CIMCO CNC-Calc

A basic CAD/CAM for the shop floor

Designed for usability and productivity

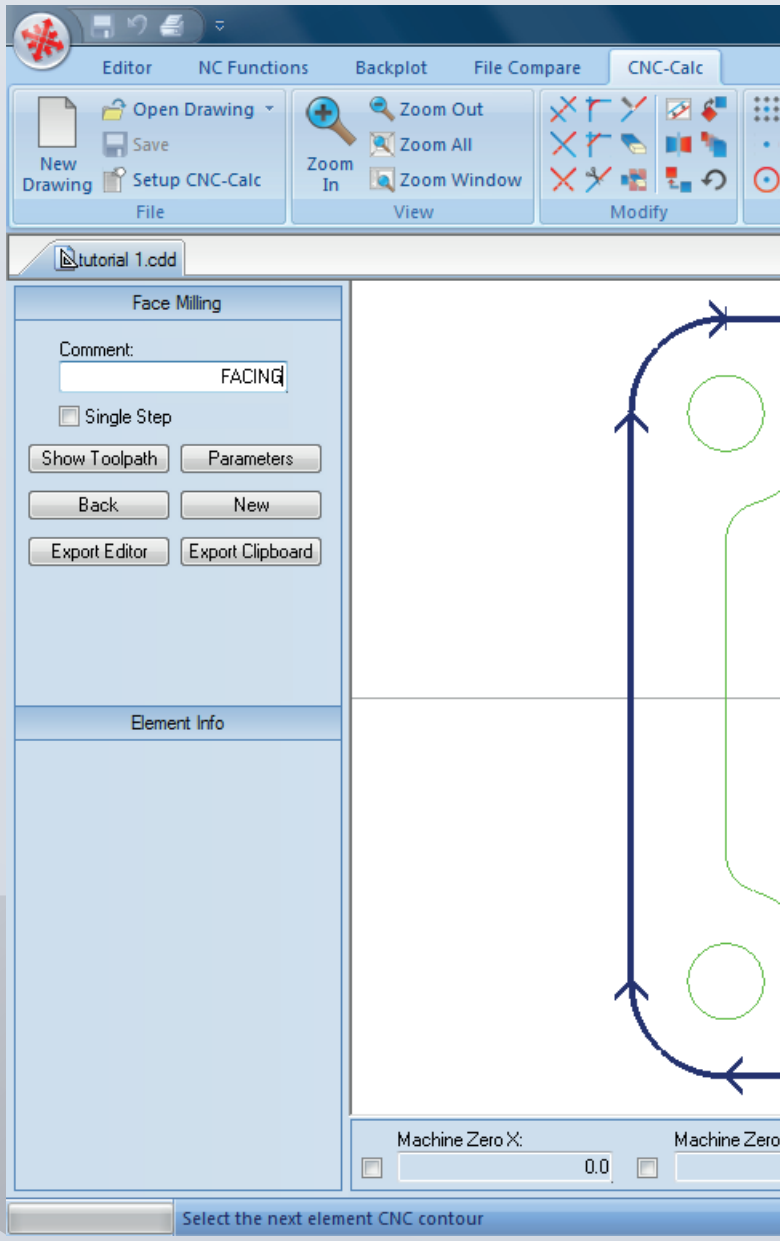
CIMCO CNC-Calc is an add-on for CIMCO Edit that enables novice programmers to draw 2D geometrical contours, lay out toolpaths for mill and lathe, and simulate the resulting NC program.

CNC-Calc is a great tool for the operators and toolmakers who are untrained in the use of advanced CAD/CAM systems. For them, CNC-Calc can help increase productivity and assist in the day-to-day NC programming. For a small company it can be the first step into the CAD/CAM world.

CIMCO CNC-Calc is designed for ease-of-use that enables the user to draw contours fast and easily. It features common functions for drawing lines and circles in relation to the coordinate system and/or existing geometry. Functionality ranges from the plain "horizontal line" to the complex "circle tangent to three elements". It includes advanced trimming capabilities and an easy point and click approach for toolpaths layout.

CIMCO CNC-Calc imports DXF files. From DXF files it is possible to generate toolpaths for lathe and mills, such as ISO, Fanuc and Heidenhain controllers. Other features include generation of user-defined compensation types like computer, controller, wear, and reverse wear.

Since CIMCO CNC-Calc is an integrated part of CIMCO Edit it is an easy task to view, edit, and simulate generated toolpaths. This enables the user to validate programs and thereby optimize the use of machine resources.



CIMCO CNC-Calc performs geometric calculations and toolpath creation in seconds. Supports 2D strategies for milling and turning

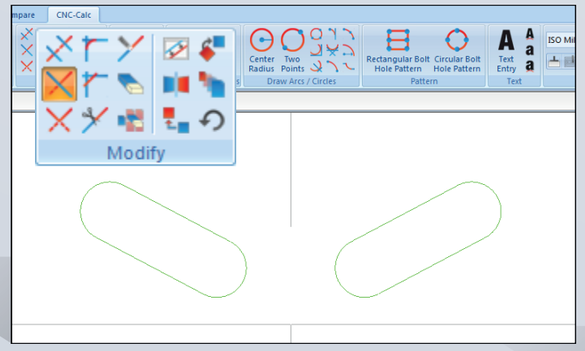
For more information visit us at
www.cimco.com

CIMCO Integration

Drawing with CIMCO CNC-Calc

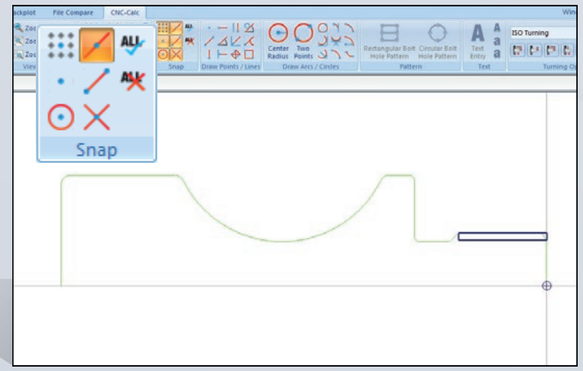
Single Click Trimming

Trim between intersections with a single click. The element is automatically broken in two and trimmed to the two intersections closest to where you clicked.



Snap to Anything

A wide variety of snap options makes it easy for you to select specific points in your drawing. Snap options such as "snap to intersections" and "snap to circles' and arcs' center points" can be activated separately, in combination, or all at once.



Round Corner Intersections

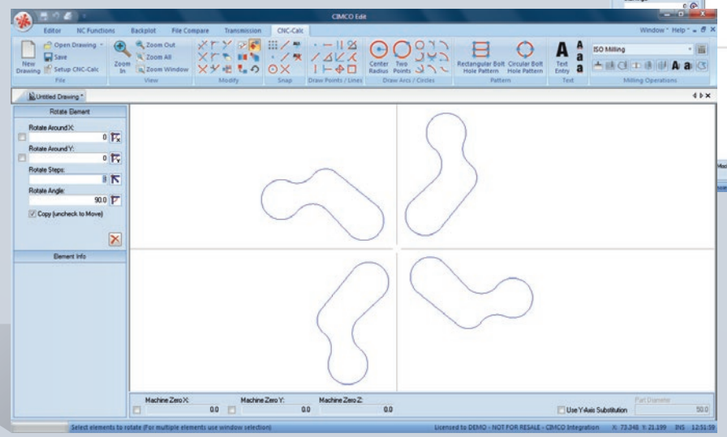
Create fillets on any corner intersections with any radius. Simply specify a radius for your fillet and click on the corner intersections.

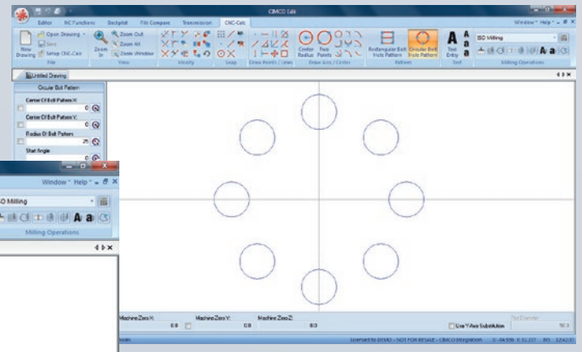
Intelligent Bolt Hole Patterns

Create rectangular (rows and columns) and circular (full circle or circle segment) bolt hole patterns in seconds. This cuts down on repetitive tasks and saves you time.

Transformations

CNC-Calc includes all the transformation features expected from a modern 2D CAD system. Offset, mirror, rotate, translate, and scale part or all of the geometry.

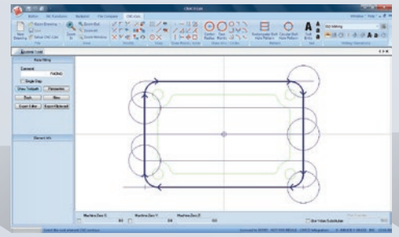




Strategies for 2D Milling and Turning

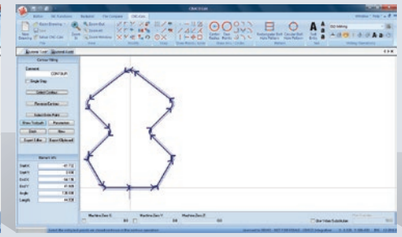
Once your 2D geometry is drawn CIMCO CNC-Calc makes it easy to lay out milling and turning toolpaths as well as drilling operations. By applying suited toolpath strategies to your model CNC-Calc can generate the NC toolpaths for you. In the following the available strategies for milling and turning operations are shown.

Facing



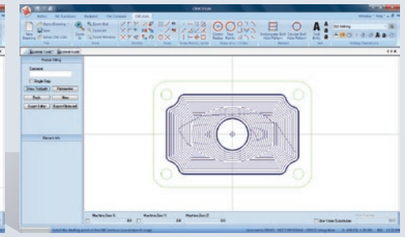
The facing strategy is designed for quick part facing to prepare the raw stock for further machining, but can also be used for clearing flat areas in general.

Contouring



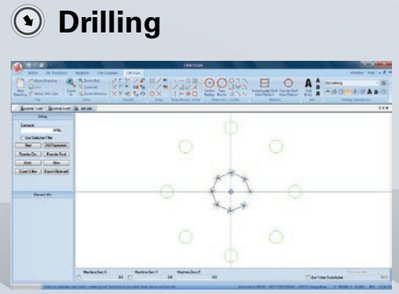
Machine 2D contours with separate lead-in and lead-out, multiple roughing and finishing passes, and multiple depth cuts. Machine open and closed contours without creating additional geometry and eliminate sharp motion with corner smoothing.

Pocket



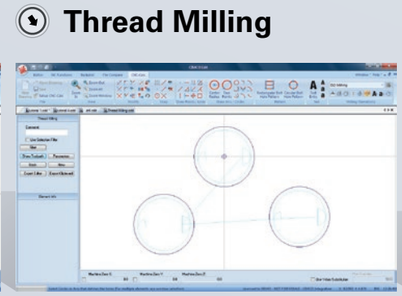
Machine closed contours with and without islands. The pocket toolpath can be performed using either a conventional or climb milling strategy. The entry is selected anywhere on the model and includes options for plunge, ramp, or helix.

Drilling



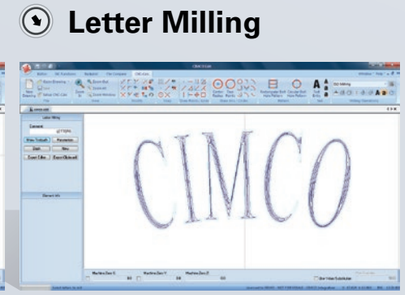
Strategies for drilling and hole making are available in CIMCO CNC-Calc. These include drilling, counterboring, and tapping operations.

Thread Milling



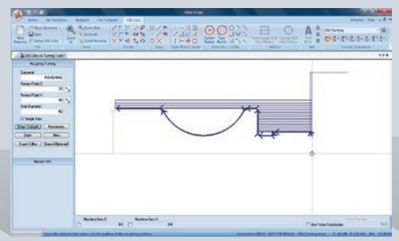
Thread milling makes it possible to mill internal or external threads. It is also possible to mill several holes as long as they have the same pitch, etc. For machines that do not support helix movements, it is possible to linearize these movements.

Letter Milling



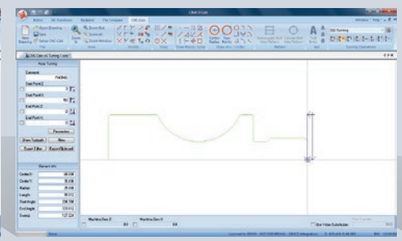
CIMCO CNC-Calc also supports milling of text. Any true-type font can be used. Simply write the text you need to mill, and CNC-Calc can generate the toolpaths for the text and convert them into CNC code.

Roughing



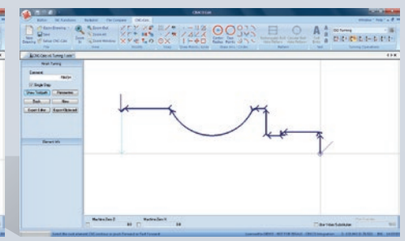
The Roughing operation makes it possible to remove material fast and easily. The Roughing strategy enables the user to remove this material with the use of both roughing and finishing passes.

Facing



The facing strategy is designed for quick part end facing. This strategy is controlled either by entering coordinates or snapping existing geometry.

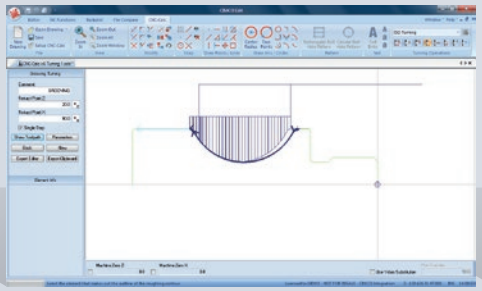
Finishing



The Finish strategy is a fast way to take the final finishing cut, making the part complete.

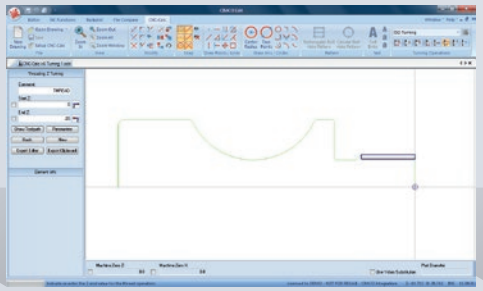
Strategies for 2D Milling and Turning

Grooving



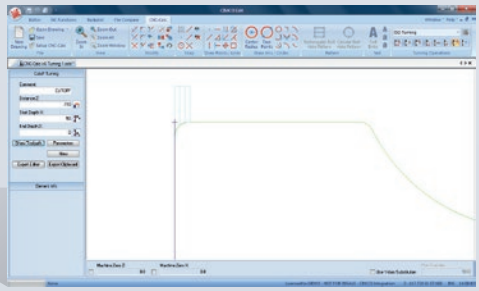
The Grooving operation enables the use of grooving tools to reach those places that can not be reached with normal roughing and finishing tools. As a possibility the entries can be performed with pecking motions.

Thread (ID, OD)



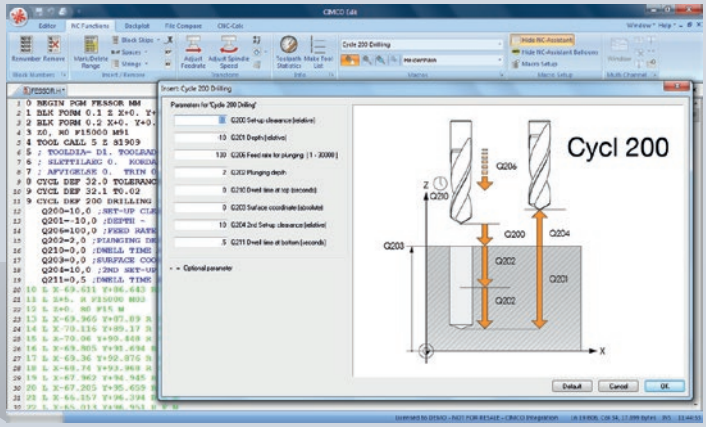
It is possible to machine every thread OD and ID (you can even choose from standard tables - metric or inch). Also, conical threads are easily produced.

Cutoff



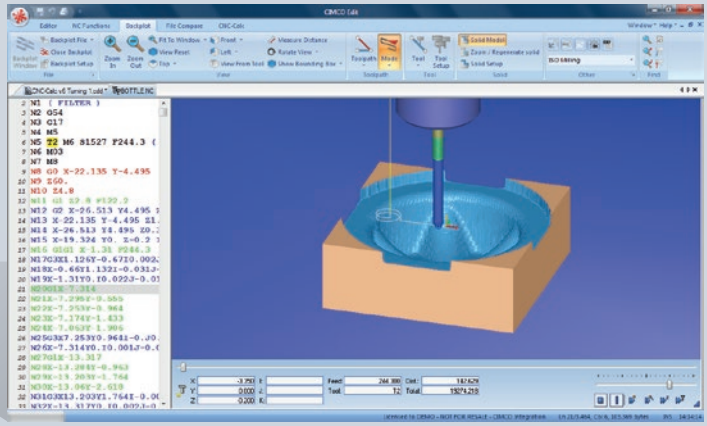
Use the cutoff operation to cut off the part. The cutoff operation makes it possible to add complex corner geometry to the part before cutoff. The corner geometry can be rounded, chamfered, or chamfered with rounded corners.

Additional features in CIMCO CNC-Calc



Simulation

The 3D Mill / 2D Lathe backplotter handles your 3-axis Mill and 2-axis Lathe CNC programs with step and continuous forward and reverse plotting. Edit the CNC program and the update is automatically reflected in the plot. Analyze the plot with dynamic zoom, pan, rotate, and measuring functions. There is also support for solid visualization of NC code with toolholder collision check and gouge detection.



Cycles and Macros

Due to CNC-Calc's integration with the CIMCO Editor all the functionalities of the editor can be seamlessly used. This means that the built-in cycles and macros for common operations like program start, program stop, and tool change are provided. You can also record or create custom cycles and macros for the operations most common to your own specific setups and applications.

Europe

CIMCO A/S
Copenhagen
Denmark

Tel: +45 45 85 60 50
Fax: +45 45 85 60 53

Website www.cimco.com
E-mail info@cimco.com

CIMCO Americas

CIMCO Americas, LLC
651 S Sutton Road, Suite 276
Streamwood, IL 60107

Tel: +1 704 644 3587
Fax: +1 704 943 0514

CIMCO Integration

When Reliability Matters