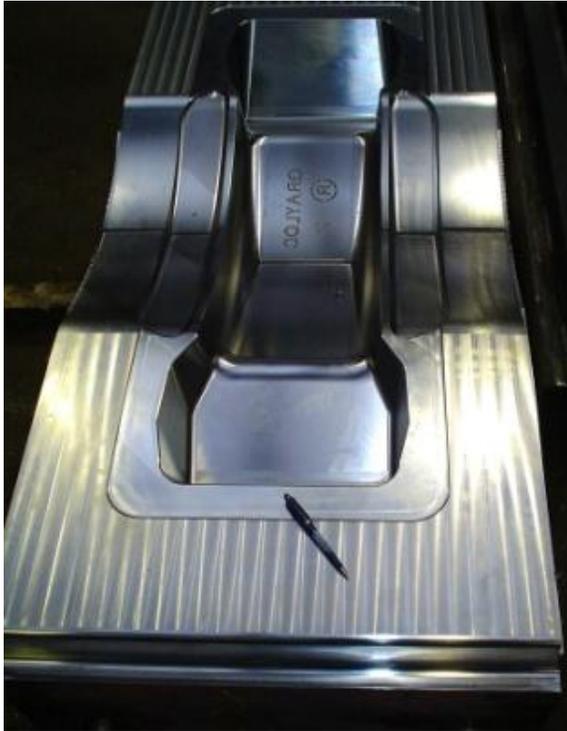


# **NCG CAM**

**NCG CAM Solutions Ltd.**



## **NCG CAM for Shop Floor Programming**

*Images courtesy of Dynamic Die &  
Steel (Sheffield) Ltd, UK*



**Save Time, Save Money  
Increase Profitability**

## NCG CAM for Shop Floor Programming

### Key Benefits of NCG CAM

NCG CAM is perfect for the high speed machining of moulds, dies, prototypes and precision surface machining.

- Stand alone CAM software that is compatible with most other CAD package
- Extremely easy to use with just 1 day training required to machine a live job
- Ideal for shop-floor programming
- Powerful and reliable 3D machining
- Optimised toolpaths for high speed machining
  - Increased efficiency
  - Reduced wear on machine
  - Extended tooling life
- Saves time and money !!



### Target Engineering Industry Sectors

Mould & Die  
 Core / Cavity Machining  
 Die Casting  
 Jewellery

Modeling & Prototyping  
 Injection Mould & Blow Moulds  
 Electrode Machining

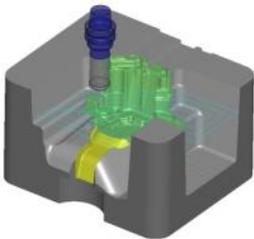
Medical Parts  
 Motorsport  
 Forging Die



### Main Features of NCG CAM

- Easy to learn and use
- Quickly computes efficient, reliable toolpaths for even the most complex geometries, with highest quality surface finishes
- Assembles all precision high-speed machining processes into a single package:

- Fast , robust and reliable 3-axis machining
- Support for 3+2 machining (5-axis positioning)
- High-speed machining strategies, optimised approach, exit and connections for roughing, rest-roughing, finishing, rest milling and more
- Tooling library with material/feed/speed/cutting conditions
- Stock models allow visualisation the part after each machining step
- Post-processors included for many machine controls. Easy to customise post-processor from a GUI



- Add-on simultaneous 5-axis module is available
- Add-on machine simulation module available for basic module. Included with add-on 5-axis module
- Supports multiple CAD systems and data formats
- Extends tool life and reduces wear on machines with its optimised toolpaths, feed-rate optimisation, and anti-vibration capabilities

**What is Shop Floor Programming?**

Many manufacturers and specialist sub-contractors program their CNC machine tools away from the shop floor. Off-line programming in a separate department using some form of CAM system has become the standard way to generate and also modify part programs for large numbers of components.

However, there are other factors to consider if you are looking to optimise all-round manufacturing performance and standards:



- Flexibility
- Rapid response
- Cost effectiveness
- Being able to capitalise on operator skills
- Type of work - small batch runs, one-offs, prototypes and complex moulds and models do not easily lend themselves to off-line programming.

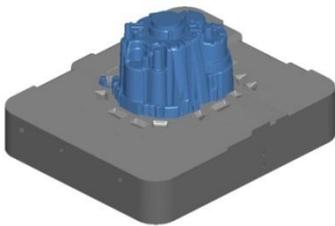


**Benefits of using NCG CAM for Shop Floor Programming**

**NCG CAM** is an extremely easy to use, yet advanced CAM system that allows machinists to read in the most complex 3D parts and visualise the details. This enables operators to plan the most efficient cutting strategy.

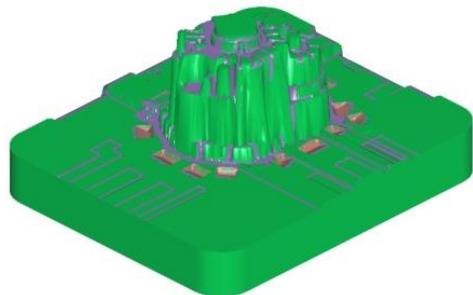
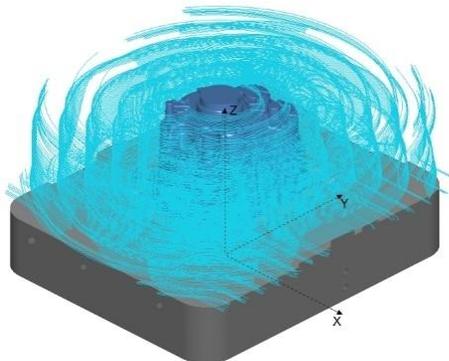
Some benefits found by customers introducing **NCG CAM** have been:

- Able to combine the CAM programming department with the CNC department



- Can create programs directly on the shop floor faster and significantly reduce lead times
- Shorter programming cycles as can easily make toolpath modifications at the machine tool
- Reduced delivery times of parts
- Can utilise staff from the CNC department more efficiently, whilst increasing productivity and efficiency standards

- Accurate toolpaths improve the quality of the tooling
- Ease of use allows users to be easily training and productive very quickly



## Somers Forge Increase Productivity up to 10 X by Utilising NCG CAM for Shop-Floor Programming

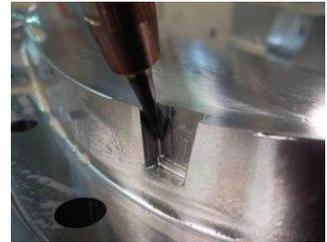
### About the Company

With over 130 years experience in heavy engineering, Somers Forge, West Midlands, UK is one of the leading open die forge masters in Europe, working in a variety of materials ranging from carbon steel through to super alloys and specialised nonferrous alloys.

Somers Forge satisfies a wide range of requirements for world industry using its comprehensive in-house facilities, including marine, power, oil, defence and aerospace and are exploring more avenues such as mould & die machining.

### Requirements

Somers Forge was looking for an easy to use, reliable CAM software package suitable for shop floor programming, that was compatible with SolidWorks and their DEPO machine tools.



*Right - Using 3+2 with small cutters to minimise spark erosion*

### Results from Purchasing NCG CAM

- ✓ Introducing CNC machines with **NCG CAM**, allows drilling & milling on the same machine tool and by using the 3+2 eliminates further operations on parts. Jobs have been reduced from 300 hours to just under 30 hours.
- ✓ Simple to program at the machine tool, allowing users to open the model and create the program in minimal time.
- ✓ Ease of use and reliability of **NCG CAM** means users are confident running lights out machining, saving valuable time.
- ✓ Easily able to diversify the type of work that they offer from forgings to mould tools.
- ✓ Able to dedicate one machine tool to roughing and carry on with other operations on the other machine, such as rest roughing, 3+2 axis and trimming back to stock models, so utilising both machines to their maximum capacity.
- ✓ Drilling is very good for drilling multiple holes; it takes just a few mouse clicks to drill 500 holes.
- ✓ Easy to drill multiple holes that have different depths, but the same diameter, using just one command.
- ✓ When drilling using 3+2 axis, do not need to worry about the angle of the hole, as **NCG CAM** always finds the correct place.

**“Somers Forge has established an international reputation for successfully combining the very best technology, such as NCG CAM, with traditional quality skills.”**

**Stephen Abbott, CNC Supervisor**



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## Adopting NCG CAM on the Shop-floor Reduces Machining Lead Times by up to 95% for Dynamic Die & Steel (Sheffield) Ltd

### About the Company

Established since 1970, Dynamic Die & Steel (Sheffield) Ltd, Sheffield, UK, provide a complete sub-contract solution, specialising in medium to heavy machining of large forge tooling for a variety of industries including aerospace, mining and transportation.

### Requirements

Dynamic Die & Steel (Sheffield) Ltd were looking for a shop-floor CAM system suitable for their high speed machining centres, that would address the rapid turn around required when producing very large forging die tools.



### Results from Purchasing NCG CAM

- ✓ Machining lead times have been significantly reduced from 8 weeks down to just 2 days
- ✓ Operators can make modifications straight away, by using the software on the shop-floor, saving time
- ✓ The amount of benching has been minimised, as the smooth cutter paths produced by **NCG CAM** give excellent surface finish
- ✓ Training of additional staff is no longer an issue, as **NCG CAM** is so easy to use

**“NCG CAM is a very powerful 3D programming system. The speed with which we create the very large cutter paths required in the production of 2 metre die impressions is incredible and has enabled us to operate lights out machining on our high speed machine tools.**

**Most of all, our customers have been astounded by how quickly we can turn round a suite of tools, which allows us to keep our pricing very competitive.”**

**- Andy Farmer, Managing Director, Dynamic Die & Steel (Sheffield) Ltd**

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