



PRESS RELEASE

NCG CAM v19.0 is Officially Released Download a Demonstration Version Now

NCG CAM Solutions Ltd, UK officially released NCG CAM v19.0 on 22nd May 2023. This major release sees the addition of new 2-axis Turning functionality.

Other new features include: Trim Surfaces to a Boundary, a new option to specify a final Profile Pass within the Adaptive Clearance Dialog, User Editable Toolsheets, Surfaces can be used to create a Swept Stock Model, Default Macro Folder added and the use of Transparency has been added during Cutter Simulation.

Significant Improvements have been made to Rest Waterline Passes, Radial and Spiral Passes, Rest Finishing Linking, Shallow Area Boundaries and Cutter Contact Boundaries.

The Drilling functionality has also been enhanced further by supporting Slocombe Style Drilling Centre Drills, a new option to define shank profiles on drills, detect holes by colour, Min and Max Angle added to Detect Holes, as well as improvements to dialogues and the Operation Tree display.

Geometry Improvements such as Significant Import Speed Increases, 3D Trimming for IGES Files and Changing the Colour of Triangulated Surfaces are included.

Multiple Significant Improvements have been made to the Graphics, Enhancements to the 3D Tool Guide and a few other General changes.

Additional developments will follow in NCG CAM v19 point releases to enhance the Pencil Passes, which will improve the Theoretical Rest Boundaries, Cutter Contact Boundaries and Rest Corner Finishing. Rest Area Clearance Linking will also follow in a v19 point release.

A demonstration version of NCG CAM v19.0 is now available to download:

<https://www.ncqcam.com/demo-download/>

Long awaited 2-axis Turning has been added to the Basic module of **NCG CAM** and is **included** in the price; there is no additional charge for this module. This adds value to existing Users with active software maintenance and opens the door new Users who have a requirement for Turning, as well as Milling.

The 2-axis Turning includes:

- Facing
- Rough Turning
- Finish Profiling
- Grooving
- Centreline Drilling
- Parting Off
- User definable Chucks

2-axis post-processors are included in Macro format with customisable Turning Tool libraries.

- **Facing** can be achieved using predefined Stock or using the finished part with pass extensions. There are options available for Rough facing using multiple passes or Finish facing in one pass.
- **Rough Turning** includes Undercut protection and can be used for roughing side or front contours.
- **Finish Profiling** also includes Undercut protection to avoid Tool Holder collision on the trailing edge whilst turning.
- **Grooving** can be achieved in single or multiple passes with chip-breaking or full depth cut options.
- **Centreline Drilling** now supports 'Slocombe' Style centre drills with all available sizes pre-defined. Centreline Drilling includes Peck Drilling and Chip Breaking.
- **Parting off** options include single pass or multiple pecks to clear the swarf.

Surfaces can now be trimmed to a Boundary; this new feature provides additional modelling capability and can be useful where additional features need to be added or surfaces corrected after import.

A new option to **specify a final Profile Pass within the Adaptive Clearance Dialog** has been added. This option will hold the cutter off the finished part whilst creating the clearance passes and can be performed either after each depth of cut, or at the end of the clearance passes. Any specified thickness allowances will be respected leaving the cut size as required. This option will provide a better surface finish where required.

The Drilling functionality has been enhanced; 'Slocombe' Style **Centre Drills are now supported** in both Turning and Milling. New Cycles for Centre Drilling will automatically select the correct tool shape with pre-defined options for all standard sizes.

A new option to define **Shank Profiles** on Drills has been added (with the exception of Slocombe Centre Drills). This will help when using Micro-Drills as the defined shank is also gouge protected.

When **detecting holes** and creating **drilling data**, it is now possible to use **Colours for easier identification** and as a search criterion. This will avoid duplication of hole selection and works in conjunction with size to precisely identify the required geometry.

The **default colour of Blind holes has been changed in Hole Detection** from Brown to Orange to make them easier to identify.

Additional options for Min and Max hole angle have been added to the Detect Holes dialog. This option is used in conjunction with the Restricted Axis to avoid the selection of unwanted holes when using a combination of filtered A,B and C axes with the Restricted selection.

New graphics have been added in the Drilling Cycle Dialog, with the drill overlaid over the hole for depth checking. Also, the colour denotes Blind or Through holes for easier identification.

The Operations Tree **display of depth adjusted Drilling operations will now be displayed correctly**. Depth adjustment is used for Through Holes to allow the tip of the drill to pass the bottom face leaving a clean edge; this additional depth will now be displayed for easier identification.

A **New option for User Editable Toolsheets** is now available from the drop-down Toolsheet Menu. Toolsheet image options now also include Ordinate Dimensions for Multi Views. A new Dialog is presented to the User and automatically populates the required data information. User-defined Templates can then be selected from the Template Folder; 3 samples are included with the Software Installation.

The accuracy of **Rest Waterline Passes has been improved**; **NCG CAM V18** Rest Waterline Passes could sometimes appear 'Stepped'. **NCG CAM V19** shows much smoother and more accurate passes resulting in a better toolpath.

It is now possible to **set the Centre points of Radial and Spiral passes** using the Left Mouse clicked into the Graphical area. Also, improvements have been made to the quality of Spiral passes generated with tighter Tolerance values, giving a better surface finish.

Rest Area Clearance and Rest Finishing toolpaths have been improved to **reduce the Rapid Retracts**. The effects of the improvements can be seen more clearly on Vertical walls. Rest Finishing Linking is included in **NCG CAM V19**; Rest Area Clearance Linking will be included in a V19 Point Release.

The use of **Transparency has been added during Cutter Simulation** and is activated using the Rendering Style buttons in the View Menu. This option will allow greater visibility of the Stock removal during machining whilst having a visual background of the finished part.

The **option to add Comments to a Tool's Advanced Pages** has been included. These comments can also be stored in the Tool Database and can optionally be output into the Post Processed Tape File. This additional feature will provide greater accountability for important tool information as well as continuity between the Tool Library, Tape file and the Machinist.

A new folder has been added during the installation of the software for the User to **store regularly used Macros**. Any folder can be specified in the Options > Defaults settings allowing for quicker access of personalised macros with less searching.

Loading Geometry files is now much quicker with the use of multi-Threading in the loading phase. This increases the number of available processors used during the operation and speeds up the process significantly.

Improvements have also been made to the speed of loading a saved Database. When loading a stored DCA file, there will be a noticeable reduction in the time it takes to load and display the database information on screen.

When Importing IGES files, it is possible to **change the surface trimming to 3D** in the Options > Preference > Open File dialog. Convert to NURB is used to provide preferred surface types for 5-axis machining. Adding the 3D trimming will give better results when importing IGES geometry.

When **Re-Triangulating Surfaces**, it can be advantageous to **change the colour** to help quickly identify the different surface sets. Within the Triangulated Surfaces properties, it is now possible to change the colour with an additional Colours option.

To create **Revolved Stock**, it is **no longer necessary to include a Point as reference** if you require the creation around the Datum. A Point can still be selected if you require a different centre point for the revolution. Surfaces can also be used to create a Swept Stock Model. The Axis of rotation is dependent on whether you are in Turning or Milling.

Shallow Area Boundaries have been significantly improved to create a smoother result, therefore providing improvements to Constant Stepover passes in shallow areas. These improvements will also provide **better results for Cutter Contact Boundaries**.

Improvements to Pencil Pass creation will provide **better Theoretical Rest Boundaries**, as well as **improved Rest Corner Finishing**. These improvements will be available in a Point Release of V19 providing more continuous Pencil paths and smoother Theoretical Rest boundaries with better Corner Rest finishing, both of which are based on the Pencil Pass calculation.

Translucent Planes have been added to help graphically identify the Min and Max limits within dialogs. Additionally, **translucent Cylinders have also been added** when creating Revolved Stock models. This new option provides greater graphical interaction with the dialogs with visual confirmation of the correct values being entered. It is possible to switch off this option if preferred in the Right Mouse Context Menu.

Multiple updates to the Graphics have been included in V19, significant improvements should be noticeable in:

- Dragging Boxes
- Completed operation displays
- Individual surface selection on large parts
- Box selection of large parts
- Organising the Operation Tree
- General improved performance in the Operations Tree.

3D Tool Guide rotations can now be enabled using the Drilling Folder angles rather than having to create a separate Boundary Folder.

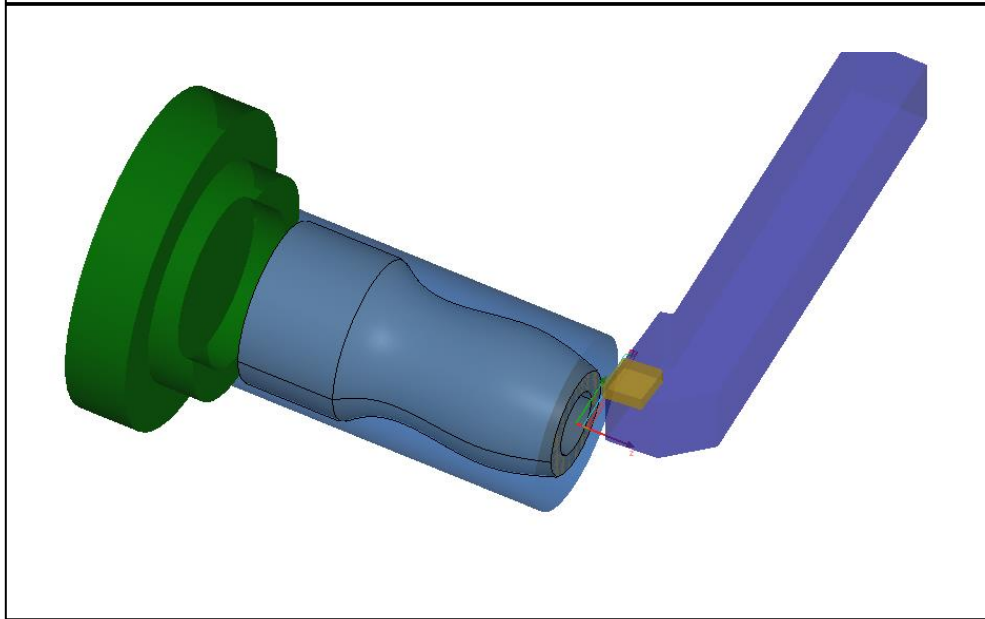
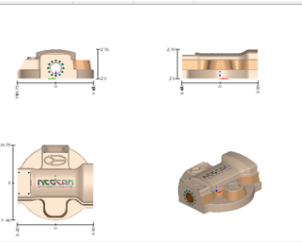
The **Auto-save** Macros and Auto-save Database functions now include information from all open Graphics Windows in any given session; in previous versions, only the current active window was saved.

The latest version of the Datakit libraries which contains the **translators for Parasolid and NX has been upgraded** to their latest version 2022.4. This will keep the translators at the same level as the current software ensuring compatibility.

Pictures – NCG CAM V19.0

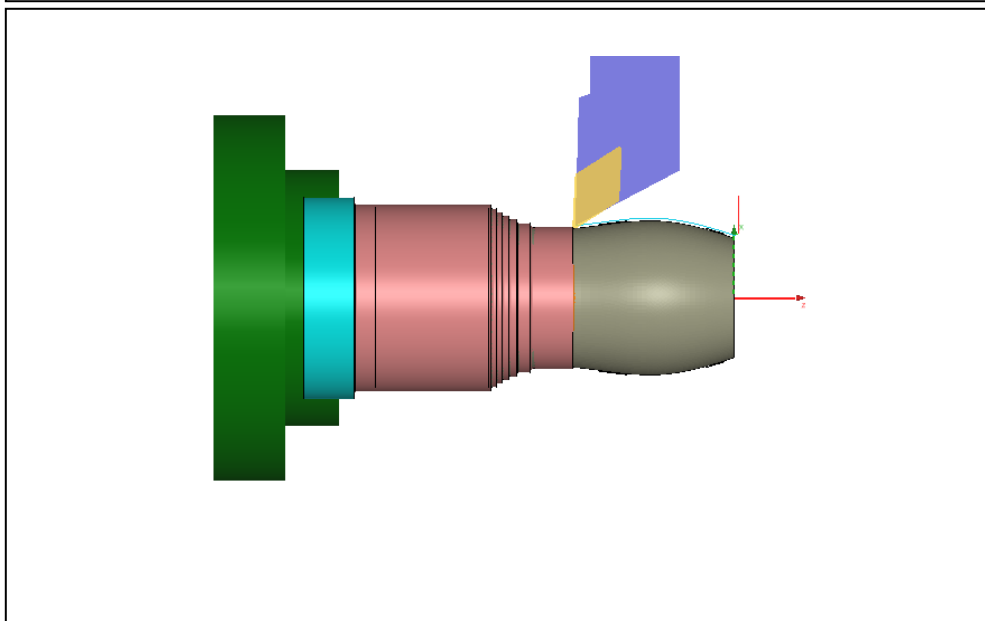
Project Comments		Tool Path Limits			
		Minimum	-114	-113.999	0.005
		Maximum	114	115.75	80
Part Limits					
		Minimum	-90	-90	0
		Maximum	90	91.75	70

Op. No.	Operation Name	Tool No.	Tool Description	Diameter	Corn.Rad	Speed (rpm)	Feed (mm/min)	Thick XY	Thick Z	Est. Time
1	Core Roughing Toolpath 1 [20x3.5, 0]	1	Toroidal[20x3.5 40, 0]	20	3.5	2400	1200	0	0	01:40:12
2	Rest Area Clearance Toolpath 1 [10x1, 0.5]	2	Toroidal[10x1 20, 0.5, 0]	10	1	4800	1000	0.5	0.5	00:25:38
3	Rest Area Clearance Toolpath 2 [6x3, 0.5]	3	6mm Ball Nose	6	3	8000	1000	0.5	0.5	00:45:50
4	Spot Drilling Cycle Toolpath 1 [8,13.262 de	4	Drill[8, 90ºx25.2]	0.1	0	5600	600	0	0	00:00:02
5	Deep Drilling Cycle Toolpath 2 [4.2,13.262	5	Drill[4.2, 118ºx25.2]	0.1	0	10000	250	0	0	00:00:18



**Above – Editable
Toolsheet**

**Left – 2-Axis
Turning - Facing**



**Left – 2-Axis
Turning – Finish
Profiling**

About NCG CAM Standalone 3D HSM CAM Software

NCG CAM is a stand-alone CAM system offering an easy to use HSM CAM solution that integrates with existing CAD and CAM systems.

NCG CAM boasts many innovative features. It is suitable for all types of forms, creating an optimised, smooth cutter motion ideal for 3D HSM, which will help to extend tool life, minimise wear on the machine tool and producing parts with an excellent surface finish.

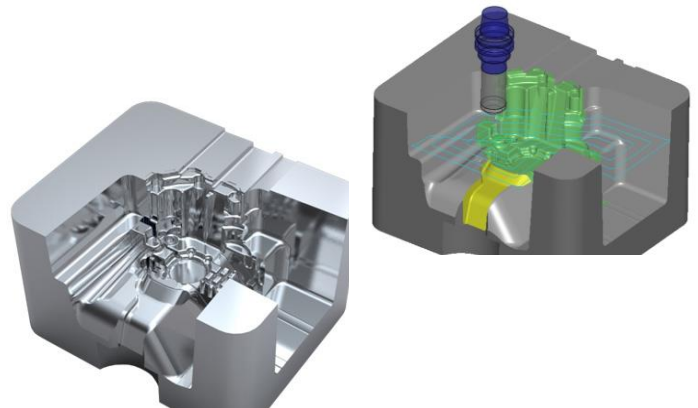
NCG CAM has a very 'user-friendly interface', with a typical learning curve of just 1 day required to machine a live job. It is perfect for the high-speed machining of moulds, dies, prototypes and precision surface machining.

Features:

- Very 'user-friendly interface' – making it suitable for even occasional users
- **NCG CAM** offers many advanced 3D machining routines, rest roughing & 3 + 2 capabilities for all toolpaths, a simultaneous 5-axis add-on module is available
- Fast and efficient roughing strategies, including core roughing and adaptive clearance
- Comprehensive drilling routines – includes automatic hole detection and / or user defined holes
- All machining routines are fully gouge protected for both the cutter and the tool holder
- Rest area option for finishing strategies to minimise any air cutting
- **Perpetual Licenses are available and will NOT be discontinued**

Key Benefits:

- Stand-alone CAM software that is compatible with **ANY** other CAD package
- Extremely easy to use with just 1 day's training required to machine a live job
- Ideal for shop-floor programming
- Gouge protection for cutters and holders
- All post-processors are written in-house
- Powerful 3D machining
- Toolpaths optimised for HSM
 - Increased efficiency
 - Reduced wear on machine
 - Extended tooling life
- Saves time and money!



A demonstration version of the **NCG CAM** software, is available to download - <https://www.ncgcam.com/demo-download/>

The demonstration version of **NCG CAM** has unlimited usage and while there are restrictions to the machining output, it can also be used in its basic form as a **FREE** .iges viewer.

Operating system compatibility: Windows 10™ onwards on a 64-bit platform, 8GB RAM (minimum).

About NCG CAM Solutions Ltd

Established in Cambridge, UK, **NCG CAM Solutions Ltd** provides CAM software solutions, offering all the tools needed to manufacture prototypes, models, moulds, dies, patterns and finished products. Our specialist area is 3D HSM CAM with our product **NCG CAM**.

All our staff have a wealth of CAM experience, having worked in the CAD/CAM and engineering industry for many years. In particular, every member of our support team has worked on the shopfloor using CAM software on live jobs, enabling us to provide an excellent back up and support service for the software.

Established in June 2009, NCG CAM Solutions Ltd has a rapidly growing global reseller base, with resellers for NCG CAM in UK, Germany, Portugal, Spain, Czech Republic, Slovenia, Slovakia, Poland, Hungary, Romania, Serbia, Croatia, Norway, Turkey, Italy, India, Russia, Ukraine, Hong Kong, Singapore, China, Taiwan, Japan, South Korea, Thailand, Philippines, Vietnam, Indonesia, Malaysia, Australia, New Zealand, Brazil, Mexico, South Africa and across USA and Canada.

To contact a reseller or to download the demonstration version of **NCG CAM**, visit www.ncgcam.com . Alternatively contact Estelle Dunsmuir for more information – estelle@ncgcam.com or call +44 (0) 1223 236408 / +44 (0)1353 699840.

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