

Renishaw Dental Studio release notes

© 2014 – 2016 Renishaw plc. All rights reserved.

This document may not be copied or reproduced in whole or in part, or transferred to any other media or language, by any means, without the prior written permission of Renishaw plc.

The publication of material within this document does not imply freedom from the patent rights of Renishaw plc.

Disclaimer

RENISHAW HAS MADE CONSIDERABLE EFFORTS TO ENSURE THE CONTENT OF THIS DOCUMENT IS CORRECT AT THE DATE OF PUBLICATION BUT MAKES NO WARRANTIES OR REPRESENTATIONS REGARDING THE CONTENT. RENISHAW EXCLUDES LIABILITY, HOWSOEVER ARISING, FOR ANY INACCURACIES IN THIS DOCUMENT.

Trade marks

RENISHAW and the probe symbol used in the RENISHAW logo are registered trade marks of Renishaw plc in the United Kingdom and other countries. **apply innovation** and names and designations of other Renishaw products and technologies are trade marks of Renishaw plc or its subsidiaries.

All other brand names and product names used in this document are trade names, trade marks, or registered trade marks of their respective owners.

Version 1.3.0.2

Operating systems

Windows® 10 is now supported. This version of Renishaw Dental Studio (RDS) will only run on Windows 7 and 10.

New scanners supported

Renishaw is launching the DS30 Hybrid, also known as the Medit Identica Hybrid scanner. This is driven using Medit's Identica scanning software, instead of exocad®'s exoscan software.

Medit's Identica can also be used if you have a DS30 scanner (non-hybrid). Possible scanner and software configurations can be seen below:

Scan option	Scanner hardware	Scanner software
Scan Medit	DS30, DS30 2015 or DS30 Hybrid	Medit Identica
Scan exoscan	DS30, DS30 2015, DS20 or DS10	exoscan
Scan Plus	DS10	exoscan
Scan Implants	DS10	exoscan

Medit's Identica will scan about 30% faster and allow some articulators to be used including Amann Girrbaach Artex®, KaVo and SAM®. However the user interface is different and you still have the option of continuing to use exoscan if preferred.

The "Scan incise" option has been removed. If you have a DS10 scanner installed, then "Scan exoscan" should be used instead.

Note that the new Medit Identica software will need to be installed before you can use "Scan Medit". This is supplied on the installation DVD supplied with your DS30 or DS30 Hybrid scanner. Please note this software is not supplied as part of the on-line update. Contact Renishaw support on +44 (0)1453 524543 if you want to update to Medit's Identica software.

Realistic shades

It is now possible to select Vita shades for Realistic™ frameworks instead of shade approximations.

Unfinished LaserPFM™ frameworks

It is now possible to select unfinished LaserPFM tooth supported frameworks. These frameworks will be delivered with support witnesses still intact and no grit blasting at a lower cost.

Configurable icons

It is now possible to configure which icons you wish to see in RDS. Configuration Manager (Start > All Programs > Renishaw PLC > Dental Studio > Configuration) has been extended to enable you to turn the icons on and off should this be preferable.

Collar parameters

It is now possible to change the default values on a per customer basis for the collar parameters: “Lingual band height” and “Lingual band angle”. These have been added to the “Advanced Parameters” of “Offset Coping” framework types.

Provisional crown submission

Provisional crowns can now be submitted to Renishaw for manufacture.

Abutment materials

It is now possible to define the abutment material of a custom abutment to be any material. Note that materials other than LaserPFM should only be used for Link Abutments as Renishaw only supports the manufacture of “One Piece” abutments in LaserPFM.

Multi-die options

You can now only specify “Offset coping”, “Offset inlay”, “Anatomic wax up” or “Reduced wax up” types when using the multi-die option.

Bug fixes

When trying to submit an abutment and a crown, the correct error: “Crown and abutment for the same tooth cannot be submitted at the same time” is now reported.

Version 1.2.0.3

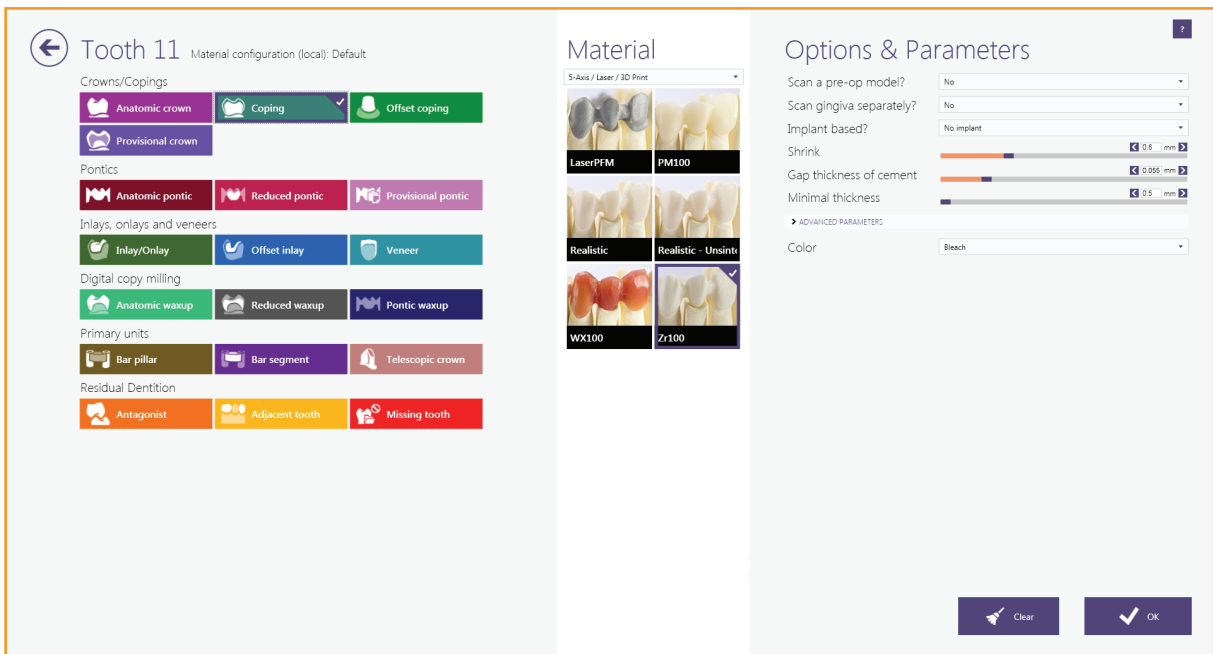
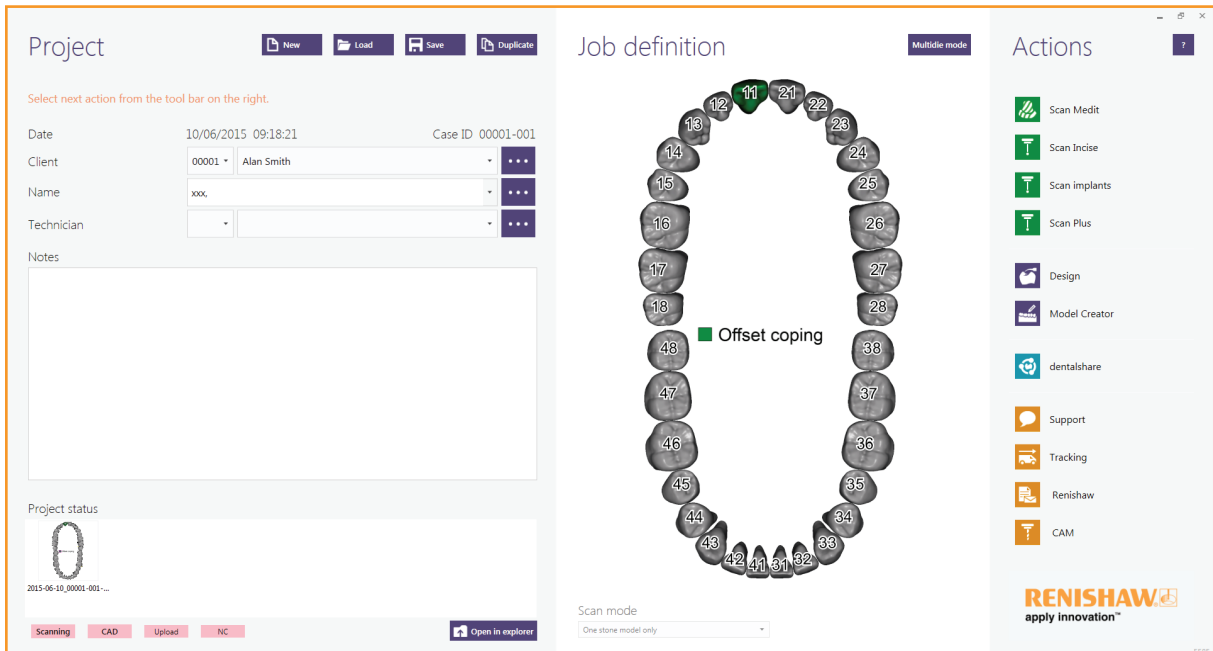
Medit Blue 2015 support

The new Medit Blue 2015 scanner is supported.

New user interface

The user interface has been updated to the new Windows 8 “Metro” standard.

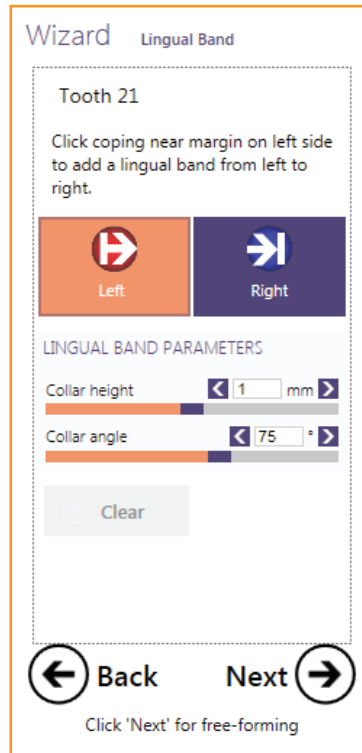
NOTE: The updated user interface requires a minimum screen resolution of 1920 x 1080.



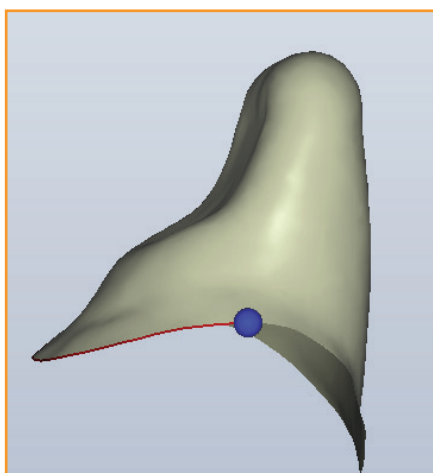
Lingual Band (Collar) on offset coping frameworks

It is now possible to add collars to “offset coping” frameworks. Previously, collars could only be produced during the shrink back of anatomical forms.

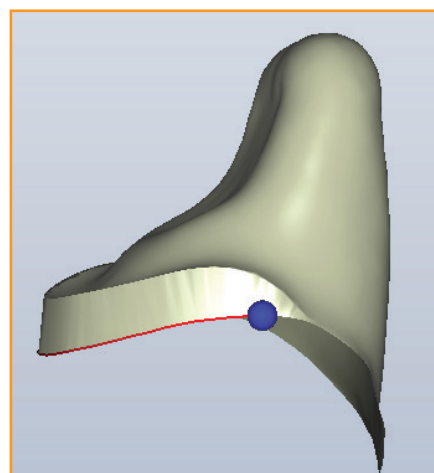
A new “Lingual Band” dialogue has now been added to the design wizard for offset coping tooth design.



The “Lingual Band” dialogue allows you to specify the position, height and angle of the lingual band (collar).



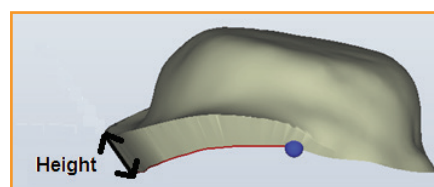
No lingual band



Lingual band



Angle



Height

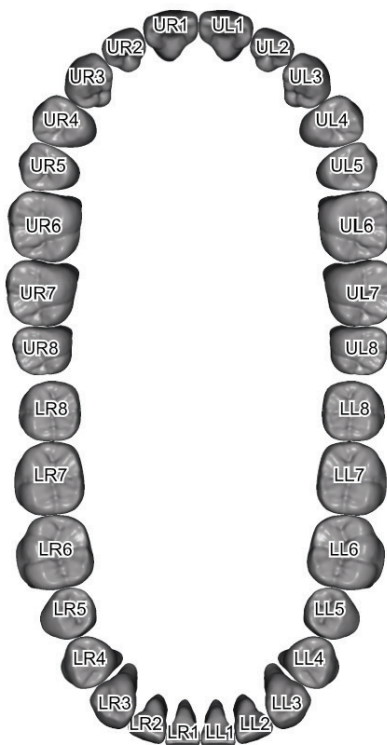
Provisional crowns and pontics

With the provisional module, individual temporary crowns and bridges can be designed using the eggshell technique. This allows a full anatomical crown / bridge to be designed. The framework is then produced as a fixed thickness shell with the inner surface offset inwards from the outer form. This is produced prior to preparing the tooth so that it can be fitted as a temporary whilst the permanent framework is being produced. The shape of the provisional crown / bridge can either be copied from the original anatomy (if the original tooth is still in reasonably good shape), or the tooth libraries can be used. These are defined by selecting provisional crown or provisional pontic for the teeth.

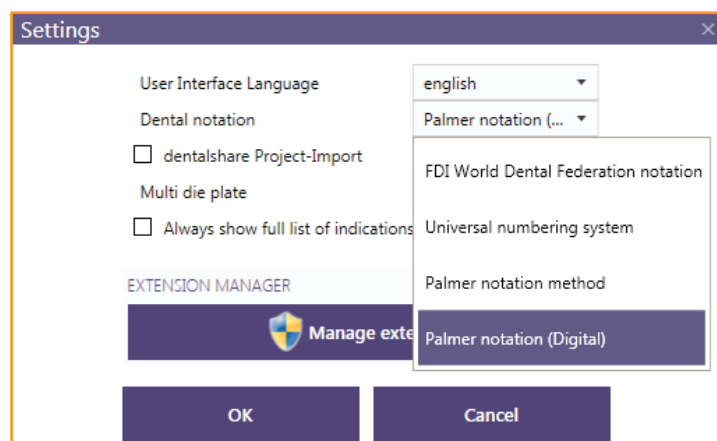
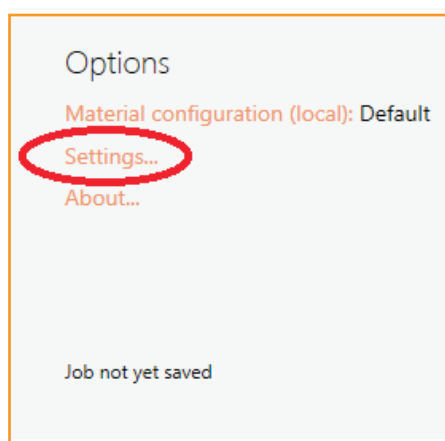
NOTE: The above option requires an additional module. Contact Renishaw for further details.

Palmer notation

It is now possible to use Palmer digital notation to identify teeth.

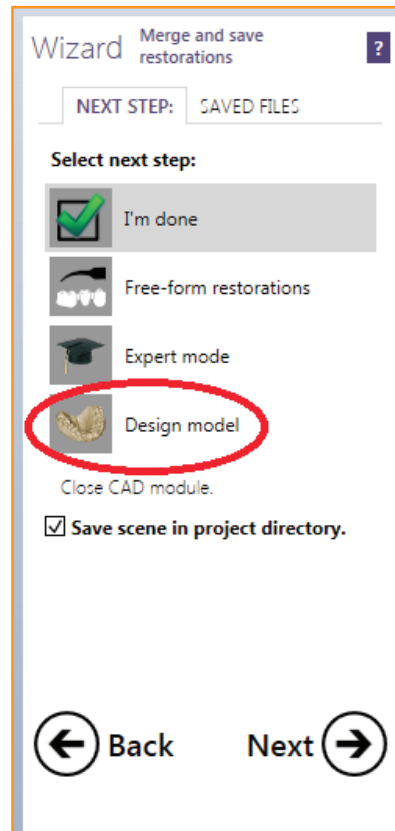


Palmer notation is selected using the “Palmer notation (Digital)” option from the “Dental notation” drop down menu in the “Settings” dialogue.

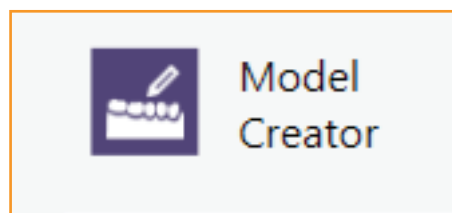


Model maker

A new module is available for designing physical models from intra-oral scan data or impression scans. Both the design of models with detachable segments (using pre-manufactured bases), and the design of monolithic models (where only the prepared die is removable) are supported. The option is selected at the end of the normal design process by selecting “Design model” at the end of the merge process.



Alternatively, the option may be selected using the “Model Creator” icon instead of the “CAD Design” icon after scanning.



NOTE: The above option requires an additional module. Contact Renishaw for further details. Renishaw does not offer a model manufacturing service.

Additional implant systems

It is now possible to design and manufacture LaserAbutments™ for the following implant systems:

- AstraTech OsseoSpeed™ TX 3.5/4.0 and 4.5/5.0;
- Zimmer Tapered Screw-Vent 3.5, 4.5 and 5.7.

Additional link abutments

It is now possible to design and manufacture frameworks using Straumann Variobase link abutments. These are selected using the “Straumann Titanium Base” library.

Note that the appropriate scan pins / bodies and titanium bases must be purchased from Straumann.

The following should also be noted:

- single retainer frameworks can be manufactured in any material;
- if a framework has more than one retainer, it can only be manufactured in LaserPFM™;
- both custom and screw retained frameworks can be designed and manufactured.

Other changes

- Crown bottoms – parameter “additional spacing occlusal (top)” added. This will only increase the cement space at the top of the preparation. Standard occlusal additional spacing adds additional spacing over the entire height of the preparation.



No extra cement space

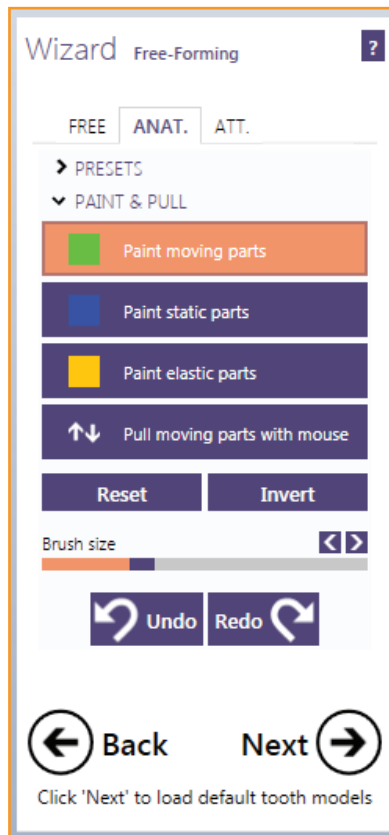


Additional spacing occlusal

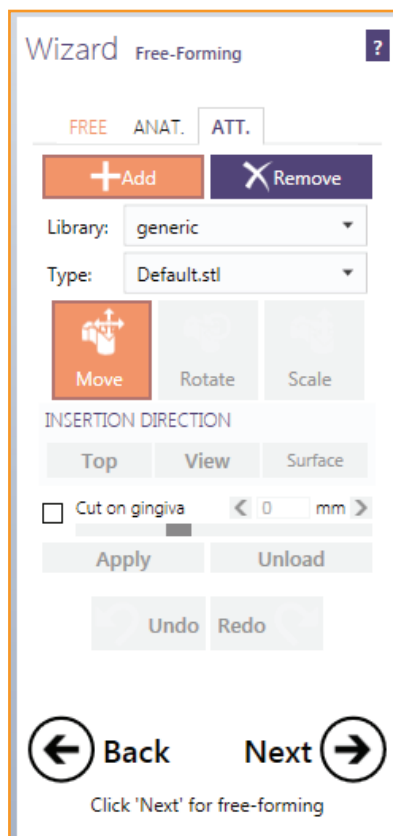


Additional spacing occlusal (top)

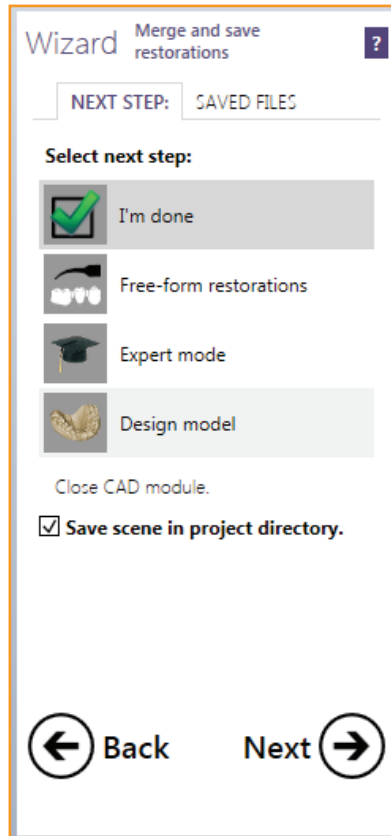
- Free-Forming – ANAT. tab – “PAINT & PULL” dialogue added. This allows more flexibility when modifying surfaces by defining particular areas to deform or areas not to be deformed.



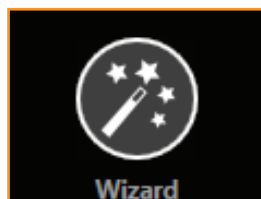
- Free-Forming – ATT. tab – allows more flexibility in designing attachments. You can now add or subtract arbitrary shapes to your design. Use this, for instance, to create interlocks. Note that Renishaw does not support attachments in our manufacturing processes.



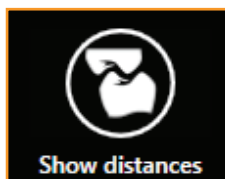
- Free-Forming – Adapt. tab replaces both the Pontic tab and Antagonist / adjacent adaptation dialogue.
- Shrinking – Min thickness added. Note that this is not enabled for standard Renishaw materials.
- Merge dialogue – “Optimise for Selective Laser Melting” moved to “Saved File” tab. This is turned on by default and should not be turned off for Renishaw materials.
- “Next Step” dialogue added at the end of merge. “I’m done” takes you out of the Design module back to the Job Definition screen.



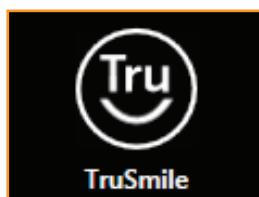
- New CAD “Expert” mode: At any time, you can switch between “Wizard” mode and “Expert” mode. In “Expert” mode, you can switch arbitrarily between the available functions, using the new “Expert” mode tool bar. The classic “Context” menu is still available. The wizard history (ability to use the “Back” button) will usually be preserved when you switch back to “Wizard” mode.



- Visualization of antagonist / adjacent intersections can now be toggled on and off using the “Show distances” icon from the right hand tool bar.



- TruSmile™ with tooth color selection can now be toggled on and off using the “TruSmile” icon from the right hand tool bar.



- New “Annotations” feature to add comments to your design. This is selected using the “Tools” icon.
- Standard and custom views can now be selected from the right hand tool bar.



Custom views are case-specific and saved together with the scene. You can even name them (right click to edit name). This is useful, for example, to deal with different insertion axes. The custom views are also used when generating PDF files.

Bug fixes

- The framework thickness could be designed too thinly if a preparation had an irregular surface close to the margin line.
- If you selected the bar module in Spanish, the “Profile parameters” dropdown on the “Profiles” dialogue was not wide enough.
- If you scanned and designed a framework, then went back and changed some of the framework details, the scans were not aligned correctly in the subsequent redesign.
- You can now combine implant positions measured on the Renishaw DS10 scanner with any STL scan data from a third party non contact scanner.
- The display could be corrupted when using the section tool.

NOTE: This version will only run on Windows Vista, 7 and 8. Windows XP is no longer supported.

A simple tip for those who “don’t find where a certain feature is in the new release”: If you don’t see it in the CAD’s context menu, look for it in the new “Tools” menu. The previously overloaded context menu has been streamlined, and options that are not tooth-specific have been moved to “Tools”.

Version 1.1.0

Realistic™ material (translucent zirconia)

It is now possible to select pre-shaded options for the Renishaw Realistic material. Four shades, in addition to bleach, can be selected for both sintered and unsintered frameworks. Contact Renishaw for details of the available shades.

Implant identification

All Renishaw implant systems are now prefixed with “RNI” to differentiate them from other implant systems. Many implants have also been renamed to make the names consistent with the manufacturer’s names.

Our full list of available Abutments and Implant Bridges is shown below.

OEM	Implant system	Abutment	Implant Bridge
Biomet 3i	Certain®	✓	✓
	External Hex	✓	✓
	Low Profile Abutment	✗	✓
Straumann®	Bone Level	✓	✓
	Tissue Level	✗	✓
	Tissue Level + SynOcta® abutment	✓	✓
	Multi-base straight	✗	✓
Nobel Biocare®	NobelReplace™	✓	✓
	NobelActive™	✓	✓
	Brånemark System®	✓	✓
	Multi-unit Abutment	✗	✓
MIS®	Internal Hex	✓	✓
	Conical Connection	✓	✓
	Multi-unit Abutment	✗	✓
BioHorizons	External	✓	✓
	Tapered Internal (3.0)	✗	✓
	Tapered Internal (other sizes)	✓	✓
	Multi-unit Abutment	✗	✓
Dentsply	Ankylos® Balance Base	✗	✓
AstraTech	UniAbutment	✗	✓

Link abutments

It is now possible to design and manufacture abutments using links (sometimes called titanium bases). The process is similar to the standard “one piece” abutment design but, when selecting the abutment library, you select a link library.

The link abutment libraries are not installed as standard, but can be installed if you contact Renishaw support. The following link manufacturers are supported:

- Dentsply Ankylos Titanium Base;
- Medentika (2nd generation).

Note that the appropriate scan pins / bodies and titanium bases must be purchased from the link manufacturer.

The following should also be noted:

- single retainer frameworks can be manufactured in any material;
- if a framework has more than one retainer, it can only be manufactured using the LaserPFM process;
- both custom and screw retained frameworks can be designed and manufactured.

The scanning of scan pins / bodies supplied by 3rd party link manufacturers is only supported using the DS20/DS30 scanners. The DS10 scanner can only scan Renishaw supplied scan pins / bodies.

It is also possible to design frameworks to fit onto modified links, or links for which there is no library information. This is only possible for LaserPFM frameworks.

Define the unit as either:

- custom abutment (manual positioning);
- screw retained (manual positioning).

Scan the link (as a normal preparation scan). Instead of specifying an implant library, the design process will ask you to position the screw access hole and define its size.

Design the rest of the abutment as standard.

Prescription naming and tracking

- All jobs are now referenced in the central and local manufacturing systems by “<patient name>, <customer name>”.
- The tracking application now allows items to be sorted by column.
- A separate prescription is now generated for each framework in a batch submission.
- The name assigned to the individual frameworks is now used to identify the frameworks in a batch submission.
- A warning is now reported on submission if multiple shades are contained in a framework.
- The configuration utility now orders the additional serial keys by name.
- It is now possible to assign a name to the default serial key if multiple keys are defined.

Support for all Exocad framework types

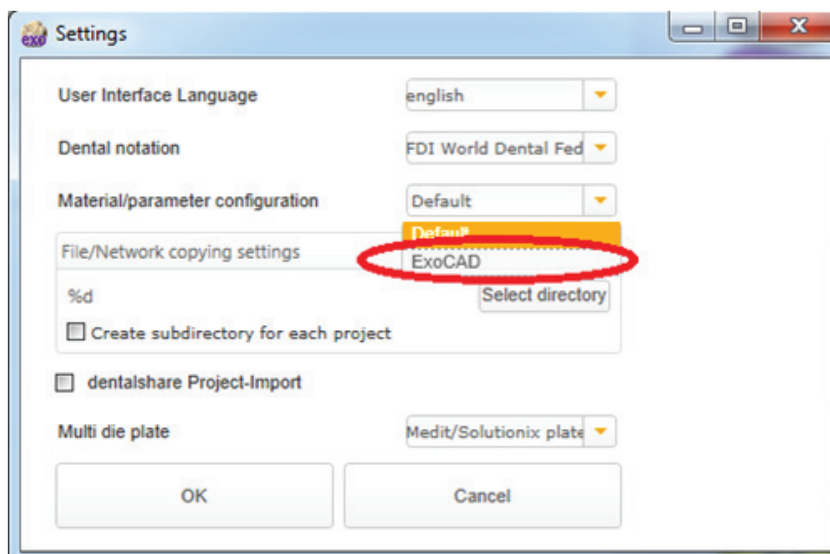
All generic Exocad framework types and materials are now supported. By default, only framework types and materials supported by Renishaw will be selectable. Note that Renishaw can only manufacture frameworks defined with these “Default” parameters.

To switch settings:

1. Select “Settings” (tick at bottom right of DentalDB screen).



2. Select the “Material/parameter configuration” dropdown and select option “Exocad”.



3. Restart RDS. All Exocad options will now be available.
4. Repeat the process and select “Default” to revert back to Renishaw settings.

DS10 contact scanning changes

Some of the workflows have changed when scanning on the DS10 scanner, to make the workflow similar to the non-contact DS20 scanning. These changes mean:

- you no longer scan individual adjacent teeth and ridges as there is now a single “Overview” scan, during which you can define one or more areas to scan to form a single jaw scan;
- waxup scans are now combined into a single scan. This single scan can either:
 - **scan as an unsegmented waxup:** this allows you to define one or more rectangular scan areas (similar to the overview scan above);
 - **scan as a segmented waxup:** this is the same as the “Wax Bridge” scan in the inciseCAD software. You define a point above one of the end teeth and a low point at the base of the waxup. A 2D profile is then performed at the “low point” height to define the scanning area. This area is then scanned normal to the centre line, with a radial scan performed at each end;
 - you can choose to scan with either stylus A or B for waxup scans.

Other changes

- Frameworks containing more than one tooth, but only one implant tooth, were incorrectly submitted as implant bridges. These will now be submitted as abutments. Note that, if there is only one implant unit, the implant must be measured using a PEEK “engaging pin” to ensure that the implant orientation is measured.
- If the material of a framework is changed, the new material is now submitted to the manufacturing system. Previously, the original material was used. Note that if the new material is manufactured using a different milling diameter, the framework should be regenerated as follows:
 1. Delete constructed parts.
 2. Select “Bottoms”, “Undercuts” and change “Milling Diameter” to suit the new material.
 3. Regenerate and merge. The milling diameters are shown below:

Material	Milling diameter
Zr100 Realistic Realistic – unsintered	0.88 mm
PM100 WX100	1.1 mm
LaserPFM	0.01 mm

- It is now possible to import Itero data using the Import button.
- Two extra tooth libraries have been added. These are:
 - generic smooth;
 - alternative.

- Improvements have been made to Medit Identica (DS20) scanning. It is now possible to add multiple scans safely. Previously, the program could lock up when adding scans.
- The “Best Fit Matching” button is no longer shown when matching implant pins scanned on the DS10 contact scanner. Previously this was optional and, if elected, it corrupted the implant position.

NOTE: This version will run on Windows XP, Vista, 7 and 8. However, Windows XP will no longer be supported in the next version.

Renishaw plc
New Mills, Wotton-under-Edge,
Gloucestershire, GL12 8JR
United Kingdom

T +44 (0)1453 524524
F +44 (0)1453 524901
E uk@renishaw.com
www.renishaw.com

RENISHAW 
apply innovation™

For worldwide contact details, visit
www.renishaw.com



H - 5489 - 4040 - 05