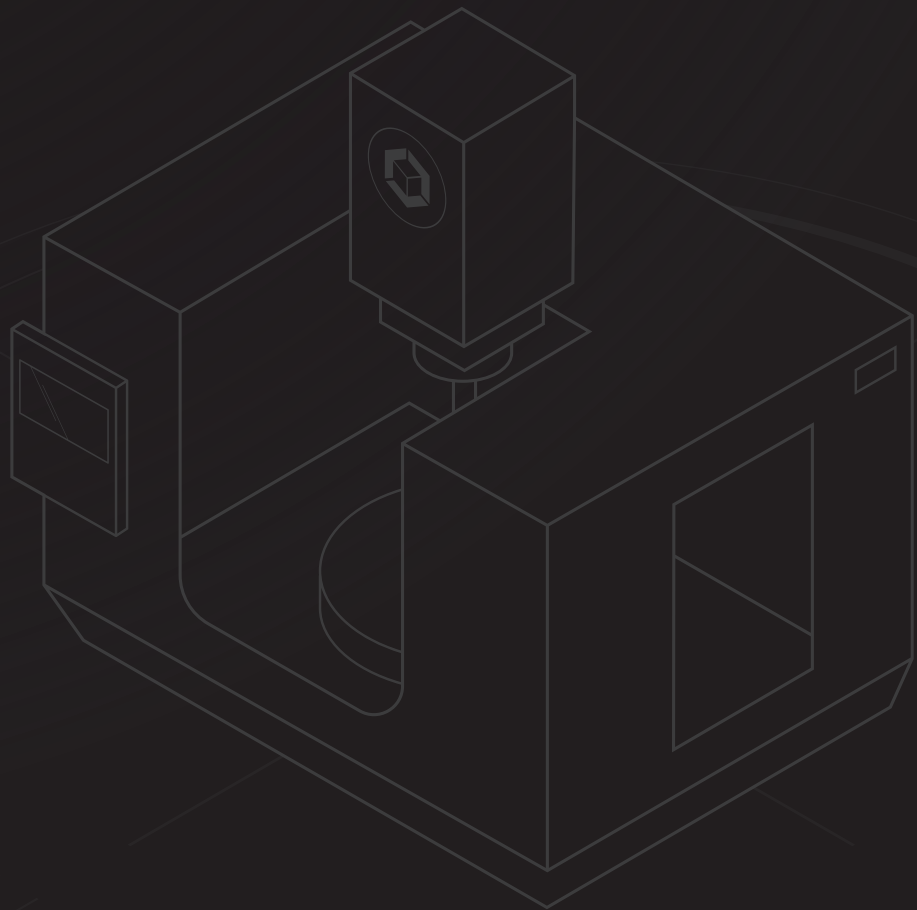




# MACHINE SIMULATION

NC program simulation on  
3D machine models

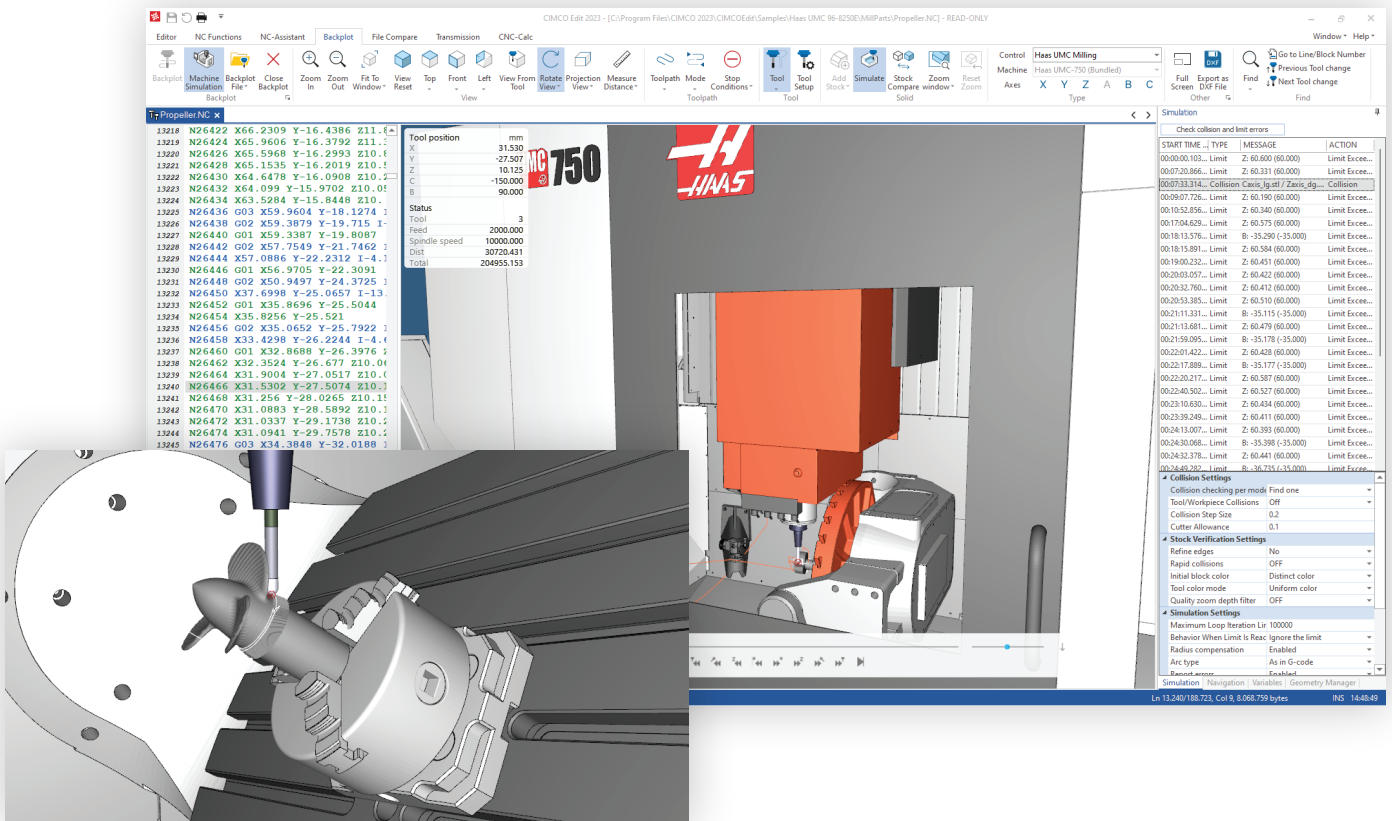


# INTRODUCTION

What is CIMCO Machine Simulation?

## Eliminate costly programming mistakes and accelerate onsite startup with real-time, GPU-accelerated machine simulation

CIMCO Machine Simulation is an add-on for CIMCO Edit that lets you test your NC program on a 3D model of your CNC machine. Powered by the world's fastest GPU-accelerated stock simulation kernel, you can see the exact movement of components such as heads, spindles, and peripheral devices in real time. It also automatically detects collisions and out of limit moves to help ensure that error-free code is sent to the physical machine.



# BENEFITS

Why use CIMCO Machine Simulation?

## ⚠ Shop safety

Protect employees from hazardous situations and machines from costly damage by testing programs on PC before running them on your machines.

## 🕒 Accelerate startup

Reduce time spent on setup and scrap from initial test runs and calibration. Run your program with confidence the first time.

## 🔄 Faster iterations

Optimize your programs by quickly trying out new ideas and testing your modifications on PC. Save time, resources, and wear on machine tools.

## 🔗 Faster shifting

Quickly switch between machine configurations for faster shifting of job to a different machine.

## ✅ Train at PC instead of machine

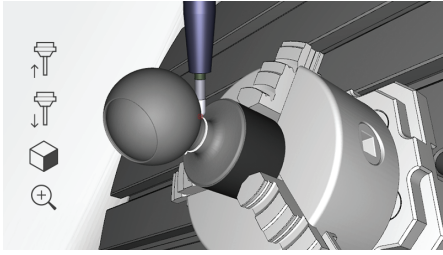
Use the available 3D simulation and NC editing functions to train employees in operating machines and modifying code.

## ↔ Simulation + NC editing

Fully integrated add-on for CIMCO Edit and a powerful solution for doing fast iterations of simulating and fixing problems in your code.

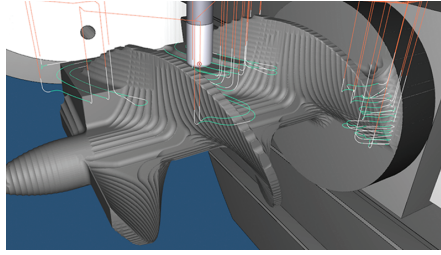
# FEATURES

Some of the many features included



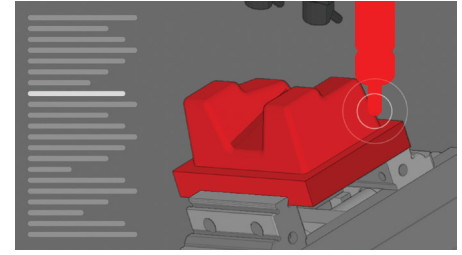
## Full control of simulation

Simulate your NC program from any angle or distance using zoom, pan, and rotate. Adjustable speed in both directions. Jump to next/previous tool, cutting pass, or move.



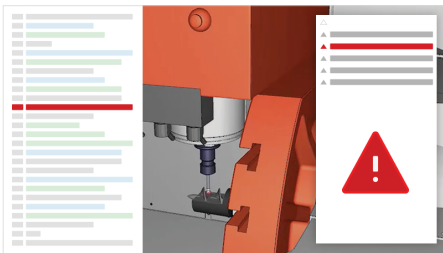
## Stock material removal

High and low tolerance options for simulation of stock removal. Includes options to define stock, or import your stock as an STL file. The resulting stock can be exported as an STL file.



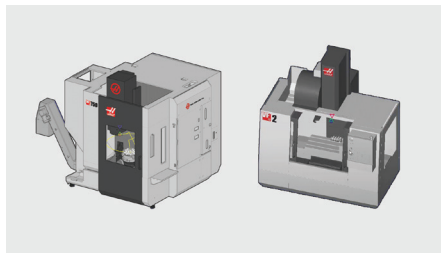
## Inspection

Side-by-side display of code, simulation and Simulation Report. Components turn red when colliding and collisions, out of limit moves and errors are recorded in the Simulation Report.



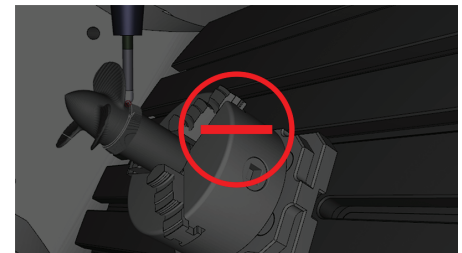
## Simulation Report

The Simulation Report shows errors in your NC program. Select an error and jump to the corresponding line. Modify the code and the Simulation Report verifies that the problem is resolved.



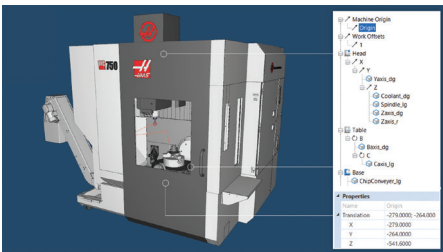
## Downloading Machines

Download and install pre-configured machines from vendors such as Haas directly from within CIMCO Machine Simulation. Or build your own using the Machine Configuration Editor.



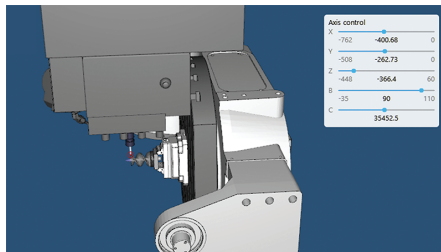
## Stop Conditions

Automatically pause the simulation when certain triggers occur, such as over travel limits, tool changes and different types of collisions.



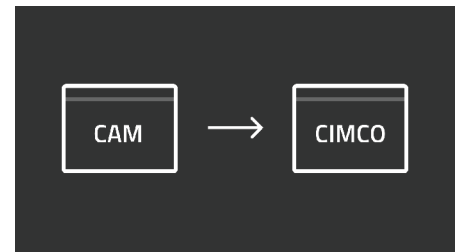
## Geometry Manager

A machine-tree shows the machine's definition. Properties of components such as head, table, and workpiece can be viewed, or visibility toggled.



## Axis Control

Ensure that all of the axes fall within the travel limits of your machine. Any axis that runs over its travel limit is highlighted in red. Use sliders to easily make adjustments and see it update in real time.



## CAM integrations

Transfer tool, holder and geometry data from Mastercam, SolidCAM, or other supported CAM systems. Changes made in your CAM system are instantly reflected in CIMCO Machine Simulation.

- ✓ Navigation  
Auto-generate an operation structure from your NC code.
- ✓ Variable Watch  
Track both the initial and current state of variables in your NC program.
- ✓ Stock Compare  
Compare stock to design model to easily identify inaccuracies.
- ✓ Free online courses  
Learn about milling and turning, trigonometry, NC code, and more.

## MORE

[www.cimco.com](http://www.cimco.com) →

Visit our website to discover many more features, videos or to download our free, 30 day trial version of CIMCO Machine Simulation.



CIMCO is an industry leading developer of software solutions for Computer Integrated Manufacturing and Industry 4.0. Our software suite includes advanced CNC editors, simulation software, DNC communications software, Manufacturing Data Collection for real-time monitoring and analysis of shop floor productivity, and Manufacturing Data Management for managing, organizing and securely storing production related data.

Since 1991, CIMCO has helped companies worldwide improve their competitive edge by providing reliable software and outstanding on-site assistance. Our network of CAD/CAM/CNC resellers and consultants have sold more than 100,000 licenses worldwide and we hold great pride in continuously supporting and meeting our customers' demands by developing intelligent and competitive solutions.

## THE FULL SUITE OF CIMCO SOFTWARE



### CIMCO Edit

Full-featured NC editing, simulation and machine communication tool. Powerful add-ons available.



### CIMCO DNC-Max

The leading solution for NC program transfers to and from CNC machines. Compatible with machines and files.



### CIMCO MDC-Max

Real-time manufacturing data collection. Optimize use of resources, and streamline processes.



### CIMCO NC-Base

Organize, manage, and protect part programs and related production documents efficiently.



### CIMCO MDM

Complete solution for manufacturing document management. Integrates with CAD/CAM systems from leading vendors.



### CIMCO Scheduler

Production scheduling and order tracking solution. Improve delivery times and use of machines and resources.



### CIMCO Machine Simulation

Prove-out your NC program on a 3D CNC machine model. Automatic checks for collisions, out of limit moves and more.



### CIMCO CNC-Calc

A basic CAD/CAM. Draw 2D geometrical contours and lay out toolpaths for milling and turning machines.



### CIMCO Mazatrol Viewer

Enables CIMCO Edit to read, preview and print Mazatrol binary files for both milling and turning.



### CIMCO Teachware

E-learning solution that introduces students to working with digital machine tools.

## MAIN OFFICES

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CIMCO HEADQUARTERS AND MAIN TRAINING FACILITY ARE LOCATED IN THE DANISH CAPITAL COPENHAGEN. THIS IS THE BASE OF OPERATION FOR THE SALES AND SUPPORT TEAM. OUR TECHNICAL SERVICE STAFF TRAVELS WORLDWIDE AND HAS LOCAL OFFICES IN SELECT COUNTRIES.

## LOCAL OFFICES / RESELLERS WORLDWIDE

### EUROPE

AUSTRIA	FINLAND	NETHERLANDS	SLOVAKIA
BELARUS	FRANCE	NORWAY	SLOVENIA
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BULGARIA	HUNGARY	PORTUGAL	SWEDEN
CROATIA	IRELAND	ROMANIA	SWITZERLAND
CZECH REPUBLIC	ISRAEL	RUSSIA	TURKEY
DENMARK	ITALY	SCOTLAND	UKRAINE
ESTONIA	LATVIA	SERBIA AND MONTENEGRO	UNITED KINGDOM

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CHILE	
COLOMBIA	
COSTA RICA	
ECUADOR	
MEXICO	
PERU	

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CHINA	SOUTH AFRICA
HONG KONG	SOUTH KOREA
INDIA	TAIWAN
INDONESIA	THAILAND
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MALAYSIA	VIETNAM
NEW ZEALAND	

CIMCO AUTHORIZED RESELLER



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