



PRESS RELEASE



Merrem Kunststoffen B.V. Rapidly Expands their Business using NCG CAM Simultaneous 5-axis alongside IronCAD

Established in Dinxperlo, Netherlands in 2006, Merrem Kunststoffen B.V. is a supplier of technical plastic semi-finished components for different sectors including automotive and machine builders. Merrem Kunststoffen B.V. is a part of the Merrem Kunststoffen Group who is a leading supplier of plastic components and technical rubber parts.

With their own in-house Machining Department, Merrem Kunststoffen B.V. offers the complete design to manufacture process, continually improving the innovative CNC machinery to retain their position as the most advanced supplier of the market, with each machine tool specialising in a different area.

Merrem decided to invest in a 5-axis CNC machine tool to expand their machining capabilities to their customers, but on purchasing the machine tool, they found it difficult to find a good 5-axis CAM software package, that could also work well with CATIA part files.

NCG CAM was recommended to Merrem by one of their customers, who was using it alongside CATIA and said **NCG CAM** was affordable, easy to use and user friendly; so Merrem decided to evaluate **NCG CAM**.

Having evaluated **NCG CAM**, Merrem was very pleased with the simultaneous 5-axis capabilities, as they previously could only do 3+2 axis. One thing that really impressed them was the way that the 5-axis in **NCG CAM** automatically checks for collisions. If **NCG CAM** detects a potential collision with the head of the machine tool, it will tilt the machine tool head on its side, whilst still keeping the cutter on the part; this is something that Merrem had not seen in many CAM software packages.

Merrem produces many large automotive parts, including for the inside of a wheel which can be up to 1500mm high. This part is machined using a ball-nosed cutter, with very large machining calculations of 2 - 3 million lines of

machining code, so calculation times and also surface finish are important. The evaluation proved that calculations that had taken hours before, took just 50 minutes with **NCG CAM**.

Merrem also found that **NCG CAM** worked very well alongside the IronCAD software that they had; they initially purchased IronCAD 2 years ago to repair broken STEP files that they receive from their customers.

IronCAD is able to automatically recover broken files, by simply opening the broken file in IronCAD and selecting to fix the file; Merrem found that it works extremely well with CATIA and STEP files. The repaired file can then be read into the CAD software with no problem at all. It is also possible to take a DXF or a DWG file and create a STEP file. This is a very powerful feature in IronCAD and is something that Merrem had not been able to do with other software that they had previously used or evaluated.

Many of the combined CAD/CAM packages available were good at some things, but were weak in other areas. Having a standalone CAD package that works well alongside a standalone CAM package, gave Merrem a very strong solution, as both products are very focused in their speciality fields.

Examples of products that Merrem now manufacture using IronCAD and **NCG CAM** together:

Moulds for making:

- Wheel house liners
- Engine compartments
- Luggage compartments
- Roof liners
- Poultry farming machinery

Since installing **NCG CAM** alongside IronCAD, Merrem Kunststoffen B.V. has seen the following results:

- ✓ Can now manufacture larger and more complex products that could not make before, utilising the simultaneous 5-axis capability in **NCG CAM**. Before purchasing **NCG CAM** it was only possible to work in 3+2; since customers have heard that Merrem has these new capabilities, 5-axis machining has increased from once a week, to daily, rapidly expanding their business.
- ✓ Parts can be created and machined much faster utilising IronCAD and the fast tool-path calculation time in **NCG CAM**. Calculations that had taken hours before, now take just 50 minutes with **NCG CAM**.
- ✓ **NCG CAM** has reliable collision checking, where it is possible for the head of the machine to automatically tilt if it sees a potential point of collision, but still keeps the cutting tool on the job. This prevents any potential damage to the machine tool head, which could be very costly. This is also important in very tall 5-axis mould tools, some with a Z axis as large as 1500mm, which can be easily damaged.

- ✓ Merrem now run lights out machining producing 80,000 pieces / year utilising robots and cameras on the CNC machines, which would send out a text should any problems occur. This would not be possible if the collision checking in **NCG CAM** software was not reliable.
- ✓ Additional work prompted the purchase of an additional CNC machine to manage the increased workload. **NCG CAM** is now running on a Belotti 5-axis CNC machine and also on Finetech and Hedelius machines. Merrem currently has a total of 17 CNC milling machines, 4 CNC turning machines and 1 9-axis mill-turn machine tool, with operators operating 2 – 3 machines each, across 2 daily shifts. There are currently 4 operators for IronCAD and 4 operators using **NCG CAM** for 5-axis.
- ✓ Merrem has continued their success by expanding their business further into Germany, Estonia and Latvia.

*“For programming some of the CNC machines we use **NCG CAM** in combination with IronCAD. The company uses IronCAD to automatically repair and make adjustments to 3D models, before opening the model in **NCG CAM** to program the tool-paths.*

*We use **NCG CAM** for programming semi-finished products which require 5-axis simultaneous machining. Using these programs together with the Belotti FLA 417 5-axis CNC machine makes the programming of the products a lot easier and faster.*

***NCG CAM** calculates very fast and is good at indicating visually what the machine will do. It is also possible to put in dimensions of the machine head for auto clash detection. The program will automatically twist the machine head to prevent contact with the material.*

*Merrem Kunststoffen B.V. is very pleased with the use of **NCG CAM** and IronCAD for products that must meet the expectations of our customers from different industries.” Says Ramon Leonhardt – Merrem Kunststoffen B.V.*

Pictures –



Figure 1 - Production Plant in Dinxperlo (NL)



Figure 2 – Belotti 5-axis Machine Tool

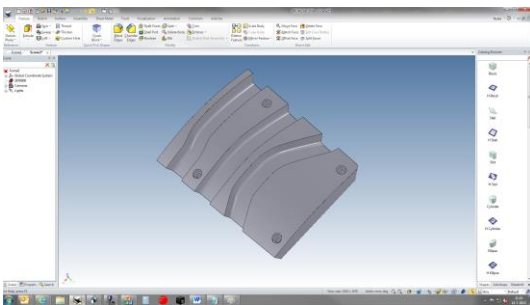


Figure 3 – Designing Part in IronCAD

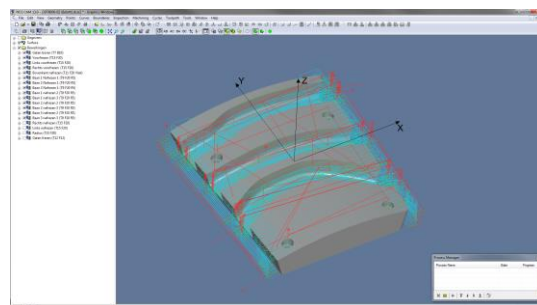


Figure 4 – Programming Part in NCG CAM



Figure 5 – Example Automotive Products



Figure 6 – Example Automotive Products



Figure 7 – Example Products – Poultry Farming Machinery - Machining 5-axis



Figure 8 – Example Automotive Products – Machining 5-axis

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.

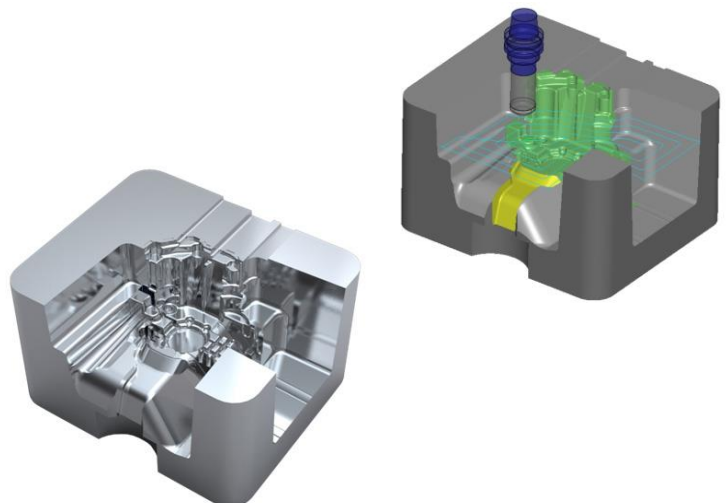
NCG CAM has a very user-friendly interface, with a typical learning curve of just 1 day is required to machine a live job. It is perfect for the high-speed machining of moulds, dies, prototypes and precision surface machining.

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 area 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

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, Netherlands, Denmark, Slovenia, Slovakia, Hungary, Czech Republic, Romania, Bulgaria, Serbia, Croatia, Norway, Poland, Turkey, India, Ukraine, Russia, China, Taiwan, Hong Kong, Japan, South Korea, Thailand, Vietnam, UAE, Australia, Brazil, South Africa, Canada and across USA.

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)1353 699840.

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