MACHINE SIMULATION

NC program simulation on 3D machine models
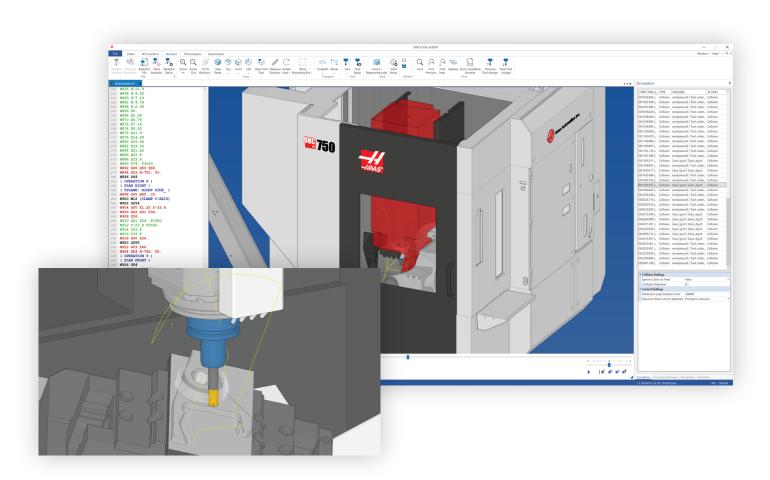
CIMCO
WHEN RELIABILITY MATTERS

INTRODUCTION | What is CIMCO Machine Simulation?

Eliminate costly programming mistakes and accelerate onsite startup

Machine Simulation is an add-on for CIMCO Edit and a powerful addition to the existing Backplot. Prove-out your NC program on a 3D model of your CNC machine and see the exact movement of components such as heads, spindles, and even peripheral devices. Collisions and out of limit moves are automatically detected to 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

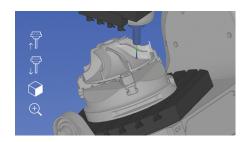Optimize your programs by quickly trying out new ideas and testing your modifications on PC. Save time, resources, and wear on machine tools.

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.
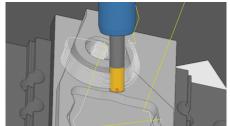
✳ CIMCO ◎ MACHINE SIMULATION
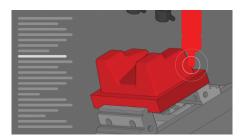
FEATURES | What is included?

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.
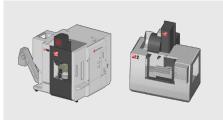

Inspection

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.
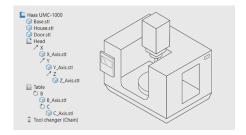

Simulation Report

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.
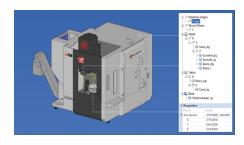

Downloading Machines

Download and install machines including models directly from within CIMCO Edit and Machine Simulation. Includes many pre-configured machines from vendors such as Haas.
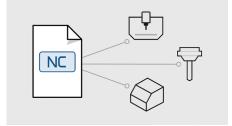

Machine Configuration Editor

Configure your own specific machine (if not available for download).
Add component geometry and set the axis, travel limits, feedrates, and tool change positions.
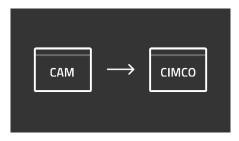

Geometry Manager

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

Scanning Commands

Automate the task of creating tools, loading geometry, specifying work offsets and defining stock when starting Backplot or Machine Simulation.

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 the state of variables in your NC program.

✓ **Tool Manager**
View and modify the tools in your NC program.

✓ **Free online courses**
Learn about milling and turning, trigonometry, NC code, and more.

MORE | 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.

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WHEN RELIABILITY MATTERS

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.

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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.

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