing
- Interactive drag-and-drop control of entries and exits
- Creating and managing tabs
- State-of-the-art simulation
- Cutting mode library
- User Operation library



Additive Manufacturing

Planar 3D

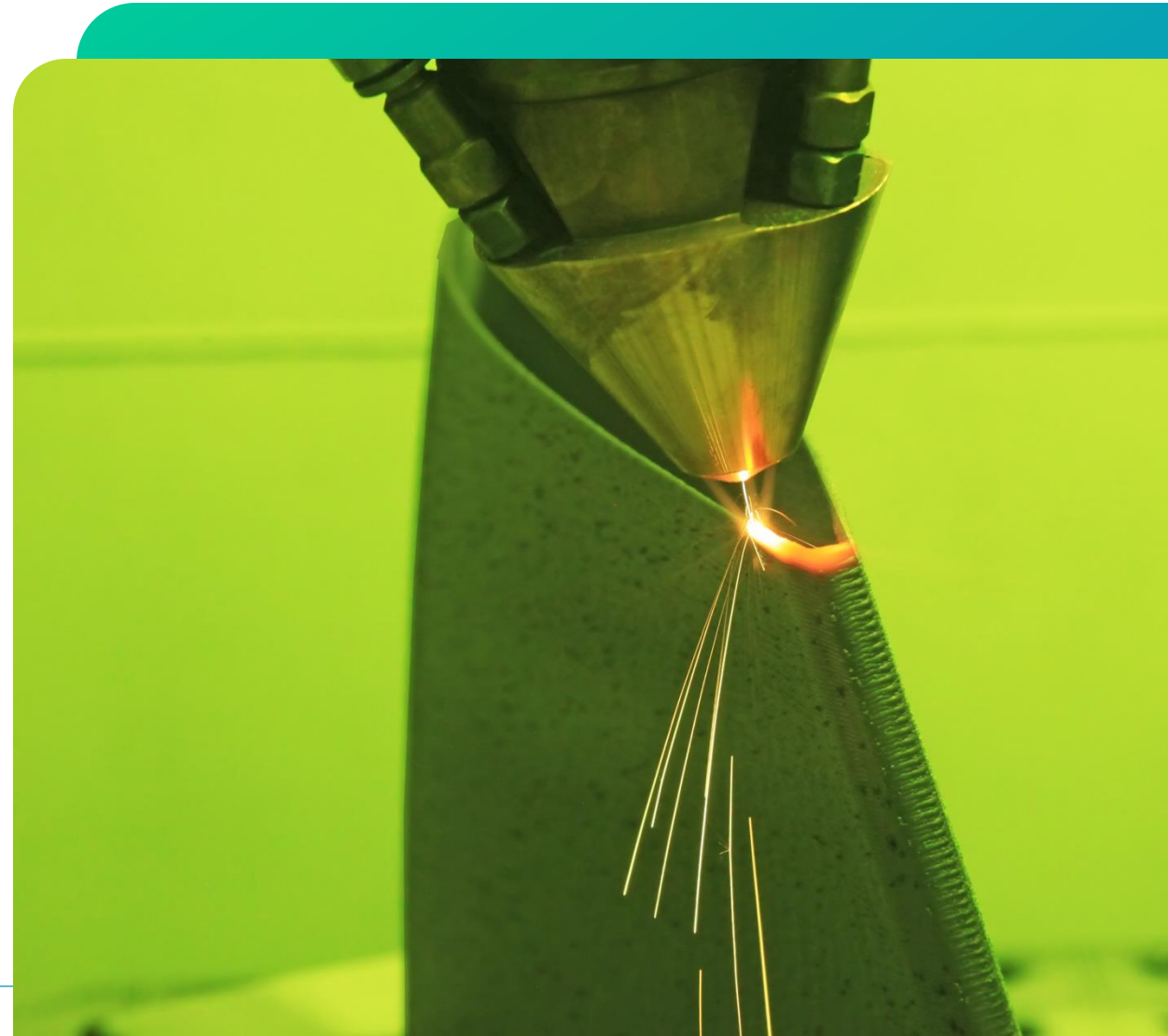
Planar slicing involves a 3D model into horizontal slices or layers that are parallel to a single plane. Each slice is a 2D cross-section of the model.

- Support for all Cura print settings parameters, profiles and templates

Non-planar 5D

Non-planar slicing involves cutting a 3D model using slices that are not parallel to a single plane. The slices can follow curved, angled, or variable paths through the model.

- Area filling
- Feed rate adjustment at corners
- Calculation by equidistant from the base surface
- Ability to grow complex-shaped parts

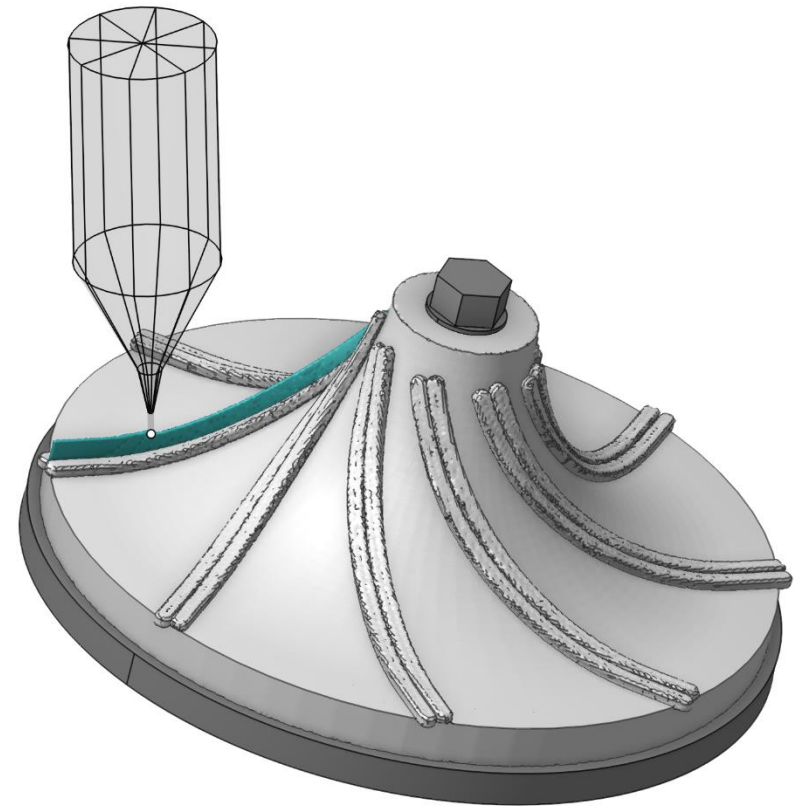


Additive & Hybrid

Additive and Hybrid manufacturing enhance precision and reduce waste, revolutionizing industries like aerospace, healthcare, and automotive. ENCY supports additive and subtractive processes in one natural workflow.

Features

- Powerful set of universal additive operations
- Side-by-side additive and full-spectrum subtractive programming and simulation
- Wide range of strategies and patterns
- Support for various additive manufacturing technologies: Direct Energy Deposition (DED), Laser cladding, Material extrusion (plastic, concrete, composite, etc.)
- Ability to import data from an external slicer

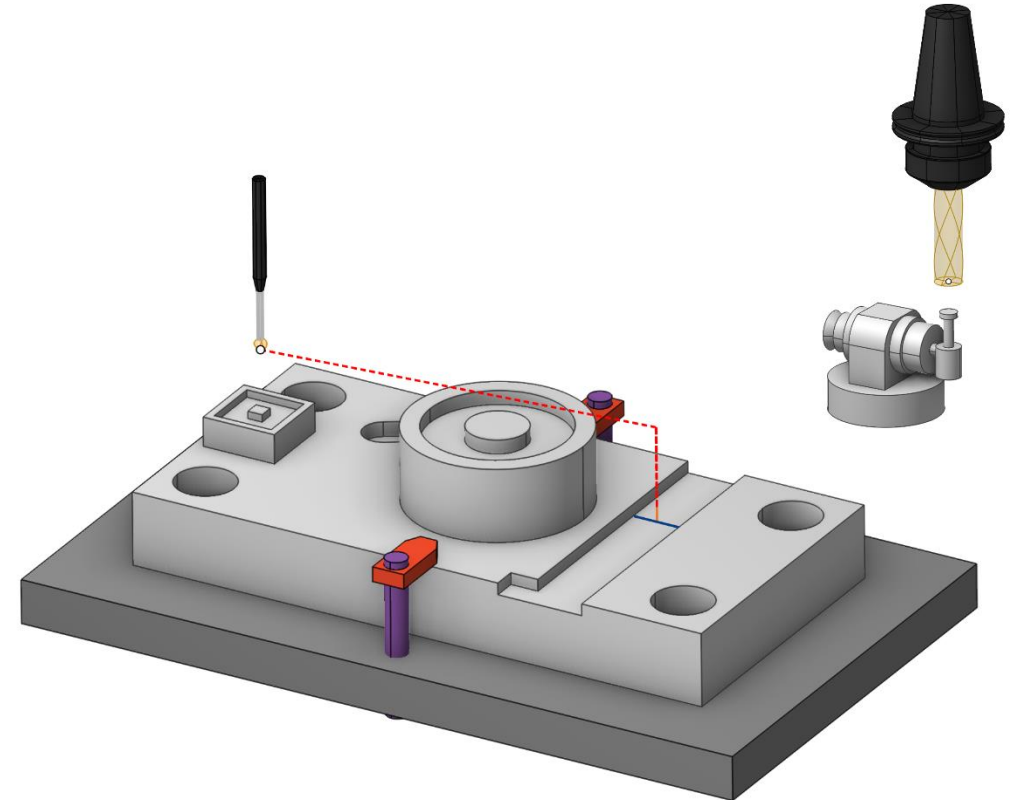


Probing

ENCY provides a powerful suite of probing cycles for any combination of CNC machine, control, and touch probe manufacturer.

Features

- A powerful suite of part probing operations:
Surface probing, Hole probing, Hole protected probing, Boss probing, Internal rectangle probing, Internal rectangle probing protected, External rectangle probing, Groove probing, Groove probing protected, Double wall internal corner probing, Double wall external corner probing, Triple wall internal corner probing, Triple wall external corner probing
- Tool probing operations
- Customization of probing cycles
- Naturally integrated into the ENCY workflow
- Combining machining and inspection into one complete program
- Simulation of probing operations

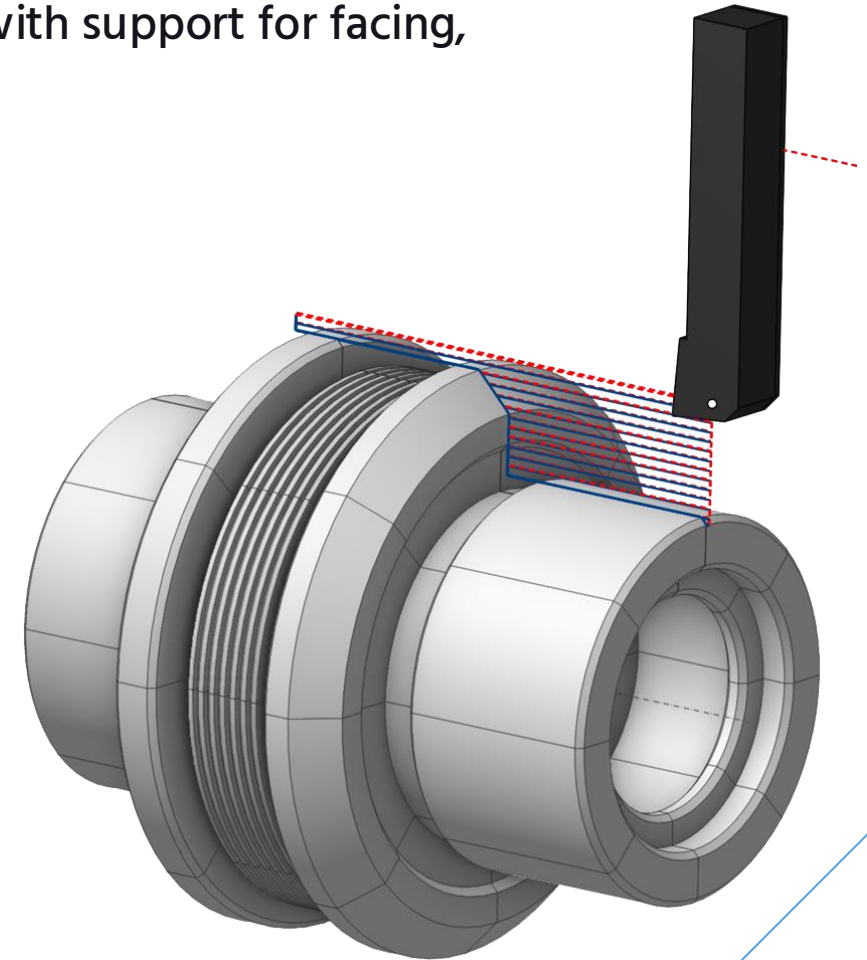


Turning

ENCY produces advanced rough and finish profile turning, together with support for facing, grooving, threading and drilling cycles.

Features

- ENCY turning and part handling cycles for use on any class of CNC lathe horizontal or vertical, mill, or mill-turn machine
- Wide range of turning operations: Lathe facing, OD Roughing, ID Roughing, OD Finishing, ID Finishing, OD Grooving, ID Grooving, Face grooving, OD Adaptive turning, OD Threading, ID Threading, Profile threading, Lathe part-off
- Lathe hole machining
- Program complete on-machine process including bar feeder, transfer and release of the finish part
- Tailstocks, steady rests and support devices
- Automatically calculated approach and retract links
- Part and Tool probing operations

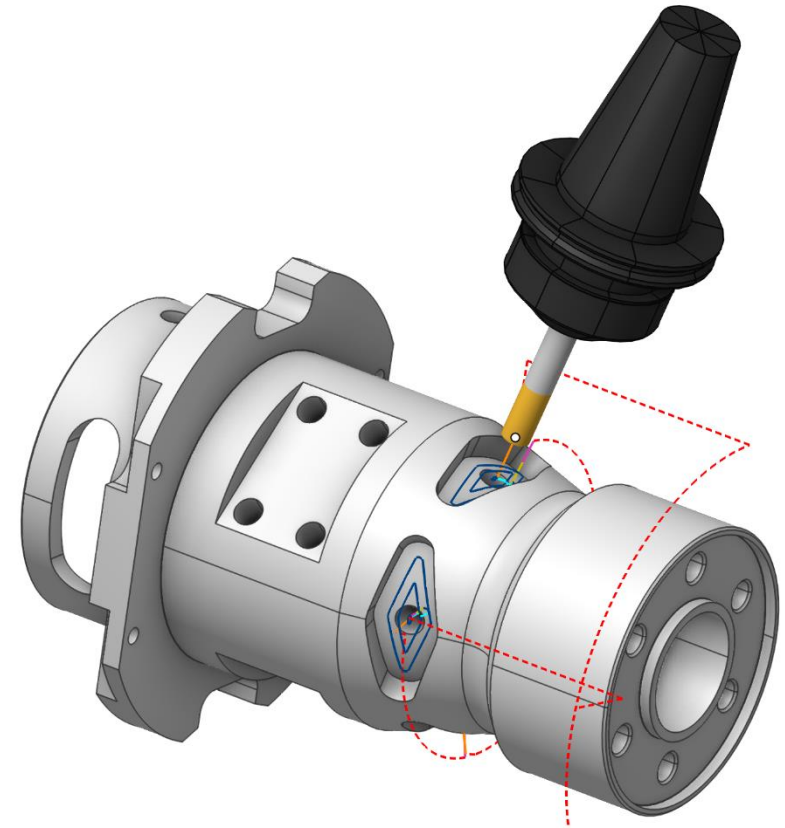


Advanced Mill-Turn

ENCY offers programming, optimization, and simulation for mill-turn and multichannel machines.

Features

- Using a machine digital twin for programming, optimization, and simulation
- All milling and turning strategies available
- C-axis, Y-axis, B-axis
- Polar interpolation
- Programming of steady rest, tailstock, bar feeder, parts catcher, workpiece loader
- Support for multiple turrets, 2-channels with synchronization, multiple spindles
- Synchronous rough turning with two cutters
- Machine-optimized G-code

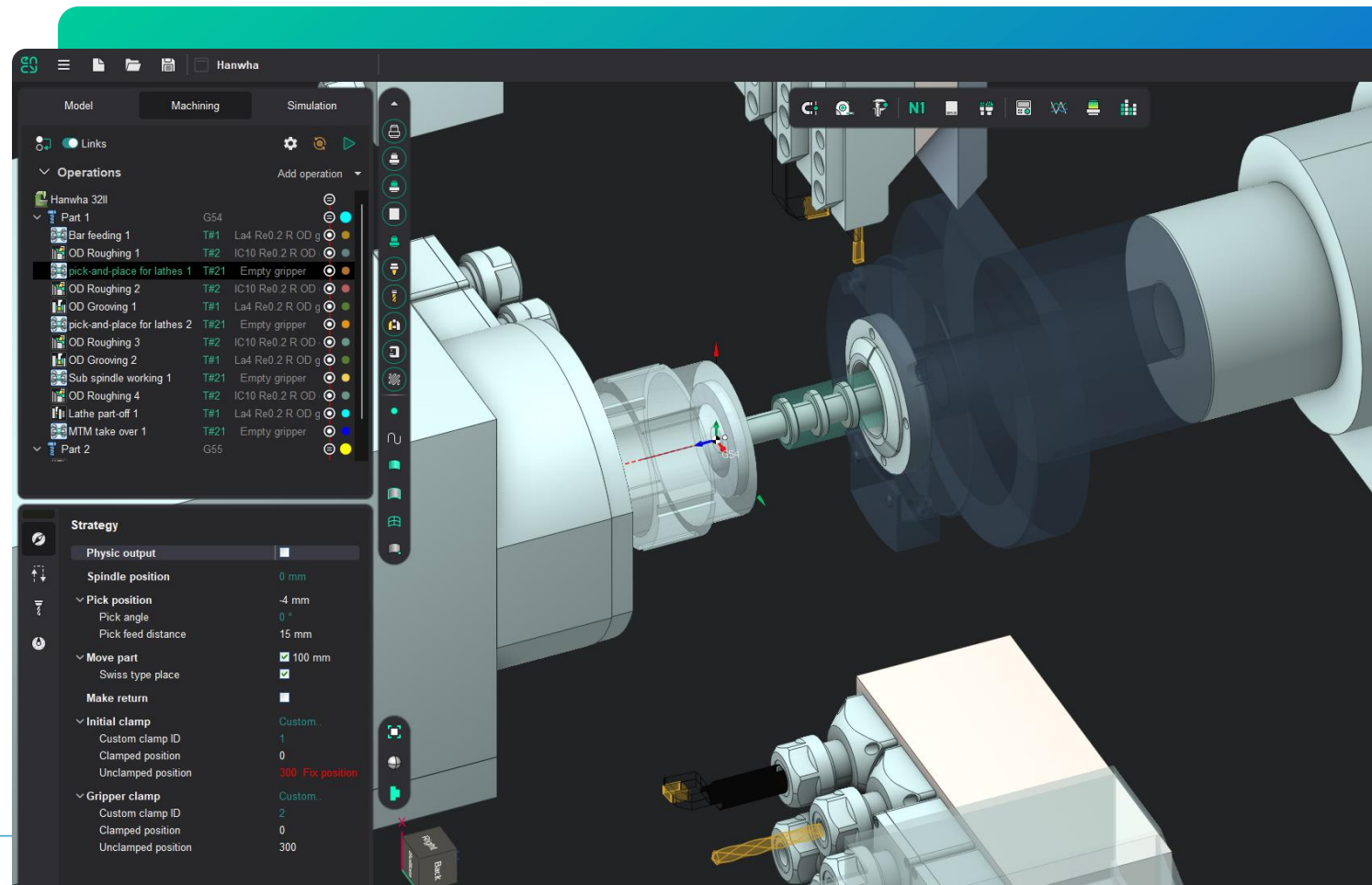


Swiss-type Machining

ENCY tuned for Swiss-type CNC turning centers: programming, cycle time optimization, and full machine and process simulation.

Machining Features

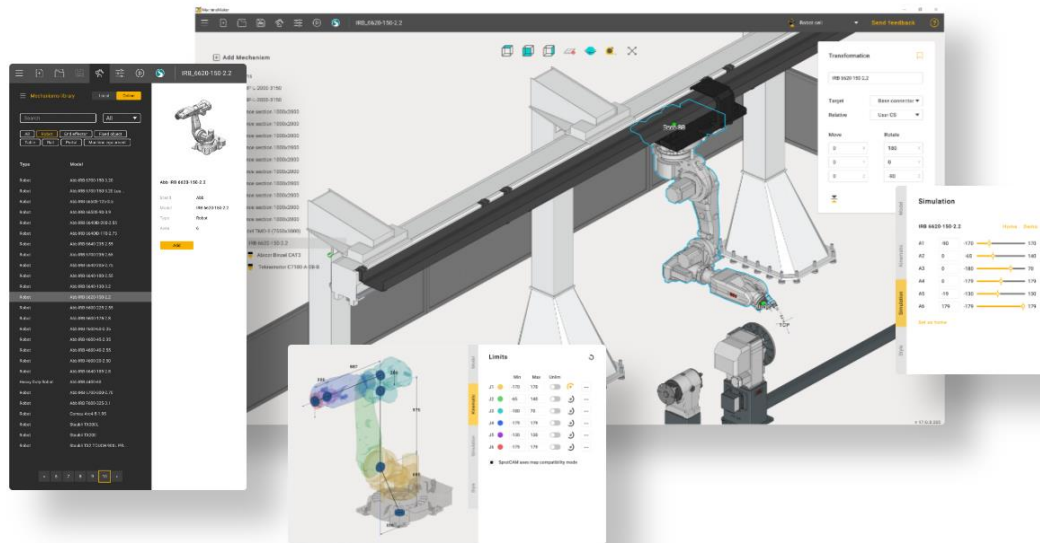
- Sync Point Setup: automatic reordering and synchronization
- Combines milling, turning, and inspection operations with support for Swiss-specific machine components: Sliding headstocks, Guide bushings, Gang slides and posts for tooling, Secondary spindles, Collinear axes
- Multiple programming channels with synchronization
- Synchronous operation of CNC machine and industrial robot



Digital Twin and Cloud-based Resources

MachineMaker App

One of the most innovative digital tools for accurately moving your production equipment from the real world to the virtual world



Postprocessors and Digital twins

ENCY provides you with valuable data resources such as online libraries of post processors and digital machines packages

Robot components library

Filter Clear

Search

Component type

- Cobot (27)
- Composite and effector (10)
- End effector (87)
- Fixed object (15)
- Heavy-Duty Industrial Robot (34)
- Industrial Robot (376)
- Linear Track (16)
- Positioner (80)
- Work cell (3)

Make

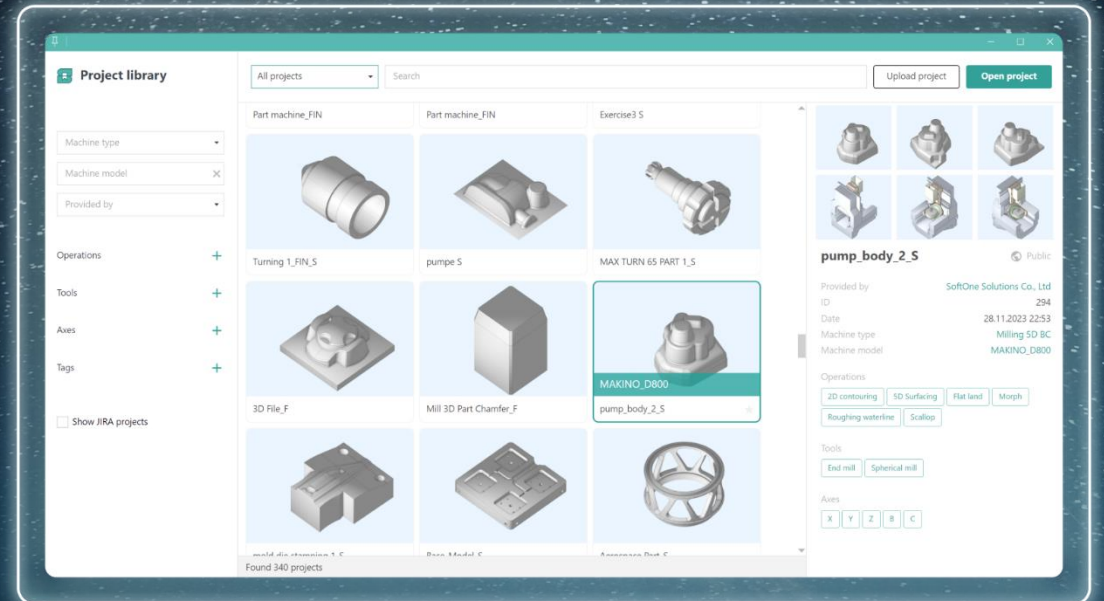
- ABB (16)
- AGUI ToolBlock (1)
- AMB (Kress) (7)
- AUBO (3)
- Abicor Binzel (1)

Image	Model	Type	Brand	Industrial Robot	Staubli	Axis	Payload	Reach	Repeatability
	TX2 TOUCH 90 PRESERIAL	Industrial Robot	Staubli			6	14 kg	1000 mm	0.030 mm
	TX200	Industrial Robot	Staubli			6	100 kg	2000 mm	0.060 mm
	TX200L	Industrial Robot	Staubli			6	60 kg	2400 mm	0.100 mm
	TX2 TOUCH 90XL PRESERIAL	Industrial Robot	Staubli			6	7 kg	1450 mm	0.040 mm
	TX2 TOUCH 90L PRESERIAL	Industrial Robot	Staubli			6	12 kg	1200 mm	0.035 mm

Project Library

ENCY Project Library serves as a collaborative platform, enabling dealers to share their expertise and allowing users to swiftly sift through an expansive database of project examples, filtered by specific criteria.

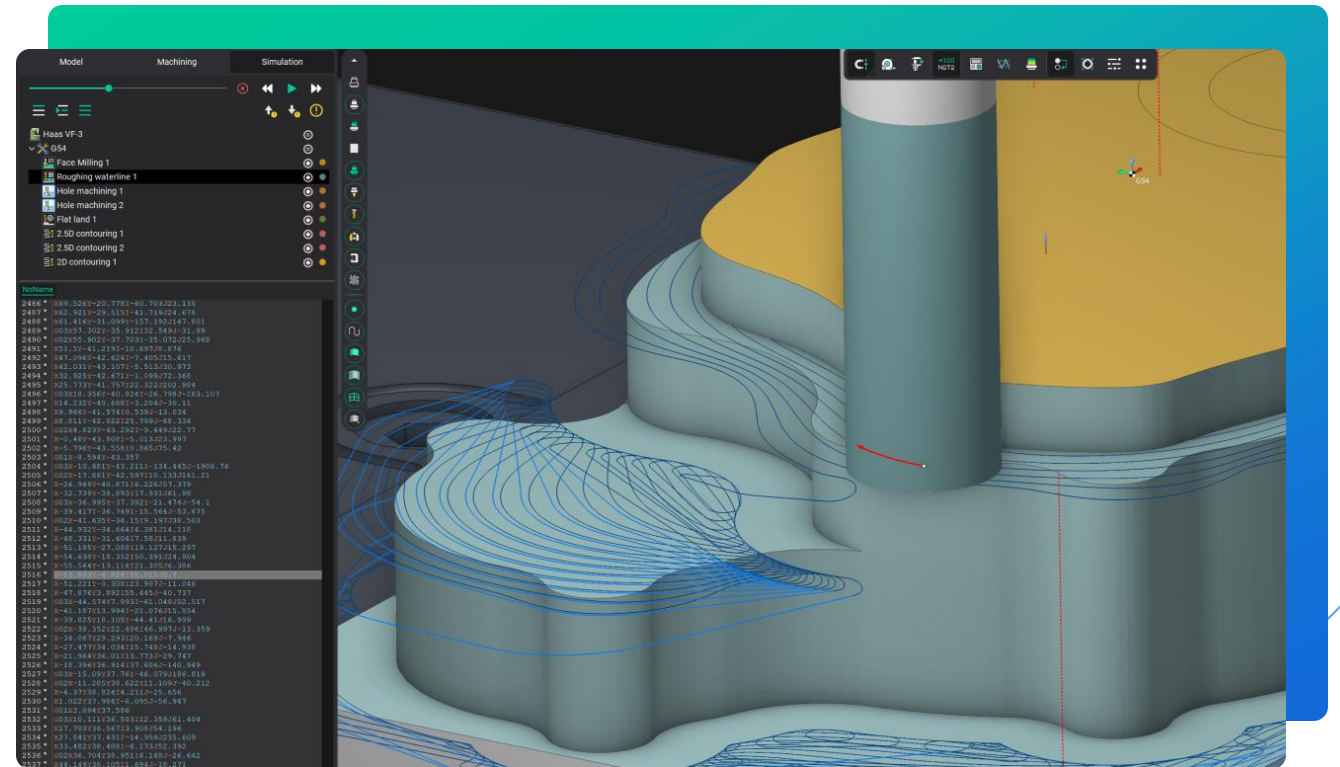
- Thousands of projects
- Flexible Search
- Access Settings
- Export to ENCY



Operations with NC code

ENCY supports G-code machining simulation and allows for the conversion of NC code back into the CLDATA format for subsequent NC re-engineering and post processing for other CNC machines.

- G-code based operations
- G-code machining simulation
- NC program re-engineering
- Code conversion to formats compatible with other machines and robots
- Available in ENCY, ENCY Robot and ENCY Tuner

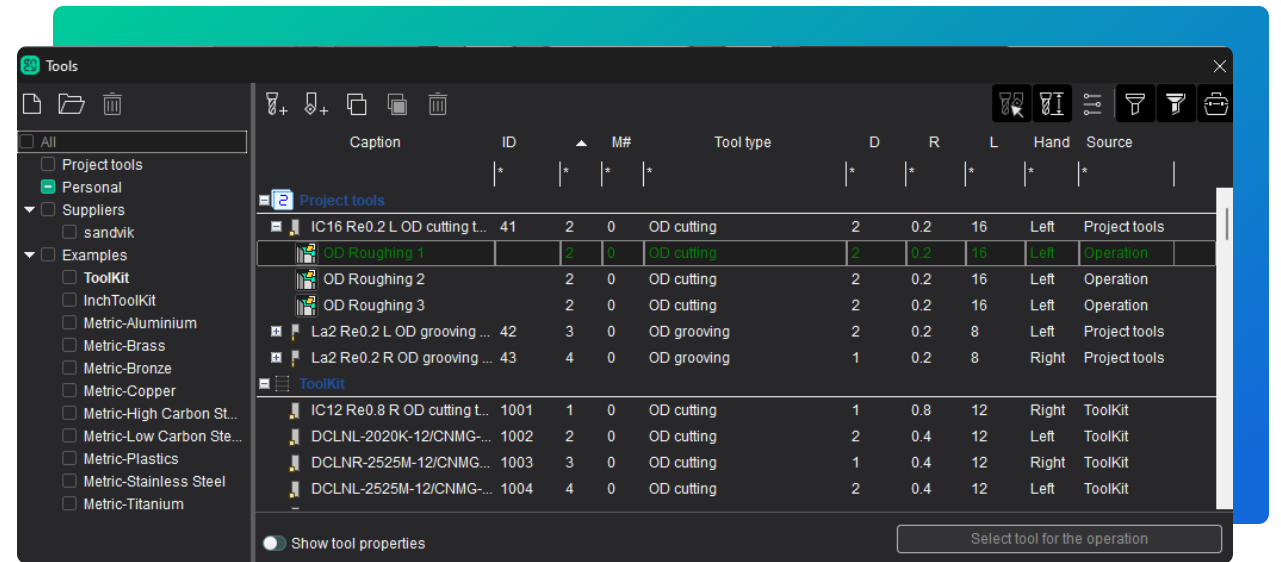


Tools

ENCY supports machining with various types of cutting tools, allows for managing tool libraries, and accelerates the CAM programming process by enabling the saving and loading of machine setups.

Features

- Support for all types of cutting tools
- Ability to create custom tools of any shape and holders
- Speed and feed rate management
- Filterable tool library
- 3D tool visualization
- Tool setup import and export across machining projects
- Cutting tools import API

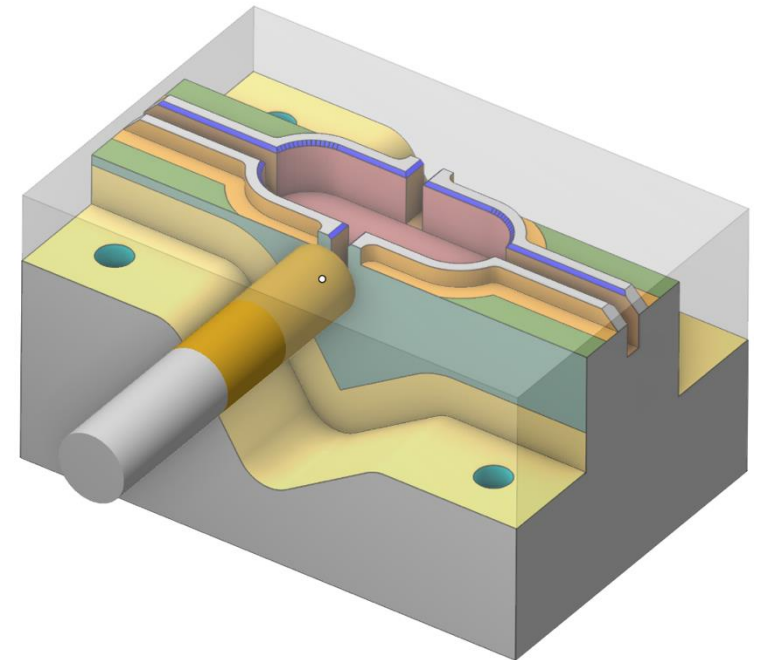


Machining Simulation

Preview machine operations in a detailed, dynamic simulation with a machine digital twin, featuring solid-shaded graphics of stock materials, fixtures, and clamps, before starting the cutting process.

Features

- Using a single interface for programming, optimization and simulation
- Simulation of subtractive and additive processes
- Two simulation technologies: Voxel - for ultra-fast verification and Solid State - for simulation with very high graphics quality and accuracy
- Dynamic updating of the workpiece state
- NC file import and G-code simulation from third-party CAD/CAM
- Color map of remaining stock: compare the original "as-designed" part to your "as-machined" workpiece to assure part accuracy
- Avoid of potential collisions, axes overtravel, etc.
- Conducting measurements during the machining simulation
- Machine control panel and Axial parameters graph
- Exporting the simulation result to STL file

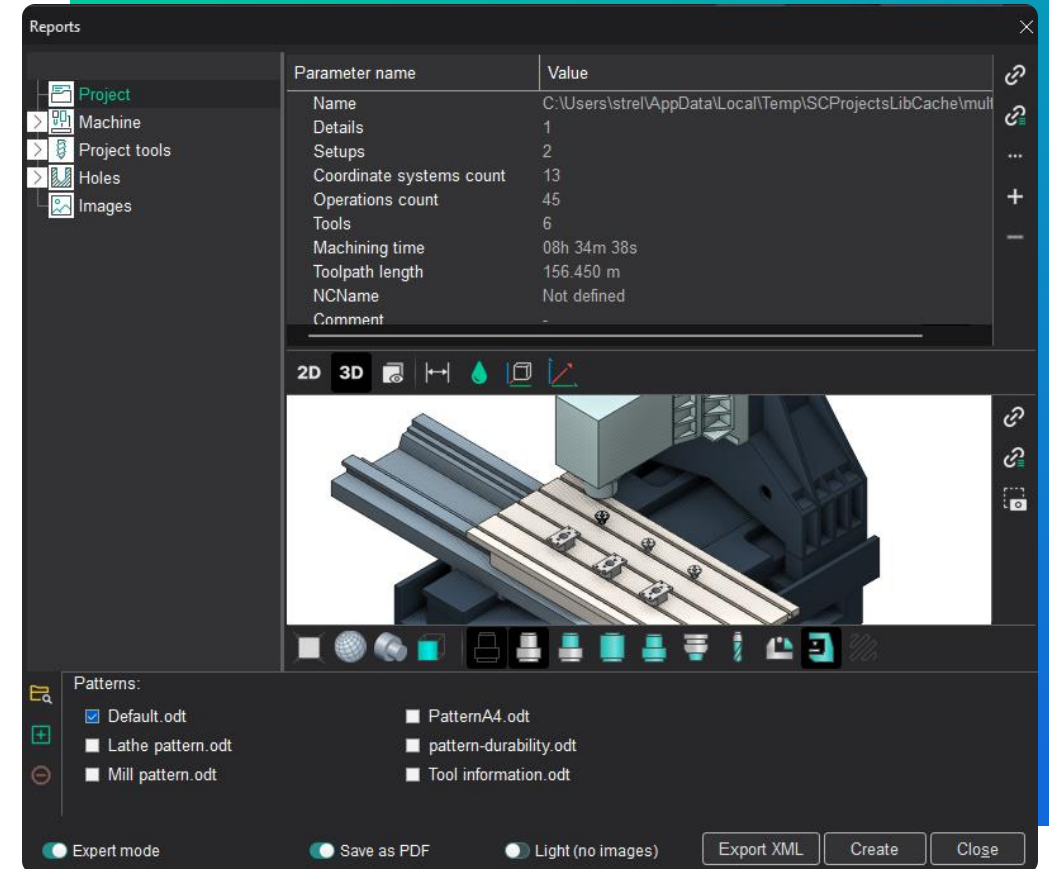


Machining Report

The ENCY Machining Report function automatically generates reports that include easy-to-read lists of all operations and cutting tools.

Features

- Export formats: .odt, .pdf., xml
- Standard and custom report templates
- Expert mode for managing report content
- Ability to add images, custom parameters and variables
- 3D viewer of the digital twin of the machine and setup

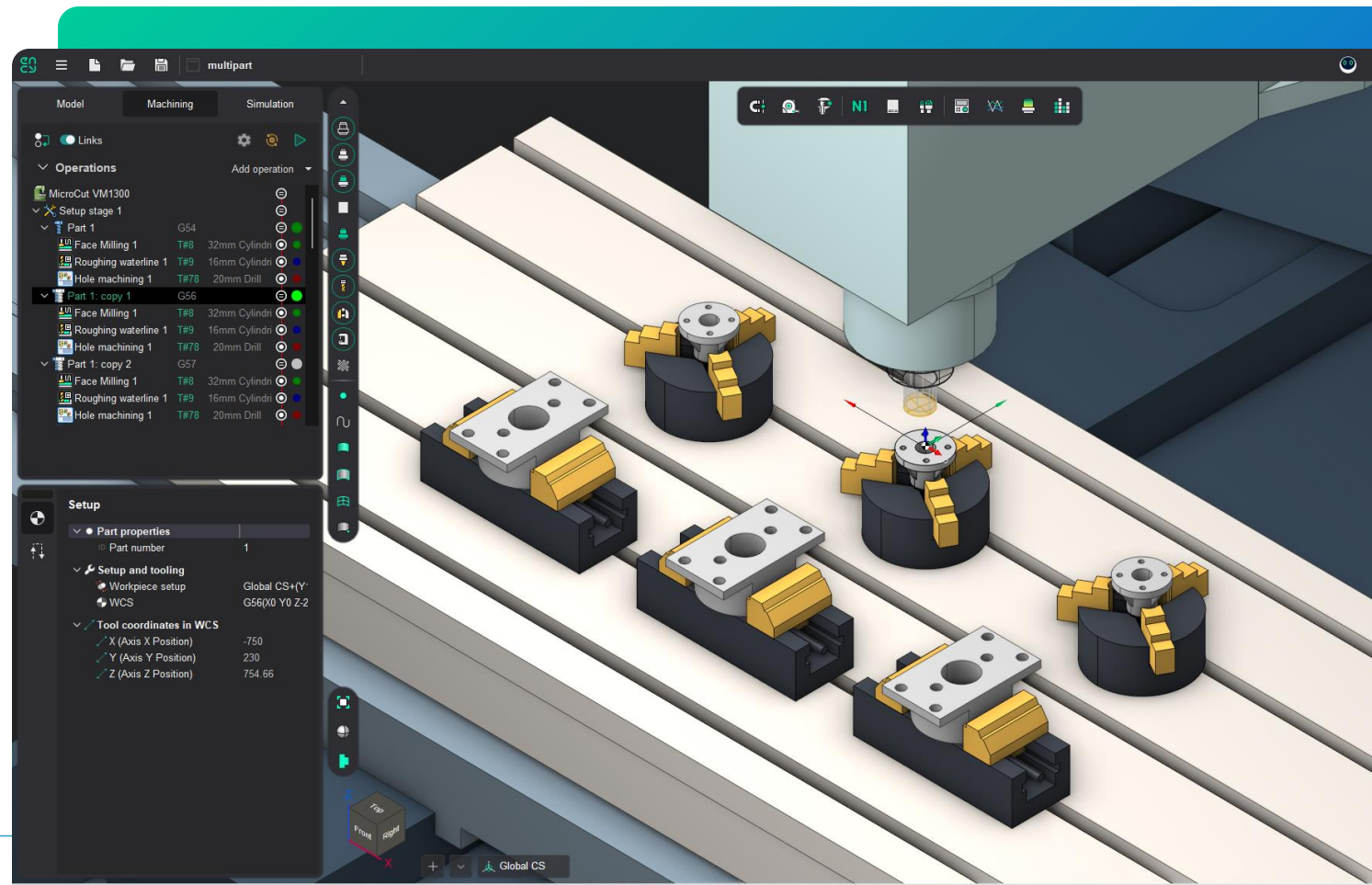


Multipart Projects

ENCY provides support for multiple setups in a single machining project, multi-part machining, copying of parts and operations, as well as machining in a tombstone.

Features

- Multi-part machining
- Multiple setups in a single machining project
- Easy copying of parts and operations
- Subprogram support
- Sequencings and Links: sorting operations by tool/side/part
- Intelligent tombstone, fixture, and work coordinate management

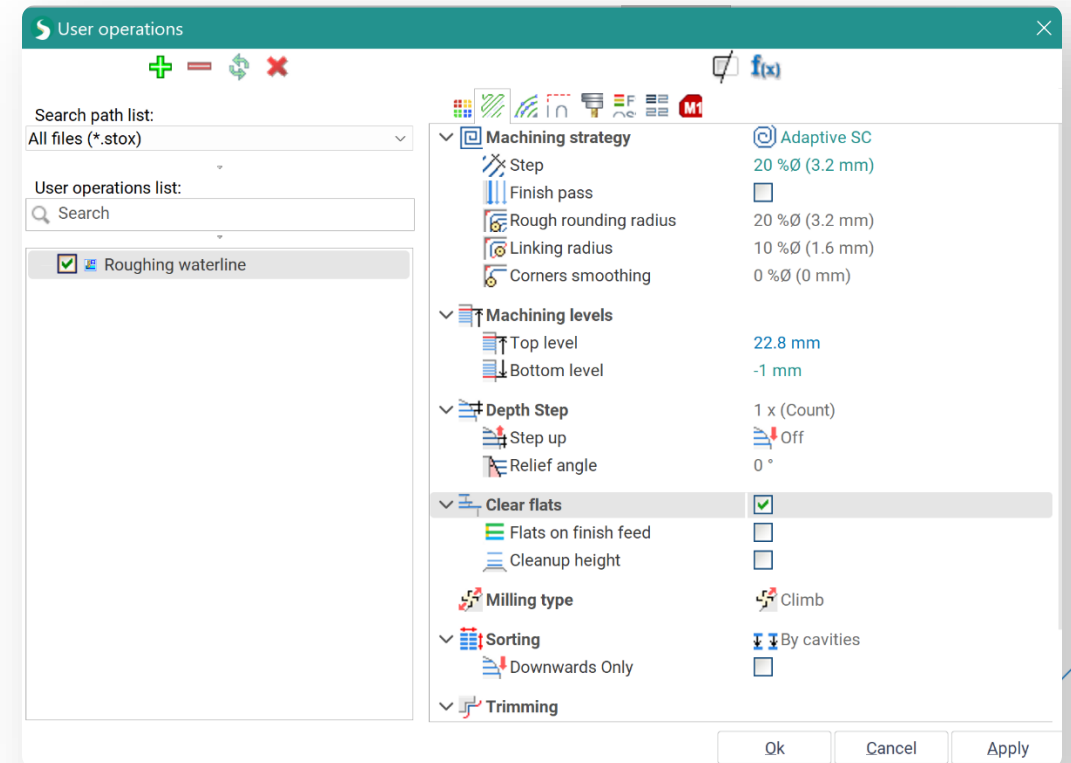


User Operations Library

ENCY provides the «User operations» function to reduce the required time to create and customize machining operations.

Features

- Save machining operations in a library
- Customize any operation parameters
- Import operations from the library to speed up your machining programming process
- User operations can easily be imported to another computer by simply transferring *.stox files of the corresponding operations



Post Processors

ENCY provides users with tools for independent creation and editing of postprocessors, as well as access to a wide range of ready-made postprocessors and 3D models of CNC machines.

Features

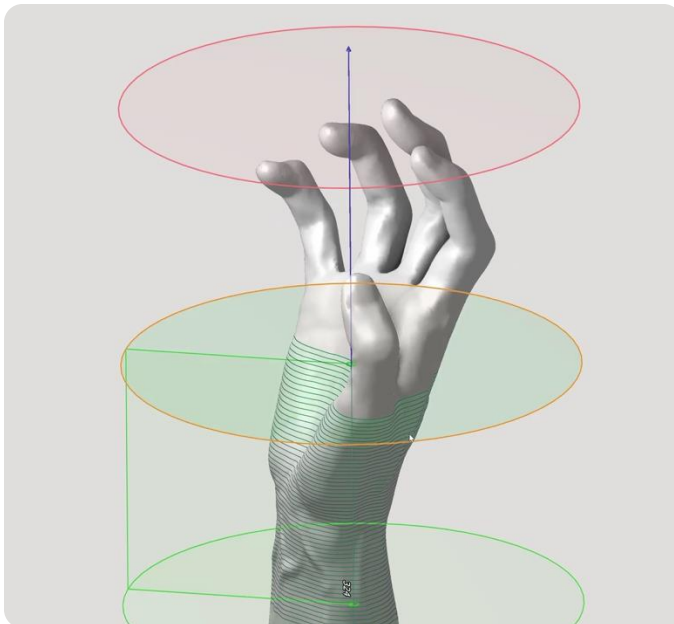
- Built-in post processor generator
- Interpreters for reverse post processing
- Open, editable and secure post processors
- 800+ ready-made post processors in the library
- Free post processors for the most popular CNC controls in the software distribution kit

Search:

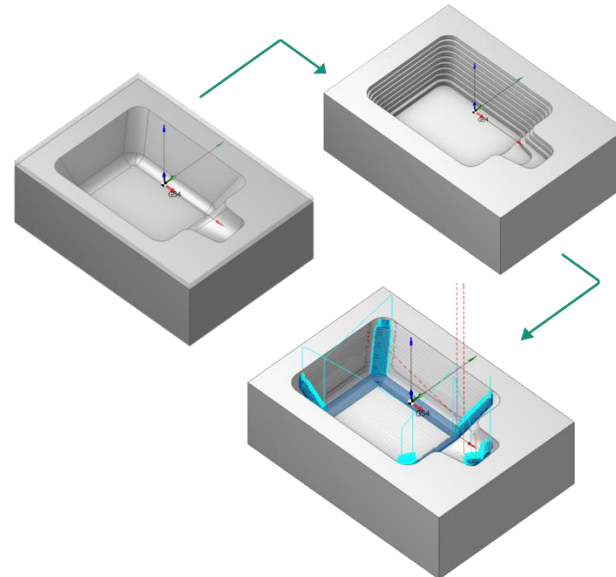
Type	Machine Manufacturer	Machine series	Machine model	Controller manufactur...	Controller model	Machine type	Number of Axes	Request
Post Processor + Schema	TAURUS			OTHER	iTNC640	Turning	5	Request
Post Processor + Schema	Boehringler		NG 200	Sinumerik	840d	Mill-Turn	2	Request
Machine Schema	Boehringler		VDF 315			Mill-Turn	2	Request
Post Processor + Schema	DMG MORI		DMC 1150 V	Sinumerik	840dsl	Milling	3	Request
Post Processor + Schema	Gefest		RIC-VT10	Fanuc	0i	Turning	2	Request
Post Processor + Schema	Hartford		PRO-2000S	Hartrol	AI300	Milling	3	Request
Post Processor + Schema	HYUNDAI	WIA	L300MA	Fanuc	32iB	Mill-Turn	3	Request
Post Processor + Schema	HYUNDAI	WIA	L300LMC	Fanuc	32iB	Mill-Turn	3	Request
Machine Schema	HYUNDAI	WIA	L300MSA	Fanuc	32iB	Mill-Turn	3	Request
Post Processor + Schema	HYUNDAI	WIA	L2000SY	Fanuc	32iB	Mill-Turn	4	Request
Post Processor + Schema	HYUNDAI	WIA	L3000SY	Fanuc	32iB	Mill-Turn	4	Request
Post Processor + Schema	DMC	DM	65V	Fanuc	0i-MF	Milling	3	Request
Post Processor + Schema	HWACHEON	Hi-tech	550ALMC	Fanuc	0i-TF	Turning	2	Request

Interactivity, Efficiency, Safety

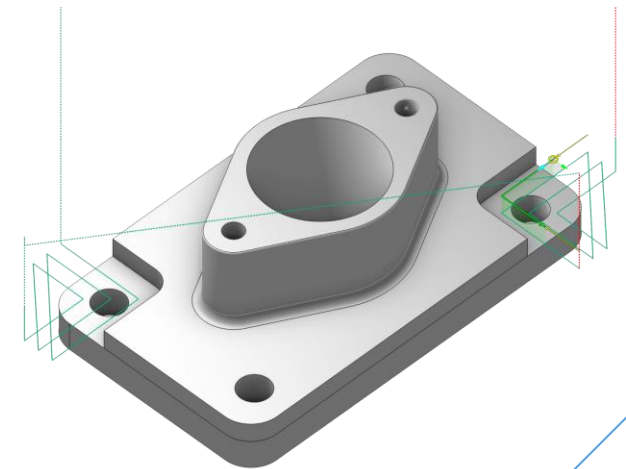
Seamlessly modify pass counts, directions, and depths, and easily update your machining strategy using intuitive drag-and-drop actions.



ENCY optimizes toolpaths by adapting to material changes, minimizing excess motion and reducing cut times for peak efficiency.



The platform's engine automatically generates safe rapid positioning between cutting cycles, optimized for the specific machine, tools, and setup being used.

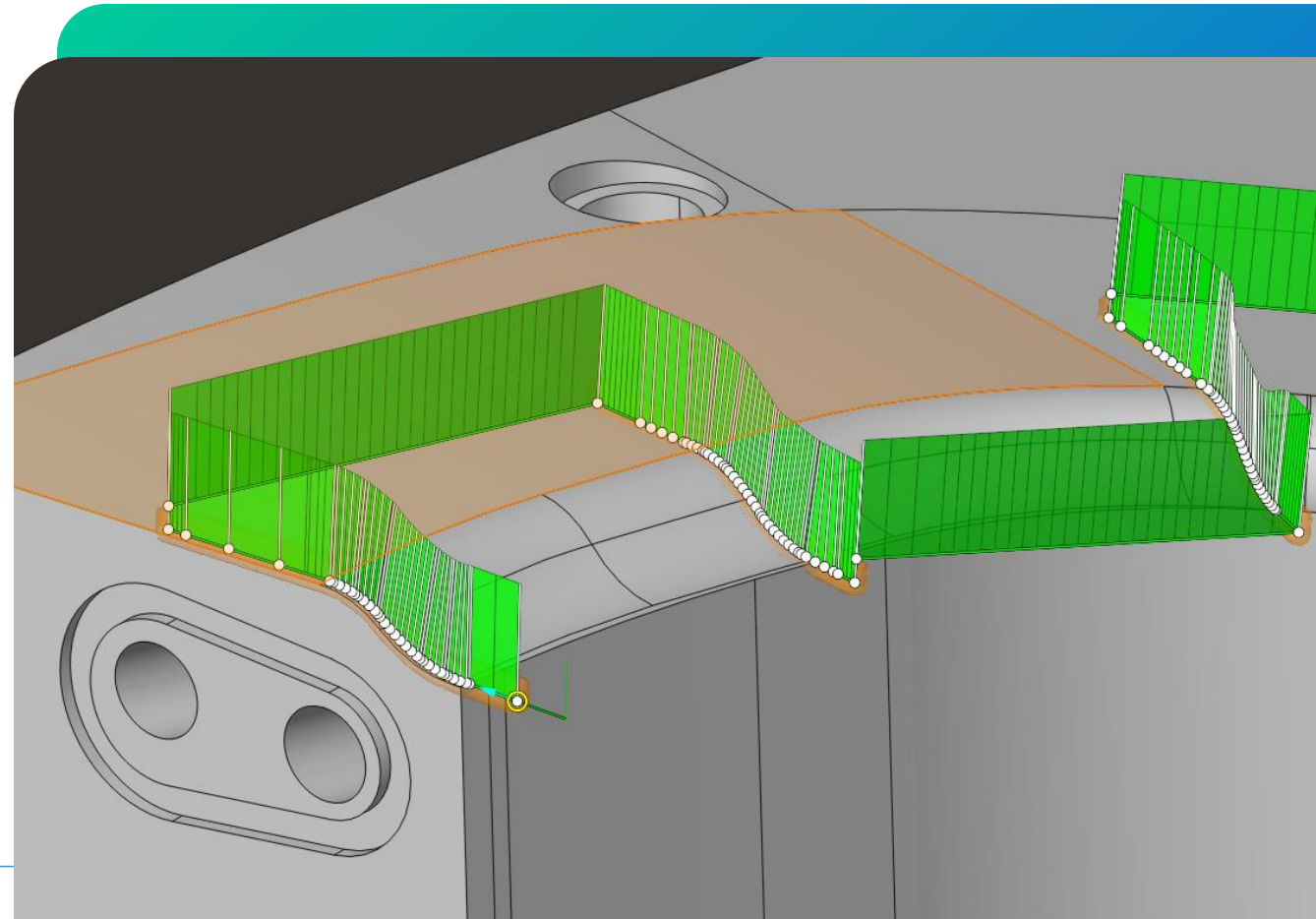


Direct toolpath editing

Even in the most advanced CAD/CAM system, users need the ability to edit operations. In ENCY, you can transform any toolpath into a 6D contour job assignment for interactive manual editing of the toolpath with maximum flexibility.

Features

- Converting toolpath into a 6D contour job assignment
- Subsequent interactive toolpath editing
- Ability to change tool tilt angle, offset any point, delete nodes at any position on the toolpath
- Maximum flexibility in subsequent editing of the calculated toolpath
- Strengthening our competitiveness in the Mold and Die industry



ency X

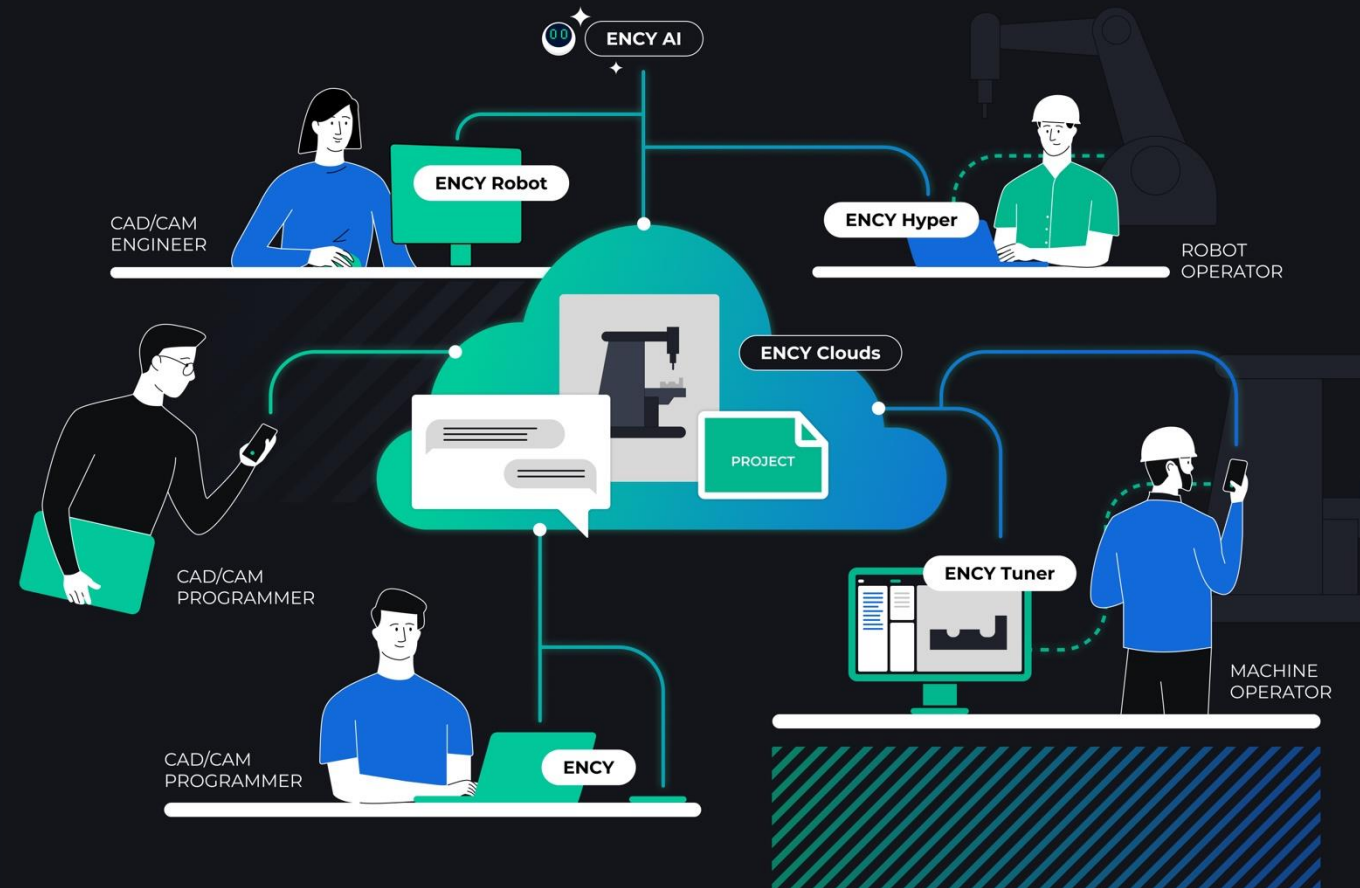
ENCY X is our innovative approach to connecting specialists who program and operate CNC machines and industrial robots, along with those who assist with software implementation and technical support.

ENCY X offers a new user experience designed to dramatically reduce downtime with CAD/CAM software.

ENCY X

A game changer for beginners and professionals seeking to use CAD/CAM for CNC machine and industrial robot programming.

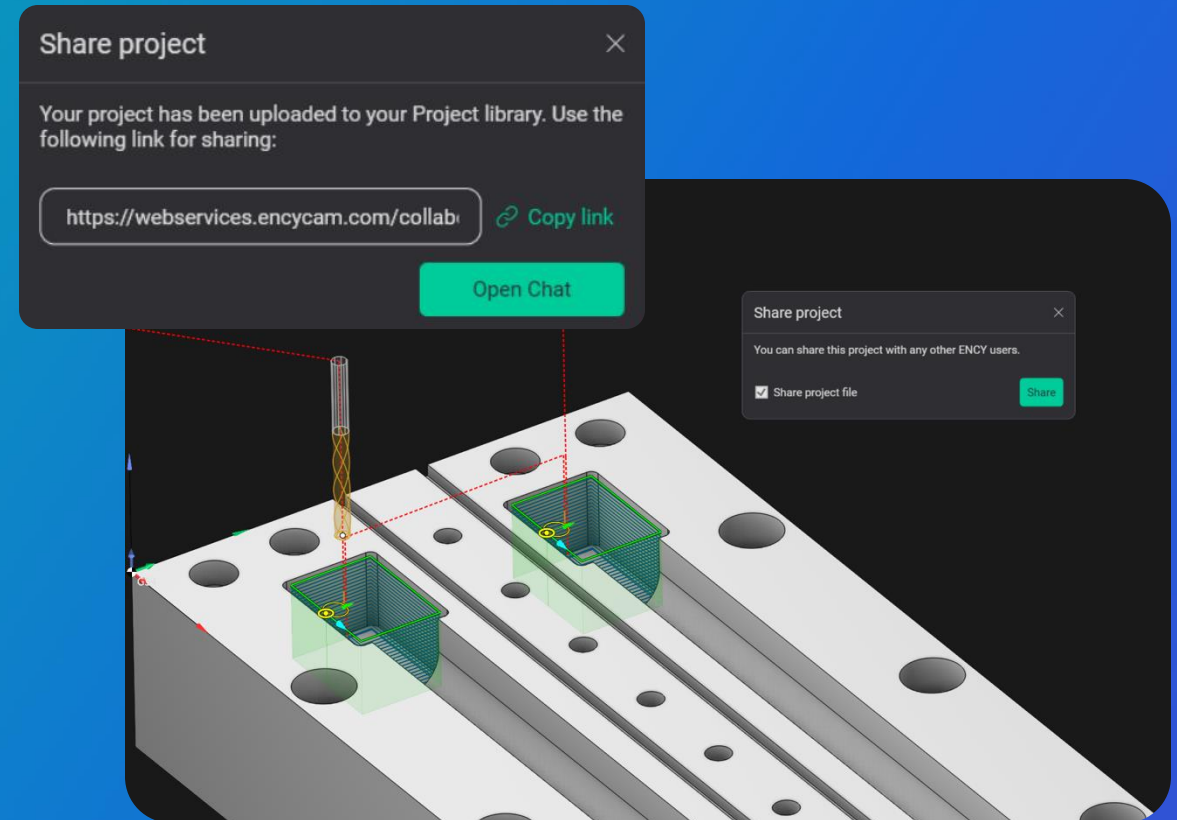
- Simplify and speed up the implementation of CAD/CAM software with built-in digital communication tools
- Connect machine operators and CAD/CAM programmers through online chat
- Invite software engineers for top-notch technical support
- Collaborate with independent CAD/CAM experts
- For CAD/CAM specialists: a chance to effectively utilize their expertise
- For machine shops: an opportunity to outsource CAD/CAM programming when facing staffing shortages or tight deadline
- The AI assistant is included (option) as a participant in the online collaboration session



ENCY Clouds

Cloud technologies for collaboration and access to machining projects

- Naturally integrated into ENCY's CAD/CAM workflow
- Exchange projects via Cloud with your collaborators (CNC programmers, robot integrators, suppliers, experts)
- One click push/pull for project share and update
- Online chat with support for videos, screenshots, screencasts, photos, and documents
- Mobile app with push notifications and the ability to upload photo and video media directly to the project chat
- Private cloud storage for user projects
- Available in ENCY flagship products and supports interaction with ENCY Tuner, ENCY Hyper, and ENCY AI



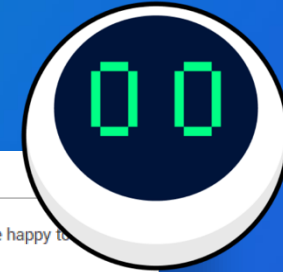
**Not all described features are available at the launch of sales. Available in select regions only.*

ENCY AI

The magic of artificial intelligence for real manufacturing

- An industry-leading support AI integrated into the ENCY software suite
- Unlike other systems, ENCY AI does not need text prompts or queries – it analyses the 3D model and provides appropriate workflow recommendations, along with predictions of progress and outcomes of the machining project
- ENCY AI is targeted at supporting all skill levels, ranging from explanation of commands and canned cycles through to offering advanced optimization suggestions for experienced users
- Automagic generation of usable NC code from user text descriptions of the desired operations
- Write code in Python to create .dxf or .stl files

**Not all described features are available at the launch of sales. Available in select regions only.*



G-code based 1 | +

Hi, I'm Ency, your SprutCAM X AI assistant. Ask away, and I'll be happy to help.

You can ask me to generate any G code you need. Using actions button you can easily paste the generated G code into the operation and test. It is possible to use macros. Just hit Ctrl+Space to quickly insert a macro into your query. Example in the request box below.

Generate a G code that will process a 100 x 50 mm rectangle at a feed rate of 300 mm/rev.
CNC system is "Fanuc30i_Mill".
Machine is "DECKEL MAHO DMU70".
Tool diameter is "20".

Here is the requested G-code program for processing a 100 x 50 mm rectangle at a feed rate of 300 mm/rev using the "Fanuc30i_Mill" CNC system and "DECKEL MAHO DMU70" machine with a tool diameter of 20mm:

```
Code
% O1000 (Rectangular processing program)
G90 G40 G17 G21 (Absolute, Cutter comp c
G54 (Work coordinate system
M03 S2000 (Spindle on CW rotation
G43 H01 Z50 (Tool length compensatic
F300 (Feed rate 300 mm/min)
X0 Y0 (Initial position)
Z10 (Safe approach height)
G1 Z-5 (Drop to Z5 plane)
G1 X100 (Move along X-axis to 100mm)
G1 Y50 (Move along Y-axis to 50mm)
G1 X0 (Move along X-axis to initial position)
G1 Y0 (Move along Y-axis to initial position)
G0 Z10 (Rapid move to safe approach height)
M05 (Spindle stopped)
M30 (End of program)
%
```

Replace full G code in the o
Change selected text only
Run as shell script
Run as python script

Generate a G code that will process a 100 x 50 mm rectangle at a feed rate of 300 mm/rev.
CNC system is "!!{Interpreter.CNCSystem}!!".
Machine is "!!{Machine.Name}!!".
Tool diameter is "!!{Tool.Diameter}!!".



ENCY SOFTWARE LTD

9, Aiolou and Panagioti
Diomidous
3020 Limassol
Cyprus

info@encycam.com

encycam.com