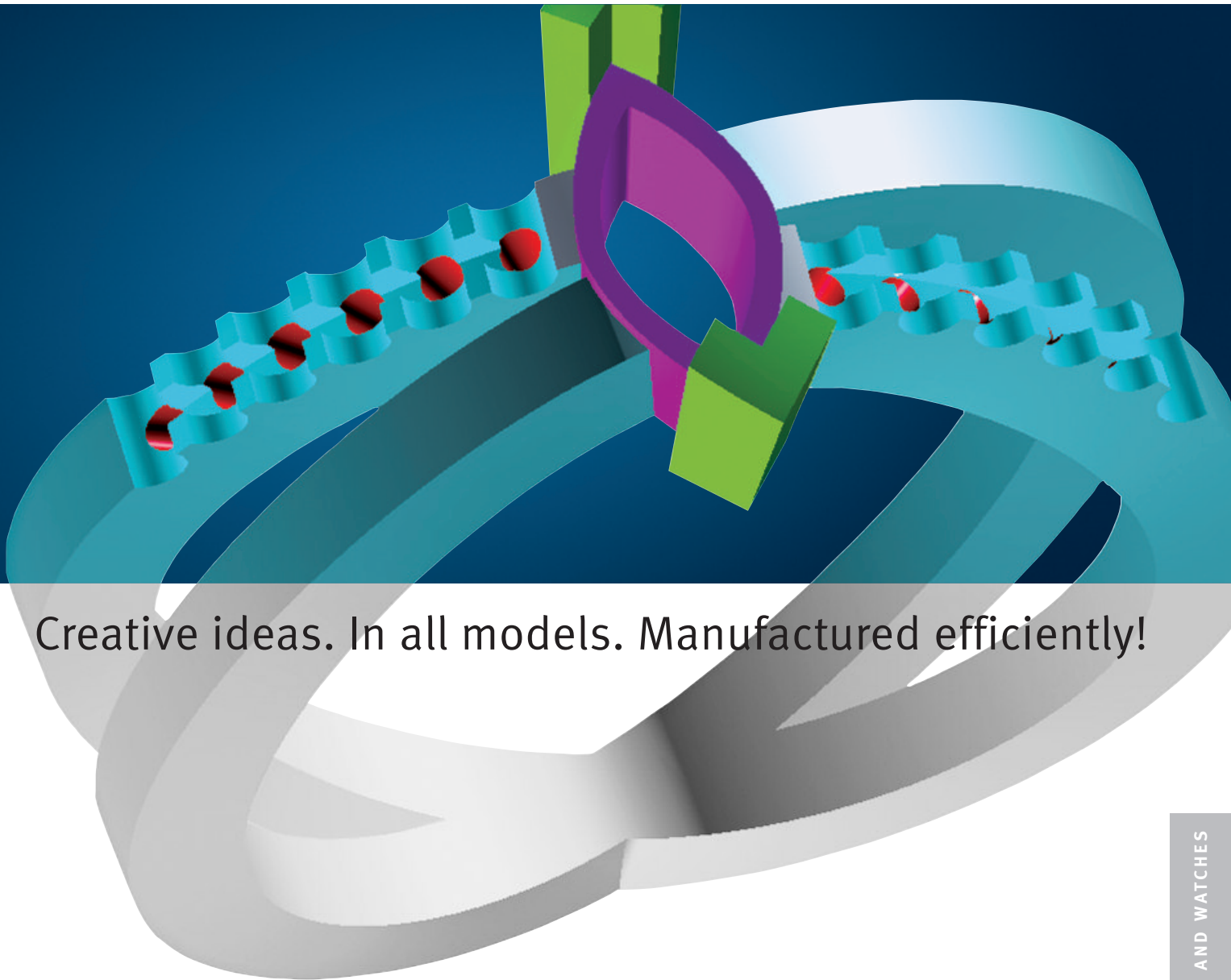


# hyperMILL®

hyperCAD®



Creative ideas. In all models. Manufactured efficiently!

JEWELLERY AND WATCHES



OPEN MIND ■ THE CAM COMPANY



„We design all types of wedding rings with *hyperCAD*<sup>®</sup>, programme the machining with *hyperMILL*<sup>®</sup> and mill the ring directly from the gold or platinum blank.“

**Jeremy Banks, CAD/CAM Diamonds Department at Alfred Terry**  
Alfred Terry & Sons is a leading jewellery manufacturer from north London, who specialises in diamond jewellery.

*hyperCAD*<sup>®</sup> / *hyperMILL*<sup>®</sup> is a CAD/CAM solution that provides a continuous process chain from development through to production. Instead of having to produce a sample for each ring based on a wax model with rapid prototyping, the CAD model is in itself sufficient. The different ring sizes are produced by minimal modification of the CNC data and then milled in just one configuration on the machine. This efficient method enables the company to present new ring models to the market more quickly.



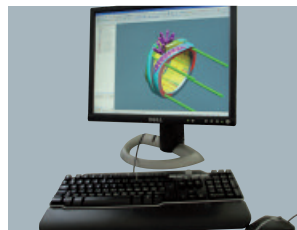


## Flexible, user-friendly and cost-effective

The CAD/CAM solution, *hyperMILL*® in *hyperCAD*®, offers alternative manufacturing methods which make the path from idea to finished product considerably shorter. Ideas for watch and jewellery collections can be produced immediately, at a high quality and with lower overheads. This is possible thanks to an intelligent process chain that takes advantage of the latest CAD, CAM and machining technologies. A high level of productivity, cost-optimised machining and the ability to modify designs flexibly and without expensive samples all contribute to the manufacturer's competitive edge.



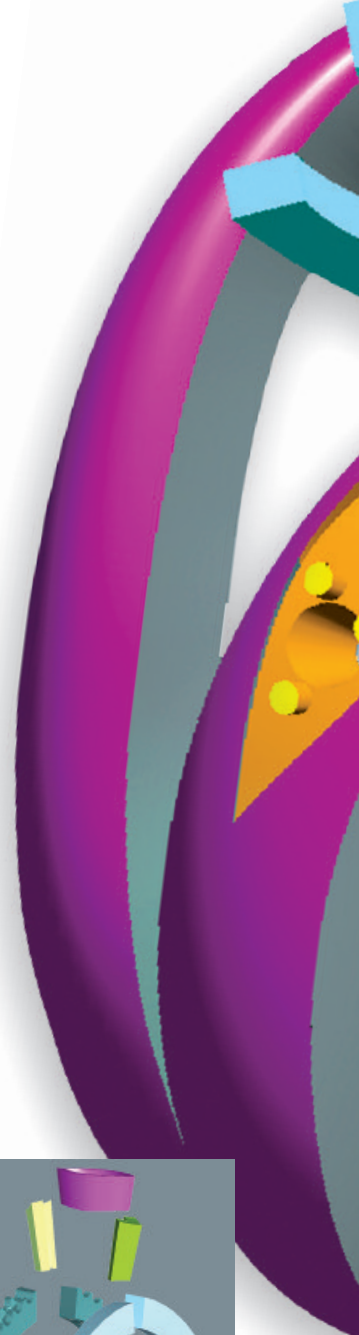
**1 Open to new ideas** Often, new ideas already exist as sketches. Once these are scanned, they can be imported into *hyperCAD*® as STL files. A picture or a sketch can be used as base to create a 3D model. Direct compatibility with many well-known CAD systems means that model data can be imported without any data loss.

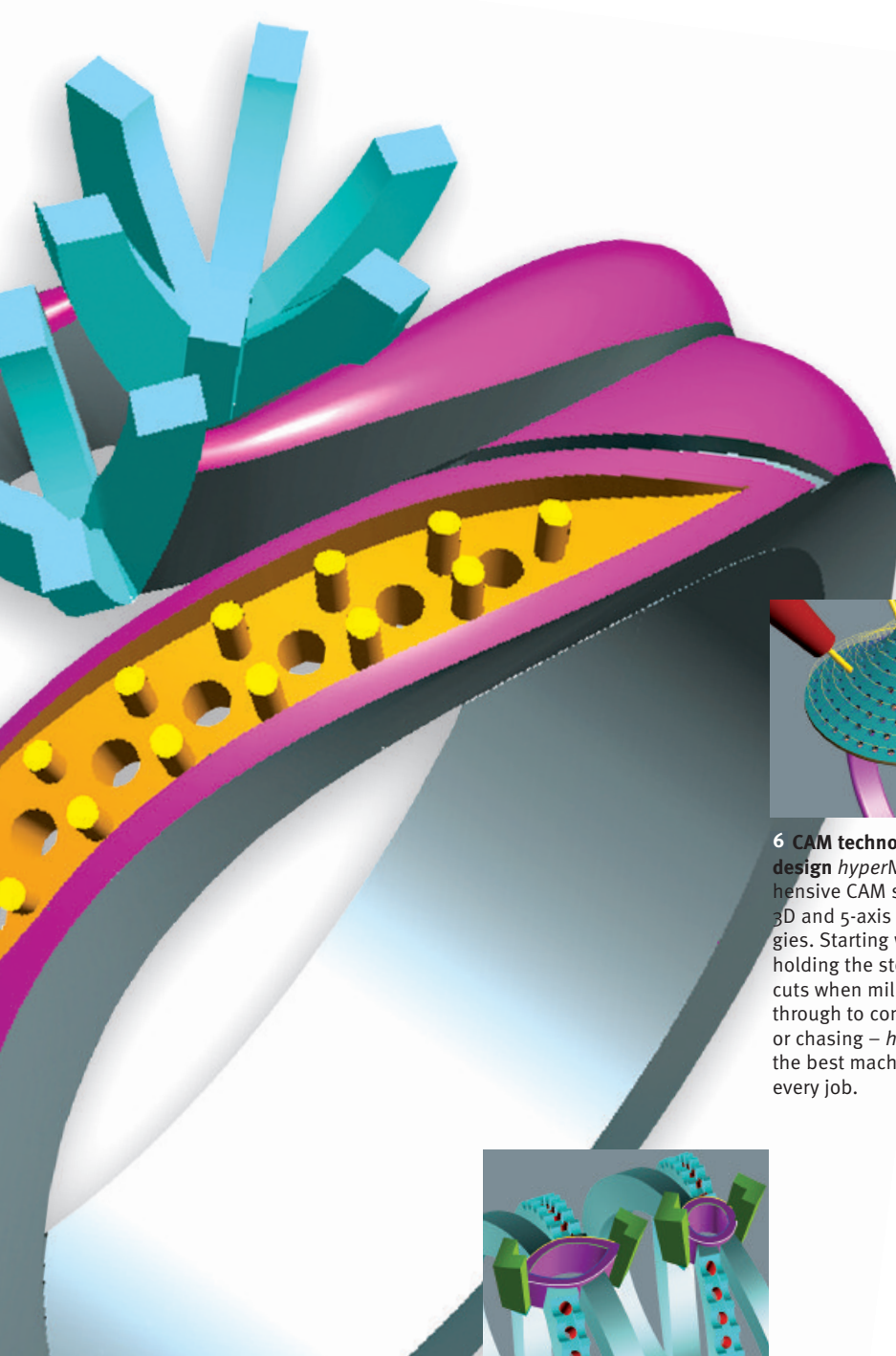


**2 *hyperCAD*® – Creativity without limits** With *hyperCAD*®, you can design, edit and adapt 2D and 3D models and thus be more creative, quicker and more flexible than ever before. Intelligent features automate many job steps and guarantee a maximum level of convenience.

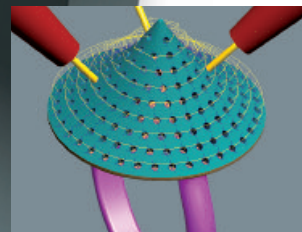


**3 Design made easy** With the „SMART OBJECTS“ feature in *hyperCAD*®, design elements such as ring bases can be stored in a library and used again at any time. Design expertise can be recalled instantaneously, eliminating the need for repetitive, time-consuming set-up tasks.

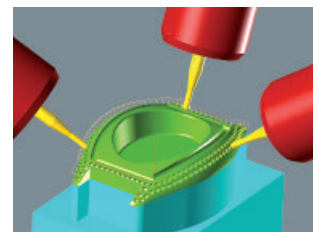




**7 Special 5-axis drilling functions** *hyperMILL*®'s multi-axis drilling functions are especially effective for machining the settings of diamonds and other stones in rings and watch cases. With multi-axis drilling, the different sides and tool angles of the drilling job can be programmed automatically. Identical drillings are recognised automatically – regardless of positions – and generated as a drilling job. As each tool movement is collision-checked against the model, the retract planes can be positioned very closely to the blank. All these features result in considerable time-savings for both programming and machining tasks.

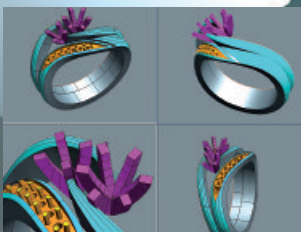


**6 CAM technologies for every design** *hyperMILL*® is a comprehensive CAM solution with 2D, 3D and 5-axis machining strategies. Starting with holes for holding the stones, via undercuts when milling watch cases, through to complex engraving or chasing – *hyperMILL*® offers the best machining strategy for every job.

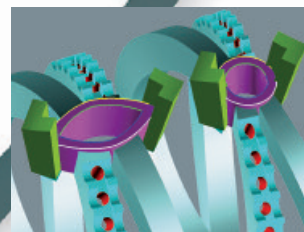


**8 Assured on all sides** *hyperMILL*® integrates the world-leading 5-axis technology. Thanks to fully-automated collision avoidance, programming 5-axis machining jobs is no more difficult than 3D jobs. That makes it easier to use 5-axis technology, with which jewellery pieces can be milled very efficiently, quickly and with great precision and surface quality.

**Good ideas in a modern CAM environment** *hyperMILL*® has a state-of-the-art programming environment: feature and macro technology reduce programming complexity, optimised machining programs minimise machine running times, and the detailed material removal simulation creates additional process safety.



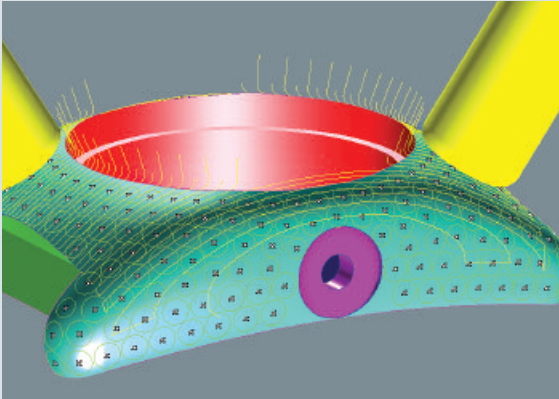
**4 All perspectives** In *hyperCAD*®, models such as rings, watches and other items can be viewed from all angles with a few simple mouse-clicks, right down to the last detail. Thus, the time-consuming production of wax models, prototypes and moulds can be avoided in many cases – which significantly reduces design costs.



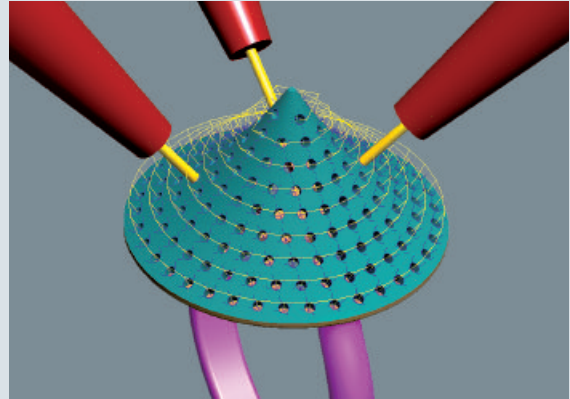
**5 Different models at the click of a mouse** Thanks to the Global Shape Modeling™ feature, alterations can be realised quickly and simply in *hyperCAD*®. Elements such as surfaces, volumes, wire frame models and imported geometric objects can be „frozen“ in their current state while other areas or elements can be bent, rotated or shifted as needed. Different models can thus be designed quickly.

**Ready for printing** 3D models can be printed as 2D drawings or reproduced on 3D printers using the STL format.

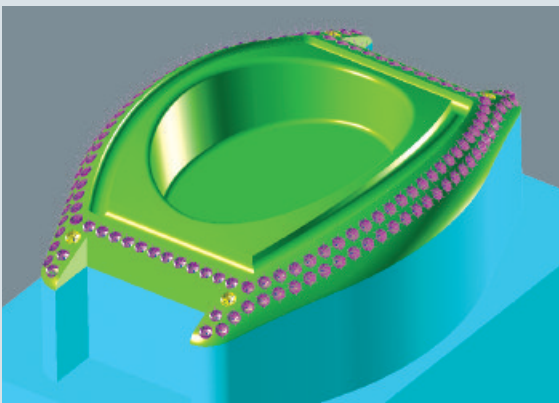
Watches, rings, earrings, brooches and pendants can be produced quickly and flexibly with *hyperMILL*<sup>®</sup>, thanks to its wide range of efficient machining strategies.



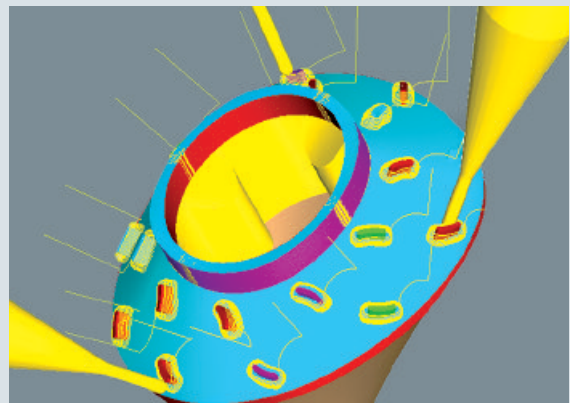
**Top milling** Top milling with larger milling tools on curved surfaces reduces the machining time and ensures excellent surface quality.



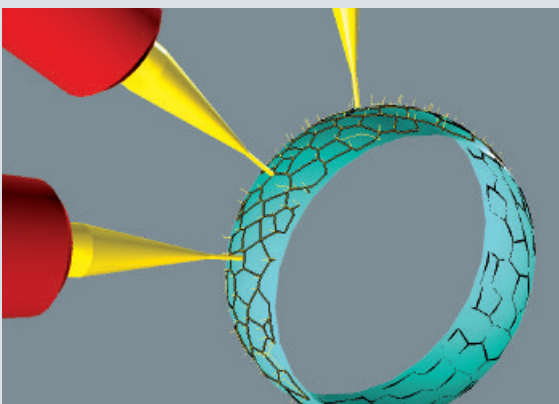
**5-axis drilling** *hyperMILL*<sup>®</sup> recognises geometries and contours, including their position. Tool positioning and placing data is generated automatically. A multi-axis drilling job is automatically calculated as a 5-axis task with different tilt angles.



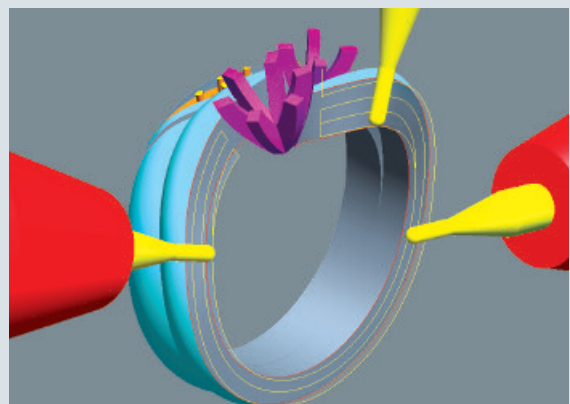
**Drilling feature recognition** Components may be searched within a specified range for holes, either with the same orientation and depth, or with a different orientation for multi-axis machining.



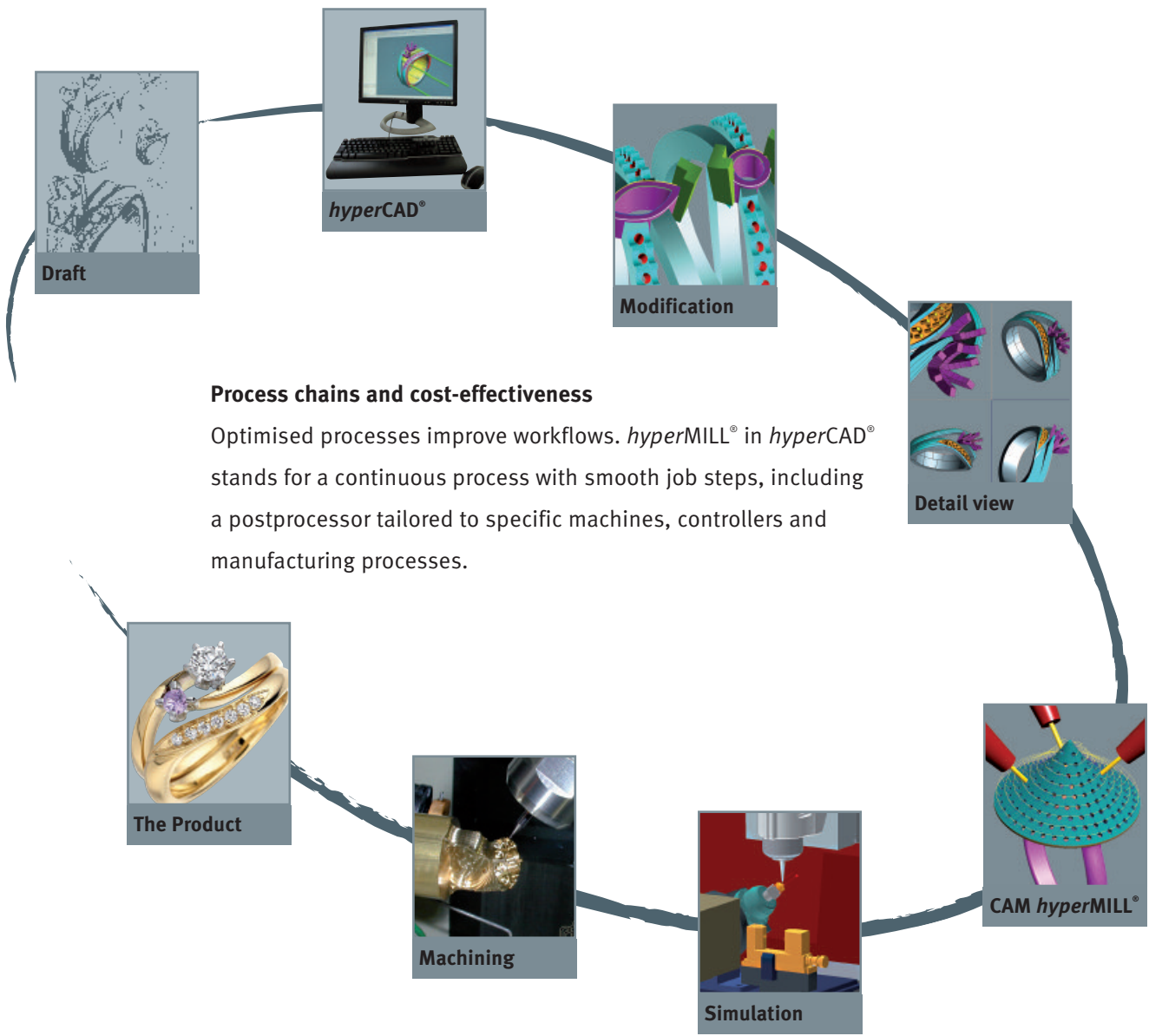
**Equidistant finishing** The continuous machining of steep and flat areas results in improved surface quality. The infeed is carried out in spirals between the machining planes. Calculation is carried out on the surface.



**Engraving** *hyperMILL*<sup>®</sup> provides straightforward programming to reduce scribing and engraving times and ensures more reliable machining results thanks to a high degree of contour accuracy.



**5-axis swarf cutting** Using end mills for circular machining reduces production time considerably. Swarf cutting can be applied to surfaces that allow contact with a line.



**Process chains and cost-effectiveness**

Optimised processes improve workflows. *hyperMILL*® in *hyperCAD*® stands for a continuous process with smooth job steps, including a postprocessor tailored to specific machines, controllers and manufacturing processes.

OPEN MIND Technologies UK Ltd.  
 John Eccles House • Robert Robinson Avenue  
 Oxford Science Park • Oxford OX4 4GP • United Kingdom  
 Phone: +44-18 65-33 80 26 • Fax: +44-18 65-33 81 00  
 E-Mail: Sales.UK@openmind-tech.com

OPEN MIND Technologies AG  
 Argelsrieder Feld 5 • 82234 Wessling • Germany  
 Phone +49 (81 53) 93 35 00 • Fax +49 (81 53) 93 35 01  
 E-Mail: Sales.Germany@openmind-tech.com

[www.openmind-tech.com](http://www.openmind-tech.com)