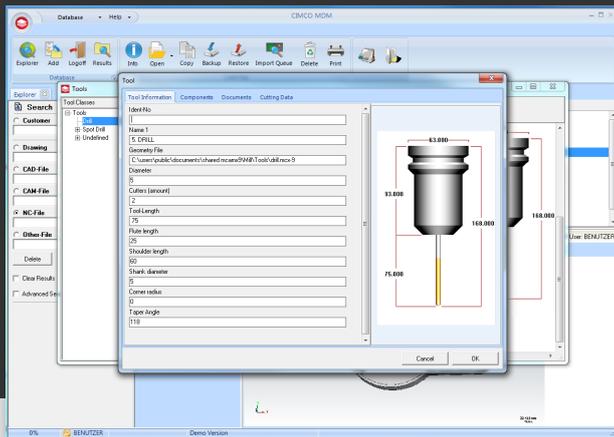
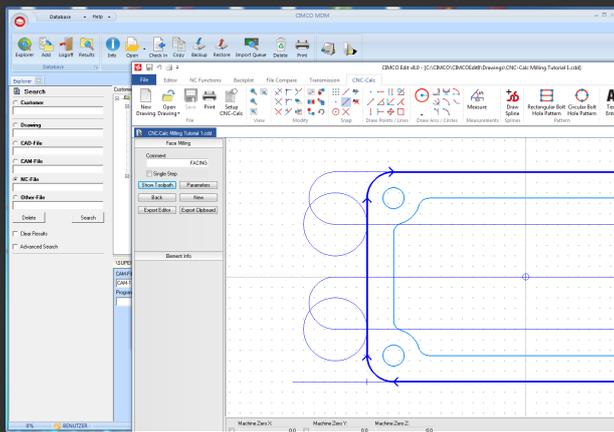
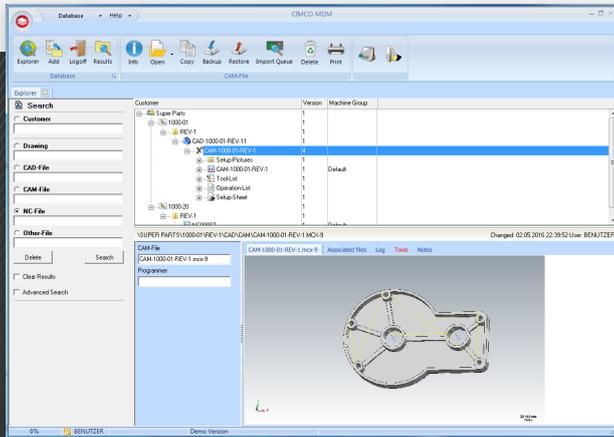


# CIMCO MDM

MANUFACTURING DATA MANAGEMENT



CAD/CAM INTEGRATION

INCLUDES CIMCO EDIT STANDARD

VERSION AND REVISION CONTROL

USER PERMISSION MANAGEMENT

DISTRIBUTED TEAMS / GROUP MANAGEMENT

WEB CLIENT FOR SMARTPHONES AND TABLETS

GENERATE TOOL LISTS, SETUP SHEETS, AND MORE

STATUS HANDLING AND WORKFLOWS

EASY BACKUP AND RESTORE

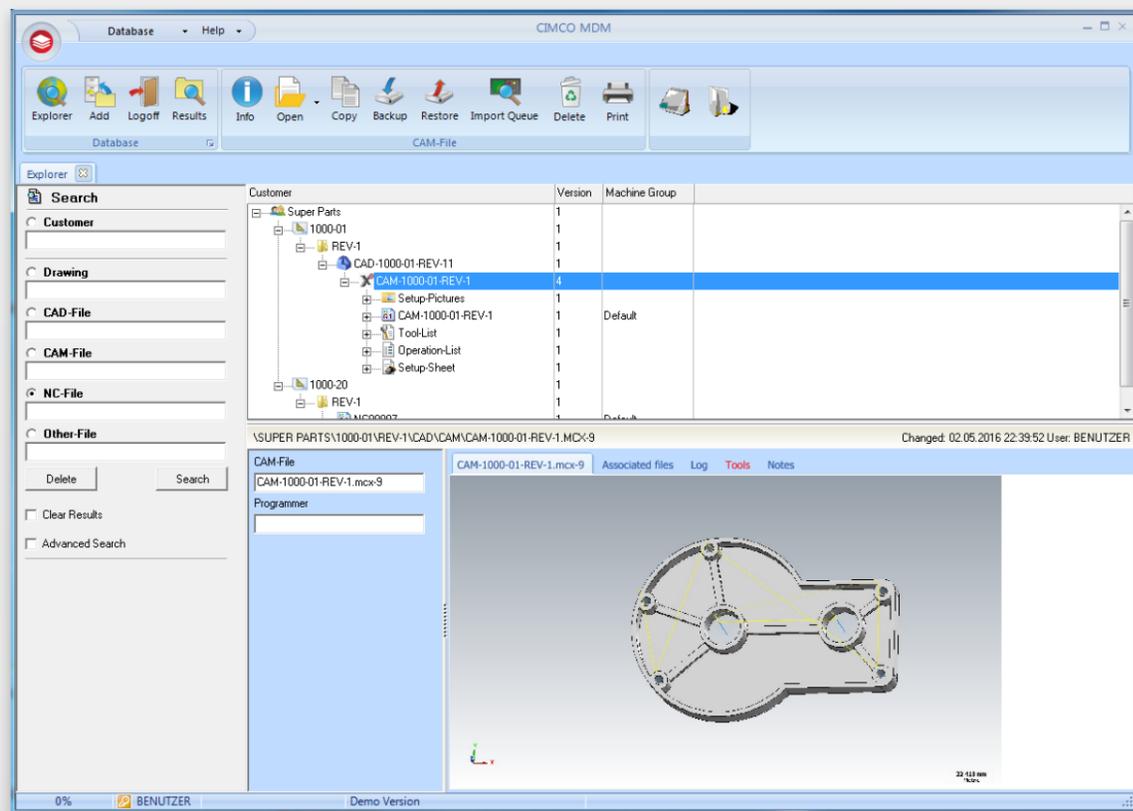
PROJECT MANAGEMENT

DOCUMENT MANAGEMENT

NC-CODE MANAGEMENT

DNC NETWORK CAPABILITIES

BARCODE READER SUPPORT



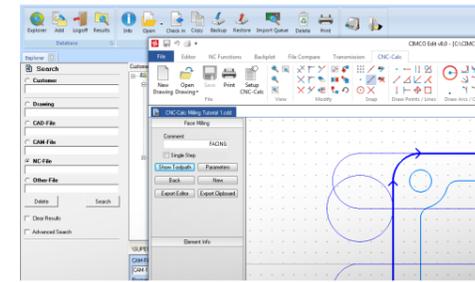
## CIMCO MDM IS THE MANUFACTURING DATA MANAGEMENT SOLUTION THAT HELPS YOU ORGANIZE AND MANAGE YOUR MANUFACTURING RELATED DOCUMENTS

Manufacturing companies often manage large amounts of project data such as CAD/CAM files, NC programs, setup sheets, tool lists, QA documents, and drawings. Not having all of this data securely stored, organized, and made accessible to team members can lead to wasted time, decreased production, and costly mistakes.

CIMCO MDM lets you manage all of your manufacturing related documents in one location on a central server. MDM has been developed to seamlessly integrate with CAD/CAM systems from many leading vendors and provides file/folder restrictions, user permissions, automation, backup, version control, and more. MDM also integrates with other applications and the machines in your setup.

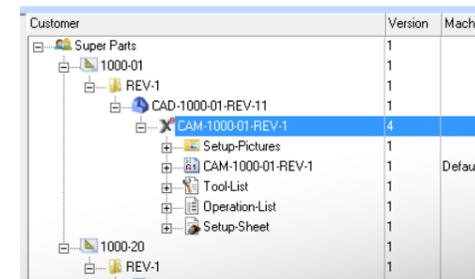
## INTEGRATION WITH CAD/CAM APPLICATIONS

CIMCO MDM has been developed from the ground up to integrate seamlessly with the most well-known CAD/CAM systems on the market. You can preview and open part files directly from MDM. Tool information is automatically exchanged and can be managed using the built-in Tool Manager - and exported to your CAD/CAM application later. Generated NC code is automatically transferred and stored in MDM.



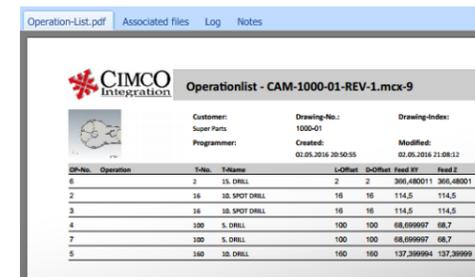
## FAST AND EASY TO USE

MDM features quick-launch buttons for your vital applications and provides a compact overview of all production relevant documents at a glance. The fully customizable search panel delivers instant search results and uses advanced file indexing for more intelligent search results.



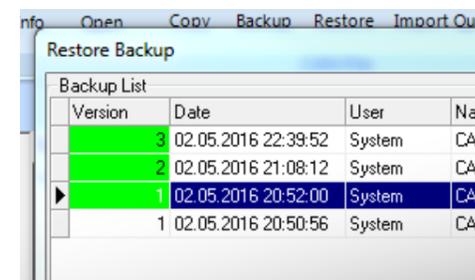
## EFFICIENT AND AUTOMATED

Drag and drop files into MDM, and they are automatically stored in the right location and logically renamed based on your preferences. CIMCO MDM automatically generates tool lists, operation lists, and setup sheets in Word or PDF format, and automated workflows can be configured based on document status changes.



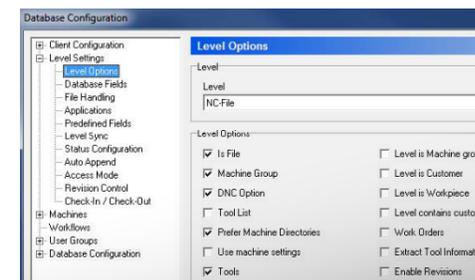
## TRANSPARENT FILE MANAGEMENT

With MDM you always get the right files - avoiding costly mistakes and wasted time. All documents are kept under version control and automatically raised in version when a file is saved. This gives you full control over all changes to your files - you can browse the file history for any file, compare versions side-by-side, and restore an older version if necessary.



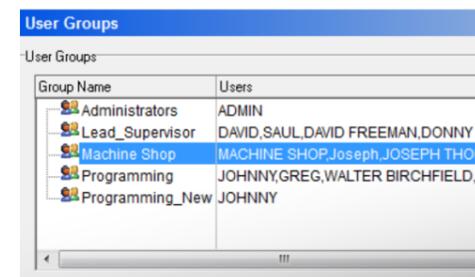
## FULLY CUSTOMIZABLE

Since no setup is the same, MDM has been developed to be fully customizable. It can be adapted to any existing workflow and can be configured to work with existing software applications and machines. From the way data is structured and how this structure is enforced to what exact search fields should be visible in the search panel - everything can be customized.



## SECURE

MDM stores data in a secure SQL database and provides a flexible User Management and Permissions system that enables administrators to specify the level of access for users and groups. Administrators can easily define who can view, modify, approve, or delete certain documents and who can make backups, send/receive files to machines, and to which group of machines the authorization applies.



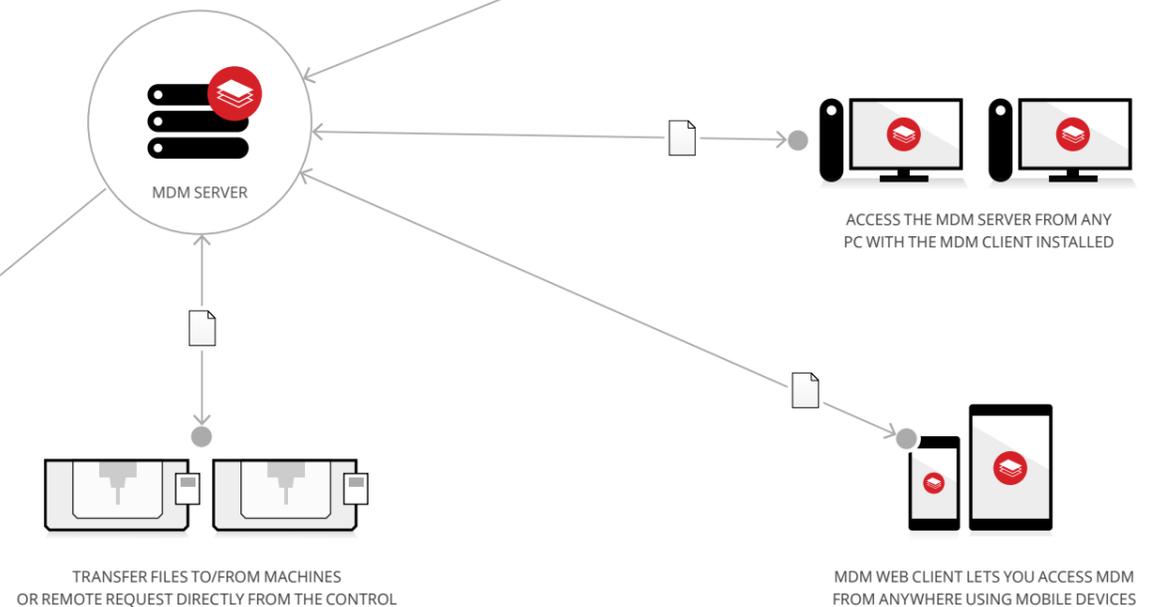
# HOW IT WORKS

## ARCHITECTURE

CIMCO MDM is a client/server based system consisting of the MDM Server, MDM Client, and the MDM Web Client. The MDM Server is the core component which handles a fast SQL database (also supports Microsoft SQL) and stores associated files. The MDM Client and Web Client run on PC and mobile devices and provide interfaces for managing documents on the MDM Server. In a small setup the server and client can run on the same PC.



ANY FILE TYPE CAN BE ASSOCIATED AND EITHER MOVED, COPIED, OR LINKED



## DATA MANAGEMENT

CIMCO MDM organizes documents in a tree structure composed of levels that can be easily adapted to any workflow. The structure is visualized in a compact overview where root levels such as "Project", "Customer", or similar can be expanded to reveal child-levels and associated files.

### LEVELS AND ASSOCIATED FILES

A level works like a virtual folder with special options for controlling what type of child-levels are allowed, how associated files are managed, which actions to perform upon level or file status changes, and more. Associated files can either keep their current location, if an external application requires this, or they can be copied/moved to the MDM Server.

### LEVEL OPTIONS

The behavior of a level can be fully customized. This includes user permissions, what type of files can be associated, or what additional information to prompt the user for when files are added. For consistency, levels and files can be renamed automatically to ensure a logical and organized data structure.

Additional level options include automatic tool management and version control, DNC support, moving files to machine directories, and automatic child-level and file creation when a level is added.

## SEARCH

Search is a key part of CIMCO MDM and provides a fast and easy way to find information in the data structure. MDM features a search panel with customizable search fields that change based on the selection in the data structure. Global fields remain visible while level fields can be customized for individual levels so only relevant fields are shown while browsing the data structure.

### FILTER AND EXPORT SEARCH RESULTS

If a search provides multiple results, these can be viewed in the Search Results window, and selecting a result reveals the desired item in the data structure. A local search field is available for filtering results. In addition, search results can be exported to Excel for further analysis.

### BARCODE READER SUPPORT

MDM comes with barcode reader support which can be a handy way to search. You can create barcodes for frequently used documents, and simply scan the printed barcode when you need to find these files. This eliminates the need for typing complex file names and prevents typing errors. Additionally, you can use a barcode reader at a machine to remote request NC programs directly from the machine.

## USER MANAGEMENT

CIMCO MDM provides a highly flexible and secure user management system that enables fine-grained control over user permissions. This ensures that the number of individuals that can change settings in MDM is limited and that regular users cannot accidentally change configuration settings, delete levels, or associated files. To access MDM, users are always required to enter their login credentials.

### USER PERMISSIONS AND GROUPS

User permissions can be defined for everything in CIMCO MDM and are configured with User Groups where users are assigned to one or more groups. Any level in the data structure can be configured so only authorized users can view, add, edit, move, or delete files - or add child-levels. Also, you can configure who can initiate file transfers to and from machines and much more.

### LOGGING USER ACTIONS

CIMCO MDM can be configured to log user and machine actions such as program changes by users or machine file transactions. Logged data can be exported using the reporting options available in MDM.

## CAD/CAM INTEGRATION

CIMCO MDM offers special integration for CAD/CAM systems that enables a seamless workflow in both directions.

For a faster workflow, any application can be opened directly from MDM, either by using an application icon in the toolbar or by double-clicking an associated file. When working with CAD/CAM applications, changes are automatically stored by MDM in the background. Operations, tools, and generated NC code are automatically transferred to MDM where tool lists, operation lists, and setup sheets can be auto-generated in PDF or Word format. MDM can even preview part files without having the associated application installed.

To manage tool information CIMCO MDM provides a built-in Tool Manager from where tools can be exchanged with your CAD/CAM application. Custom tools can also be created or imported from sources such as Excel files.

Part file templates can be configured for specific machine models in your setup to provide a faster workflow and save time when starting work on a new part.

The flexible nature of MDM enables integration with most applications such as editors and DNC software from many leading vendors. MDM can even access data from other information systems as long as it can gain access to the files.

## DNC SUPPORT

CIMCO MDM offers DNC support for most network machines, enabling file transfers in both directions. Files can also be requested directly from the CNC control using the Remote Request feature which enables an operator to import entire folders and files such as tool lists, setup sheets, and pictures without having to leave the machine. If MDM is configured to generate program numbers, the operator can also request a new program number when working on a new part that is programmed on the machine.

Machines are configured using Machine Groups that hold information about dedicated machine directories and the associated DNC communication port. Machine groups can be associated with levels in the data structure, so files in a specific level are restricted to being used only with a specific Machine Group. In addition, files can be automatically copied to Machine Group directories when added in MDM.

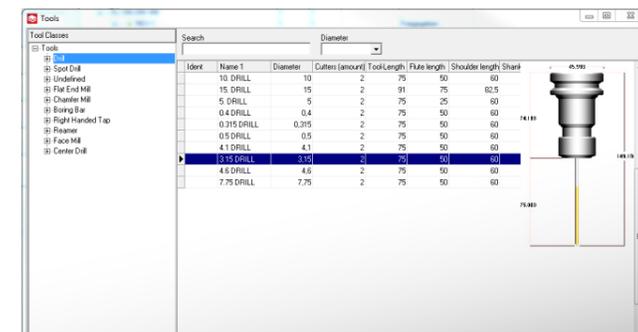
# MORE FEATURES

## VERSION CONTROL

The built-in version and revision control system in CIMCO MDM helps ensure that users are always working with the right version of a file.

MDM requires users to check-out files for local editing and automatically creates a new version each time a file is checked-in. On check-out, files become locked on the MDM Server eliminating the risk of users accidentally working on the same file. A complete version history is available for all files, and versions can be compared side-by-side with changes highlighted. MDM makes it easy to restore to a previous version while still keeping all versions in the history.

Revision control can be configured for any level in the data structure. This saves time since MDM will know what relevant child-levels and files to copy each time a new revision of a level is created.



## MDM TOOL MANAGER

The MDM Tool Manager offers a central place for managing tool data and makes it convenient to exchange tools across applications. The Tool Manager includes search options and provides a great overview of each tool with tool data presented in a table and as a diagram with key measurements.

Custom tools can also be created or imported from sources such as Excel files. This offers a quick way to import custom tools when the tool vendor provides Excel formatted catalog data.

Using the reporting options in MDM, reports can be generated for showing tool usage for specific projects or other statistics.

## AUTOMATED WORKFLOWS

MDM comes with advanced options for automating processes based on document status changes. This enables MDM to e.g. lock or unlock NC files, set a transfer limit, send email notifications, or request a comment when a certain status change occurs. Status changes can be combined with Access Modes and Workflows to offer a powerful and highly customizable solution for automating processes.

A status change can trigger a change in Access Mode for a specific level. That way, when a file is checked-in after an update it can be locked automatically, and access to that level can be restricted to a certain group of users – like Quality Assurance. Status changes can also trigger Workflows that define a number of Workflow Steps that are carried out in sequence either automatically or manually.



## MDM IMAGE EDITOR

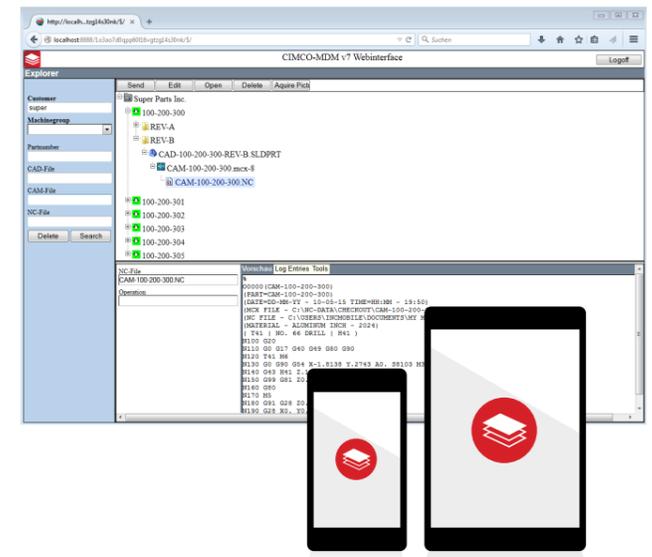
The MDM Image Editor provides image editing capabilities directly in MDM. This makes it easy to add annotations such as text, arrows, origin, and orientation to an image, and eliminates the need for external image editing software.

The image editor can be accessed by right-clicking an associated image, and annotations can easily be laid out using drag and drop. When done, the image is automatically saved as a new version and the old is kept as a backup.

## MDM WEB CLIENT

The MDM Web Client is a great solution for providing all the manufacturing information to the shop floor. Files (tool lists, setup sheets, etc.) can be viewed, edited, and sent to machines directly from a tablet or smartphone - and you can even use the camera of the mobile device to take pictures of your machine setup for future reference. When a picture is taken it is automatically sent to the MDM Server and stored in the right location.

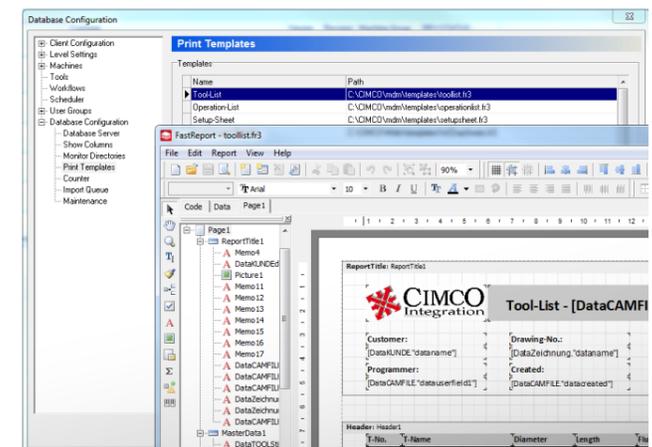
The web client is primarily a viewer and offers the necessary functionality required in situations where a user is at a machine and does not have access to a PC with the MDM Client installed.



## REPORTS

MDM offers a flexible reporting system that makes it possible to create any kind of report based on the information stored by MDM. Reports are generated from Print Templates and can be designed using the integrated report designer – FastReport®. Once a Print Template is created, when generating a report, MDM automatically merges data from the server and stores it under the correct level. Reports can be viewed in MDM, and printed or exported to a number of file formats. Below are some examples of reports.

- Reports containing text files or images
- Print DNC transactions (sent, received, requested, etc)
- Print MDM Server usage by user
- Print the entire data structure
- Print setup sheets, tool lists, operation lists, and more
- Print tool usage by project



## INTEGRATION WITH CIMCO SOFTWARE



### INCLUDED WITH MDM

A CIMCO Edit Standard is included with each CIMCO MDM Client, providing the essential editing tools for working with NC programs.

Optionally, you can easily upgrade to the full version, CIMCO Edit Professional, which features the intelligent NC Assistant, backplot/simulation for both milling and turning, and much more.



### CNC COMMUNICATION

For connecting to older CNC controllers with a serial interface or when using special network protocols, MDM can take advantage of the powerful features in CIMCO DNC-Max.



### DATA COLLECTION

With CIMCO MDC-Max, MDM can show manufacturing statistics such as job time, number of parts, production time, and downtime for parts, work orders, or programs. Statistics are available directly in the MDM Client when selecting a program file in the data structure.





CIMCO is a leading developer of software and solutions for Computer Integrated Manufacturing including advanced CNC-Editors, DNC software for reliable CNC communication, 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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