



PRESS RELEASE

NCG CAM v15.0 is Officially Released Download a Demonstration Version Now

NCG CAM Solutions Ltd, UK officially released NCG CAM v15.0 on 21st June 2016. This major release includes a number of new features including additional functionality to UV passes and UV passes linking, toolsheets now include images, 5-axis roughing, T-slot cutters can now be used in 5-axis, as well as many new user interface features and enhancements.

A demonstration version of NCG CAM v15.0 is now available to download:

<http://www.ncgcam.com/demorequest.html>

In **NCG CAM** v15.0 new functionality has been added to the UV Surface Machining, which now tries to preserve the original order of surface selection when creating UV machining passes. By selecting the surfaces sequentially to create a chain, the user will minimise any retracts and rapid moves.

An Intelligent Bidirectional **Linking option for UV Passes**, has been added to facilitate the best linking order for passes that run perpendicular to adjacent selected surfaces.

There is a fundamental improvement to the **User Interface** and the way the dialogues work in v15.0. Previously if a dialogue was open, then no other dialogues would be available; also no further actions could be executed in the 'Graphics Window'. The new behaviour allows multiple dialogues to be open, but more importantly, the User will be able to interact with the Graphics Window to recover coordinates.

An example of the User Interface changes is when hovering over the surface data the Z cursor value will be able to be recovered and used to populate various parameter fields. Also, the current cursor positions can be snapped to the wire frame model geometry; two positions could be used to define the machining direction vector in the Raster pass strategies.

Another example is when reviewing a plan using the 'Properties' you no longer need to use the Ctrl / Shift keys to get extra options, as they are now on the dialogue itself. However, the Ctrl / Shift keys can still be used to set the default options on the dialogue.

A ruler has also been added to the machining passes Tool page to help visualise the length of the cutter and holder. A new option has been added to the graphics toolbar to allow rendering with translucency and multiple selected plans can now be moved by drag and drop within the tree view.

Another new option has been added in v15.0, to enable '**Auto-saving**' of an **NCG CAM** database (dca) at a pre-set elapsed time. The existing backup macro function remains in place.

NCG CAM v15.0 will now allow **dynamic rotation** about a given point or view. When zoomed in, this enhancement will allow rotation of the part around the centre of the screen, keeping the part in view.

It is now possible to **align the toolbars**, either along the top, as before, or down the left or right side. This allows the user to make better use of the screen space for wide format screens on Laptops, etc.

Users can now utilise the '**Three Point Align**' in the view menu. This will allow the view to be aligned using three points contained in a points folder. This can be useful for 3+2 work, where it is not possible view normal to a surface and where dynamically rotating the view would not be accurate enough.

A new section has been added to the **toolsheet**, giving an image and details of each tool used.

NCG CAM v15.0 will now allow a **horizontal arc to lead off**, in order to get the cutter away from the part when it retracts against vertical walls, which could damage the cutter tip because of the rapid retract federate and leave a mark on the part.

It is also now possible to set different start and end 'Home Point' locations in the **Linking**.

NCG CAM can now **Convert Points to Curves**. With a points folder selected, the Curves dropdown menu will offer 'Convert to Curves' as an option; the points in the folder will be joined in the order they are listed. This feature can be used to create tool axis tilt-through curves when generating 5-Axis along-curve toolpaths or 5-axis swarf toolpaths.

The **Cutter Animation dialogue has been improved** to include video style buttons to control the toolpath animation. A 3+2 axis toolpath now automatically displays the ABC rotations as defined by the toolpath boundary. With 5-Axis toolpaths the user can select the rotations displayed from a toolbar, so the rotations match the machine.

Additional new functionality has been added to the cutter animation. When the toolpath animation dialogue is visible, double clicking on the toolpath will reposition the cutter to the mouse hit position. Alternatively, the user can use the new **Jump to XYZ** option in the Cutter animation dialogue to position the cutter along the toolpath.

New **curve modification functions** have been added. "Auto fit plane" is an option that flattens a 3D curve onto a calculated plane. The "Offset" curve function performs a 2D offset to closed planar curves.

In the **NCG CAM v15.0** the 5-Axis Add-on Module, it is now possible to **select tilt curves** when creating 5-Axis Swarf Toolpath. This will allow the tool axis to be aligned with the curve to give better control of access to some areas.

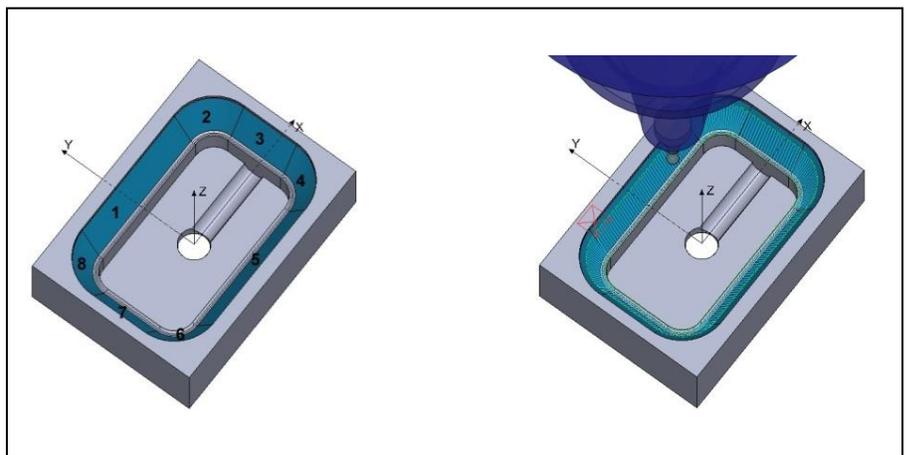
It is also now possible to use **T-Slot cutters** in 5-Axis machining plans, as well as Lollipop and Dove-Tail cutters.

A new **5-Axis Roughing** operation has been added to rough out pockets and multi-surface geometries. The inputs are contained in three folders, one each for the floor, the walls and finally the ceiling surfaces. Optionally, boundary curves can be used to localise the generation of the roughing toolpath. The Offset-Based strategy will allow for offsetting from the ceiling, the floor, or to morph from one to the other. A 5-axis Adaptive toolpath will follow in a later point release.

A Stock Model can now also be supplied as an input to the 5-axis toolpath. The Surfaces folder must firstly be converted into a Stock Model; the toolpath **will then be edited** back to the stock model to give a 5-axis Rest Roughing toolpath.

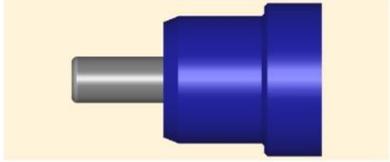
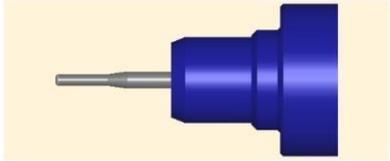
Picture – NCG CAM V15.0

Right – UV Passes & Passes Linking

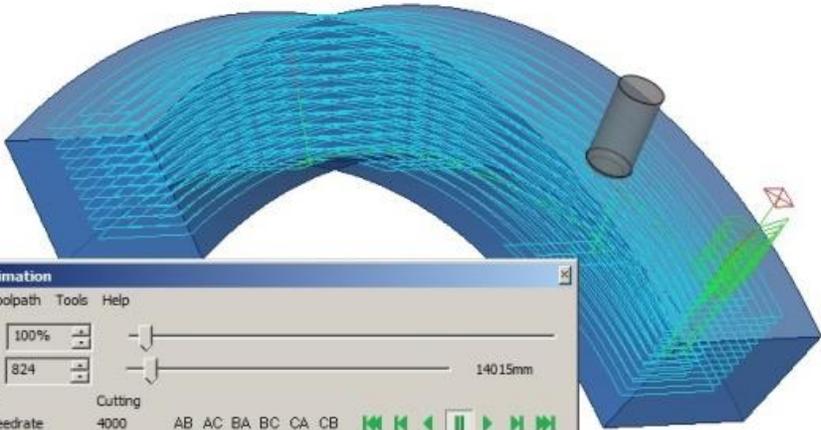


Picture – NCG CAM V15.0

Below – Toolsheets Now Include Images

Tool number	1	
Tool type	Toroidal	
Cutter name	Toroidal[16x2 32, 0.5]	
Cutter diameter	16	
Corner radius	2	
Taper angle	0	
Number of teeth	2	
Flute length	2	
Body length	32	
Cylindrical length	32	
Tool cutting time	00:18:37	
Tool name	Toroidal[16x2 32, 0.5] + BT30 Multi Lock - C16 55 long	
Tool holder	BT30 Multi Lock - C16 55 long	
Holder details	0 0 40 0 44 5 44 34 46 35 51 35 53 36 53 55	
Back to summary		
Tool number	5	
Tool type	Toroidal	
Cutter name	Toroidal[4x1 40, 0.5]	
Cutter diameter	4	
Corner radius	1	
Taper angle	0	
Number of teeth	2	
Flute length	1	
Body length	40	
Cylindrical length	18	
Tool cutting time	00:06:13	
Tool name	Toroidal[4x1 40, 0.5] + BT30 Multi Lock - C12 55 long	
Tool holder	BT30 Multi Lock - C12 55 long	
Holder details	0 0 26 0 30 5 30 28 31 28 35 30 35 37 37 38 51 38 53 39 53 58	

Below – 5-Axis Roughing



Cutter Animation

Cutter Toolpath Tools Help

Feedrate: 100%

Position: 824 14015mm

Path type: Cutting

Nominal Feedrate: 4000 AB AC BA BC CA CB

Estimated Time: 00:03:30 XYZ: 0 0 0

A 0.0000 B -25.7708 C 0.0000 X -54.6426 Y 5.9996 Z 111.2951

About NCG CAM Standalone 3D HSM CAM Software

NCG CAM is 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.

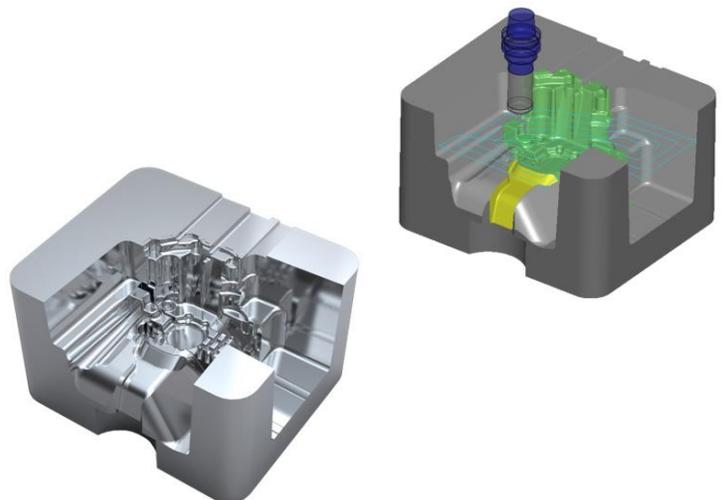
NCG CAM has a very user-friendly interface, with a typical learning curve of just 1 day is required to machine a live job. It is perfect for the high-speed machining of moulds, dies, prototypes and precision surface machining.

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 tool-paths, 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
- Available as both 32-bit & 64-bit versions (both are multi-threaded)

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
- Tool-paths 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 - <http://www.ncgcam.com/demorequest.html> . 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.

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 shop-floor 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, Spain, Netherlands, Slovenia, Slovakia, Poland, Hungary, Romania, Serbia, Croatia, Norway, Turkey, India, Ukraine, UEA, Russia, China, Taiwan, Hong Kong, Japan, South Korea, Indonesia, Thailand, Vietnam, Australia, Brazil, 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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