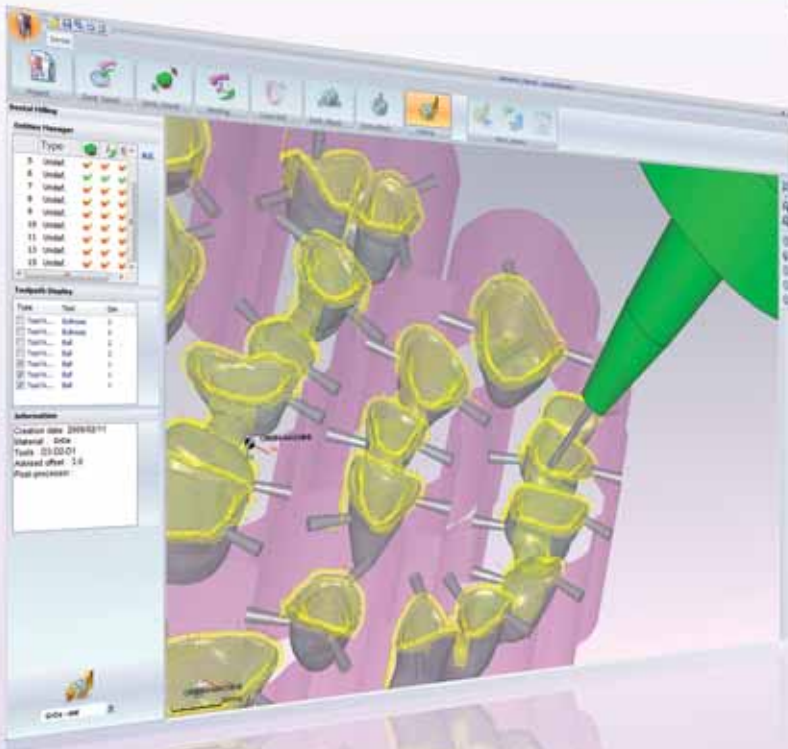




# WorkNC<sup>®</sup>

DENTAL

The Latest Automatic 3- to 5-Axis Machining Technology  
for the Dental Sector



**Sescoi<sup>®</sup>**  
[www.sescoi.com](http://www.sescoi.com)

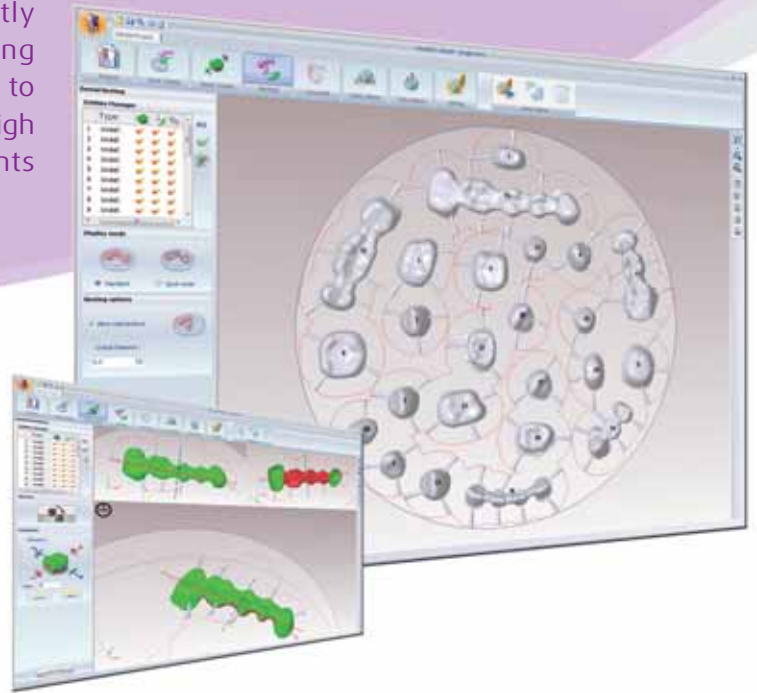
**WorkNC®DENTAL** is the ideal CAD/CAM software solution for automatic machining of prosthetic appliances, implants or structures through the use of perfectly optimized toolpaths which benefit from state-of-the-art technologies already tried and tested by thousands of users in the highly demanding automobile and aerospace industries.

Not only are production cycle times greatly reduced thanks to the use of machining processes (this is just one advantage compared to existing solutions on the market) but also the high quality finish of the machined components means that no manual reworking is required.

### → A easy to use graphic user interface :

The WorkNC®DENTAL graphic user interface, has been specially designed for prosthetists and dental technicians who are not experts in machining technologies:

- User programming wizards,
- Integrated programming and machining interface,
- Dental Manager for programming and machining administration.



### → WorkNC®DENTAL assisted programming process:

WorkNC®DENTAL comprises a comprehensive range of automated and interactive procedures that will assist the user throughout the part machining preparation process, the choice of the machining blank, the addition of support pins and finally, launching the machining process itself.

#### → Rapid machining project setup:

During the setup phase, users have predefined data at their disposal allowing them to choose key project characteristics such as the type of material, the machine ...

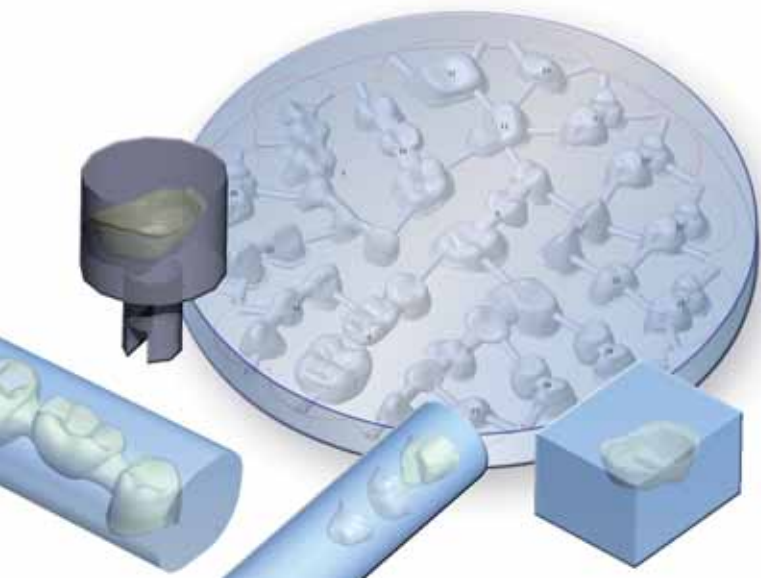
- Administrator or Expert Modes for parameter predefinition,
- Operator Mode for routine project setup,
- Integrated database...

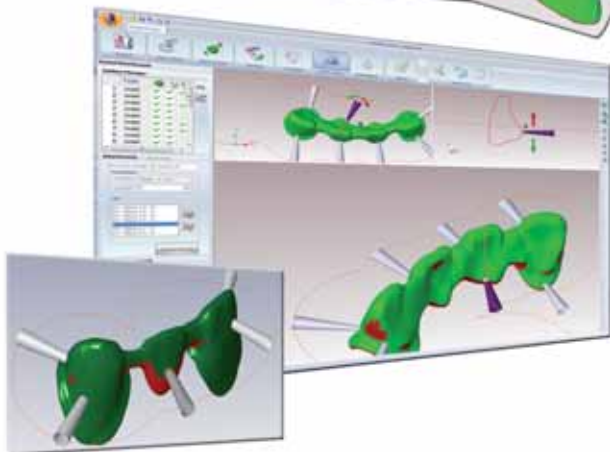
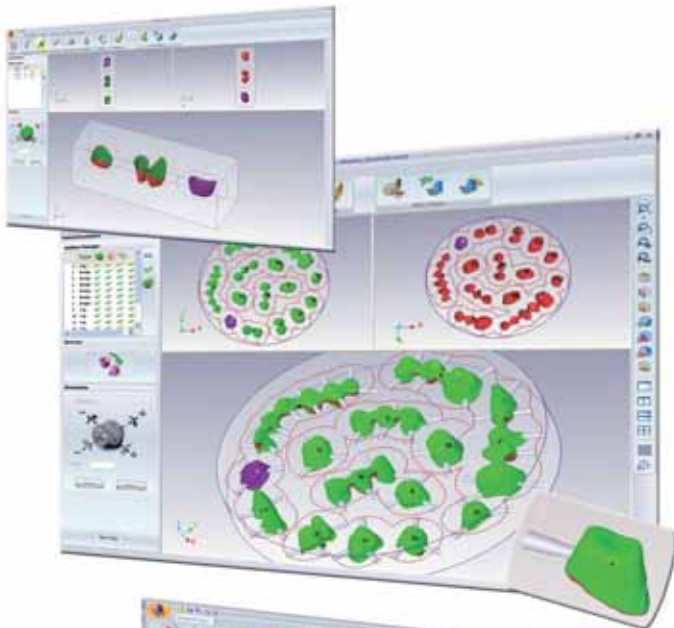
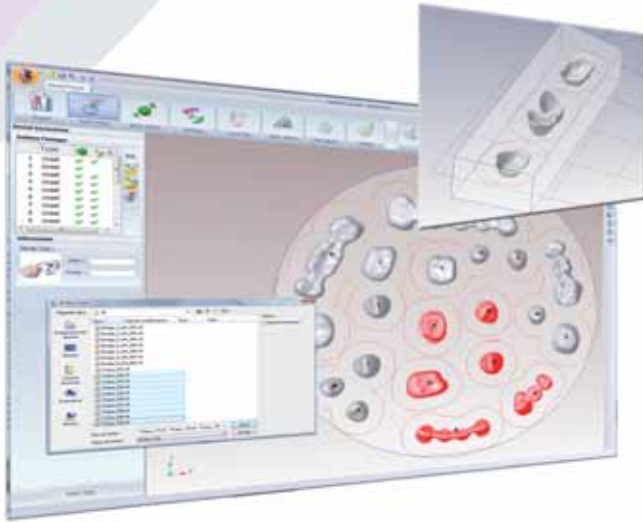


#### → Machining blanks or supports library:

A machining blank library is available in WorkNC®DENTAL. In addition to providing standard information about dimensions and material, the machining blank library may also contain metadata which enables machining customization or the taking into account of shrinkage coefficients applicable to certain materials such as Zirconium. Customized blanks can be added to the library at any time.

- Shaped supports or machining blanks and predefined materials,
- Creation of customized supports,
- Use of partially machined blanks.





### → Multiple imports and automatic nesting:

Reconstruction import in STL or native dental CAD formats can be carried out in single or multiple modes by simply selecting a list of files or a complete folder. With automatic nesting the user does not have to perform tedious, error-prone manual tasks.

- Native 3D data dental formats,
- Automatic multiple imports,
- Automatic nesting,
- Interactive entity classification for machining customization, if required,
- Automatic identification on machining supports (structure or blank engraving).

### → Nesting and orientation optimization:

A nesting and orientation optimization analysis module (Interactive Nesting) allows optimal preparation of elements for machining. Elements can be very easily nested by mouse 'drag & drop' operations to optimize use of material.

- Automatic Global Orientation,
- Interactive optimization per element in order to eliminate unmachined areas (undercuts),
- Automatic creation of machining boundary curves according to exact element morphology,
- Interactive element nesting by means of the 'dynamic compass'.

### → Automatic creation of support and sintering pins:

- Automatic insertion of support pins,
- Addition/modification of support pin positioning,
- Customization of support/sintering pin geometry according to material,
- Predefined element library.

WorkNC®, the world's leading 2 to 5 axis automatic CAM application, provides WorkNC®DENTAL with a complete range of perfectly optimized toolpaths which guarantee greatly reduced machining cycle times.





## DENTAL MACHINING:

Toolpath generation is automatic and no machining expertise is required. WorkNC®DENTAL harnesses SESCOI's 20 years experience and expertise in the field of toolpath generation.

### → Automatic toolpath generation:

WorkNC®DENTAL includes a standard range of machining toolpaths which are specifically developed for prosthetic reconstruction morphology in order to guarantee optimal machining conditions. WorkNC®DENTAL is scalable and can be enhanced by the addition of specific machining sequences provided by SESCOI's specialist engineers.

- Standard or Customized Machining Sequences,
- Automatic selection of the most suitable machining sequence according to element typology (Copings, Bridges, ...)
- Several different machining sequences can be used on the same stock to ensure better machinability.

### → Automatic 5 axis machining:

- Automatic collision free 5 axis toolpaths,
- Automatic collision avoidance according to machine kinematics,
- 5 Axis machine definition and customized post-processor.

### → Toolpath Visualization and Simulation:

- Automatic toolpath display on elements to be machined,
- Dynamic machining simulation.

### → Communication with the Machine Tool:

- Multi-machine configuration settings,
- Dental machine tool post-processor library,
- Customized post-processor development or adaptation,
- Machine simulation including machine tool kinematics.

