# Base Information

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| Objective | | This document describes the UC001 – Single crown restoration according to the change in the scope of DEV-0044354 DWOS Product Requirements Specifications [[1]](#_Referenced_Documents) for Easy software. | |
| Scope/Test Case ID | Version No. | UC\_001 | 5 |
| Product Version | Software Version | 2025.2 | 16.4 |
| Requirements tested | | REQ\_ 002, 003, 004, 007, 008, 010, 011, 018, 019, 020, 024, 025, 032, 033, 035, 036, 037, 038, 039, 040, 041, 042, 043, 046, 047, 050, 051, 052, 058, 060, 062, 070, 074, 076, 078, 083, 084, 086, 092, 108, 109, 115, 119, 121, 145, 150 | |
| Resources folder | | The Test materials needed for the tests of this verification are in the following folder:  CA02\_Org\_DW\_V\_and\_V / Documents / DWOS / Test Data for Verification & Validation / Easy | |

# Related Test Report

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| --- | --- |
| Filename | DEV-0044421 DWOS Easy Validation Report UC001 Single Crown Restoration [[2]](#_Referenced_Documents) |

# Test environment

Please refer to section 2.10 Test Environment in DEV-0044408 DWOS Software Verification and Validation Plan [[3]](#_Referenced_Documents) and section 6 Test Environment Plan in DEV-0044824 Straumann NOVA VV Plan Appendix CR-250128-DWOS-1 [[4]](#_Referenced_Documents).

# Test Specification

## UC001.1 - Full & Reduced Crown (DW scan + 4K) and send to Centralized Manufacturing

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| Test Rail ID | C69034 |
| References | N/A |
| Requirements | REQ\_002, 007, 010, 011, 038, 039, 040, 041, 042, 043, 047, 050, 051, 060, 062, 070, 076, 083, 115, 121, 150 |
| Preconditions | This test must be executed on a 4K display (REQ\_121).  Use the models EM-411 in the V&V room.  Enter valid SAP Credentials to send to Centralized Manufacturing: 31000495-71864063-38529  And the following shipping information:  A white and black text on a white background  AI-generated content may be incorrect.  For more information consult the [procedure to send a case to Straumann Centralized Milling](https://stgcs.sharepoint.com/:w:/r/sites/CA02_Org_dw_v_and_v/Shared%20Documents/DWOS/Tools%20and%20General%20Data/Send%20to%20Straumann%20Manufacturing-Interface%20Test.docx?d=wac82c0c26f8f4b28ae066ebdc7b526e6&csf=1&web=1&e=AFfoqP). |

| Step | Description | Requirement | Expected Result | Test Method / Objective Evidence |
| --- | --- | --- | --- | --- |
| 1 | Start Easy and login with the password. | REQ\_062 | The software should be open. | Functional test, Observation |
| 2 | Create and open a new case with preparation on the 11th and 13th teeth.  The name of the patient must be:  %%@c10000%%, %&@AUTOCANCEL%%  The name of the dentist must be:  Dental Wings  Click the "Model" button. | REQ\_115 | The scan area settings window should open.A screenshot of a computer  AI-generated content may be incorrect. | Functional test, Observation |
| 3 | Design the scan area and start the scan. | REQ\_ 002, REQ\_070 | The model should be scanned, and the mesh displayed in the 3D view. | Functional test, Observation |
| 4 | Clean the mesh if necessary and proceed to the Orientation step. | N/A | The Orientation step should open. | Functional test, Observation |
| 5 | Orient the model.  Then tag the teeth in the tagging step and select the anatomy library.  Proceed to the Design Anatomy step. | REQ\_076 | The model should be oriented, teeth should be tagged, and anatomy library selected. The Design Anatomy step should open. | Functional test, Observation |
| 6 | Adjust the anatomy design and positioning with the Fit, Shape and Sculpt tools.  Proceed to the Bottom step. | REQ\_ 011, REQ\_ 010, REQ\_ 038 | The anatomy should be positioned and designed properly.  The Lab slip should be open automatically. | Functional test, Observation / Screenshot |
| 7 | Select a Full crown for the 13th and a Reduced crown on the 11th with Straumann Centralized Manufacturing materials.  Click on Done to close the labslip. | REQ\_115 | The command should be saved, and the Bottom step should be open. | Functional test, Observation |
| 8 | Select the margin line using proposal or manually and click next. | REQ\_047 | Margin line should be placed correctly. | Functional test, Observation |
| 9 | Click next. | N/A | Insertion path should be open. | Functional test, Observation |
| 10 | Use the proposal or set to view of your choice. If the proposal is not correct, adjust manually. | N/A | Proposal in insertion path should be done. | Functional test, Observation |
| 11 | Click next to fitting step. | N/A | The fitting step should open. | Functional test, Observation |
| 12 | Use default setting to go next, check Marginal gap and change the size, check the cement gap, and change the size and change the color offset and Chamfer gap. | N/A | You should see all the changes applied. | Functional test, Observation |
| 13 | Click next. | REQ\_ 060 | You should be in Minimum thickness step. | Functional test, Observation |
| 14 | Make changes in the minimum thickness.  Change the minimum thickness to get a warning message. Click Next. | REQ\_043, REQ\_ 060, REQ\_ 083 | The changes on minimal thickness should be applied and represented by the red area on the screen.  You should not be able to go under the minimum value, depending to the material, also auto-correction should be applied if the minimal thickness is not respected.  You should be in Shell step. | Functional test, Observation / Screenshot |
| 15 | Use Sculpt to add and smooth the anatomy. | REQ\_ 040 | Adjustment should be applied. | Functional test, Observation |
| 16 | Use the measuring toolkit to check the distance. | REQ\_ 039 | You should be able to measure undercuts, distances, and occlusions. | Functional test, Observation |
| 17 | Click next. | N/A | Core step should be open. | Functional test, Observation |
| 18 | In reduction, Modify the reduce crown to have color displays to verify that design constraints are met. Click next. | REQ\_ 038, REQ\_043, REQ\_ 060, REQ\_ 083 | Auto-correction of the thickness should be applied if the reduction goes under the minimal thickness. Review step should be open. | Functional test, Observation / Screenshot |
| 19 | Click Next. | REQ\_ 042 | The nesting step should be open. | Functional test, Observation |
| 20 | Click Next. | REQ\_ 041 | The review step for the nesting should be displayed. | Functional test, Observation / Screenshot |
| 21 | Continue to the review step and click on Export. | REQ\_150 | Export step should be open. The model Builder should not be visible in the left panel. No information about the Model should be displayed. | Functional test, Observation |
| 22 | Go to Settings, Preferences, Actives cases and change the export location. | N/A | The export location should be changed.  A screenshot of a computer program  AI-generated content may be incorrect. | Functional test, Observation |
| 23 | Go to Cases manager and export the case to the default location. | REQ\_050 | The default location should be the location set in the previous step.  The case should be exported.  A screen shot of a computer  AI-generated content may be incorrect. | Functional test, Observation / Screenshot |
| 24 | Reopen the case. | N/A | The case should open in the export step. | Functional test, Observation |
| 25 | Check the "Anonymize" button.  Send the order to Straumann. Verify with CCA that Straumann Centralized Manufacturing received all expected files. | REQ\_007, 051 | Straumann Centralized Manufacturing should receive all expected files. | Functional test, Observation |

## UC001.2 - Inlay/Onlay (3rd party Scan – Medit)

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| Test Rail ID | C69032 |
| References | N/A |
| Requirement | REQ\_024, 038, 039, 040, 041, 047, 052, 060, 070, 074, 076, 083, 092, 115 |
| Preconditions | Use model EM 441 and EM 442 in the V&V room. |

| Step | Description | Requirement | Expected Result | Test Method / Objective Evidence |
| --- | --- | --- | --- | --- |
| 1 | Create a case in Easy for Inlay/Onlay case. Take the model EM 441 and EM 442 in the V&V room. Select 37-36-35-34-46 and 41,31 for preparation and save. Click on Open with CARES Medit Link. | REQ\_115, REQ\_ 074 | The case should be created and open in Medit link. | Functional test, Observation |
| 2 | Scan the models. | N/A | The models should be scanned. | Functional test, Observation |
| 3 | The files are sent to Easy, and you can open the case. | REQ\_ 074, REQ\_070 | The files should be sent and the case open. | Functional test, Observation |
| 4 | Orient the model.  Then tag the teeth in the tagging step and select the anatomy library.  Proceed to the Design Anatomy step. | REQ\_076 | The model should be oriented, teeth should be tagged, and anatomy library selected. The Design Anatomy step should open. | Functional test, Observation |
| 5 | In the anatomy step and adjust the design. Continue to the next step. | REQ\_ 024, REQ\_ 092, REQ\_ 038 | The anatomy should be adjusted. The lab slip should be open. | Functional test, Observation |
| 6 | Select Inlay/Onlay for 37-36-35-34-46 and Anatomical veneer for the 41, 31.  Select a STL Output material.  Click on "Done". | REQ\_115 | The Lab slip should be complete, and the Bottom step should be open. | Functional test, Observation |
| 7 | Delimitate the margin line, the Insertion path, the Fitting, the Material thickness for each tooth.  Continue to the shell step. | REQ\_ 047 | The bottom step should be finish and the Shell step should be open. | Functional test, Observation |
| 8 | Use Sculpt to add and smooth the anatomy. | REQ\_ 040 | Adjustment should be applied. | Functional test, Observation |
| 9 | Use the measuring toolkit to check the distance. | REQ\_ 039 | You should be able to measure undercuts, distances, and occlusions. | Functional test, Observation |
| 10 | In shell step, modify the inlay/onlay to have color displays to verify that design constraints are met. Click next. | REQ\_040, REQ\_ 060, REQ\_ 083 REQ\_ 024, REQ\_ 092, REQ\_ 041 | You should have a warning message about the "minimum thickness" with an auto-correction applied.  Review step should be open. | Functional test, Observation / Screenshot |
| 11 | Continue the review step and the export step by skipping the model builder. | N/A | The export step should be open. | Functional test, Observation |
| 12 | Go to Cases, select the current case, and export the Manufacturing files.  A screenshot of a computer  AI-generated content may be incorrect. | REQ\_052 | Manufacturing files should be exported. | Functional test, Observation |
| 13 | Go to the output folder.  Check your files, they must be identical to those designed. | REQ\_052 | The files should be the same as those designed. | Functional test, Observation |

## UC001.3 - Anatomical Veneer (Import Xorder)

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| Test Rail ID | C69033 |
| References | N/A |
| Requirements | REQ\_008, 025, 038, 039, 040, 041, 043, 047, 060, 070, 076, 083, 115, 150 |
| Preconditions | Enter valid SAP Credentials (0,1,0). |

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| --- | --- | --- | --- | --- |
| Step | Description | Requirement | Expected Result | Test Method / Objective Evidence |
| 1 | Import the attached case. | REQ\_008, REQ\_070 | The order should be imported. | Functional test, Observation |
| 2 | Complete the trimming step and click next. | N/A | Orientation step should be open. | Functional test, Observation |
| 3 | In the orientation step, adjust the position accordingly and click next. | N/A | Position should be applied. | Functional test, Observation |
| 4 | In the Tagging step, tag the teeth's accordingly and click next. | N/A | Teeth should be tagged. | Functional test, Observation |
| 5 | Choose an anatomy kit and click next. | REQ\_076 | Anatomy should be applied. | Functional test, Observation |
| 6 | In the Anatomy step use the design tool (fit, shape and sculpt) to adjust the position of anatomy and click next. | REQ\_025, REQ\_038 | Modifications should be displayed properly. Bottom step should be opened. | Functional test, Observation / Screenshot |
| 7 | In the bottom step, open the treatment Plan.  Choose restoration 11 (veneer)  Output (Straumann Centralized Manufacturing)  Material (IPS Emax CAD HT)  Color (A1) On 21 (veneer)  Output (Straumann Centralized Manufacturing)  Material: Zirconia: n!ce Zirconia HT Multi  Color (A1)  Click done. | REQ\_115 | Treatment plan should be closed, and Bottom step should be open. | Functional test, Observation |
| 8 | Draw the margin line manually (dot-dot or smart detect) or with the proposal. | REQ\_047 | Margin line should be placed correctly. | Functional test, Observation |
| 9 | Click next. | N/A | Insertion path should be open. | Functional test, Observation |
| 10 | Use the proposal or set to view of your choice. If proposal is not correct adjust manually. | N/A | Proposal in insertion path should be done. | Functional test, Observation |
| 11 | Click next to fitting step. | N/A | You should be in fitting step. | Functional test, Observation |
| 12 | Use default setting to go next, check Marginal gap Chamfer gap, Cement gap, Collar offset.  Change something if needed. | N/A | You should see all the changes applied. | Functional test, Observation |
| 13 | Click next. | N/A | You should be in material thickness step. | Functional test, Observation |
| 14 | Try to modify the minimum value under 0,5, on thooth 21. | REQ\_043 | You should get the warning due to below minimum value. | Functional test, Observation |
| 15 | Put back the default minimum thickness 0,5.  Click Next. | N/A | You should be in Shell step. | Functional test, Observation |
| 16 | Use the design toolkit, modify the Veneer under the minimum thickness, a color is displayed to verify that design constraints are met.  Continue the workflow with the design under the minimum thickness. | REQ\_060 | Design should be applied. | Functional test, Observation |
| 17 | Use the occlusal tool to adjust distance contact area to opposing and apply. | REQ\_039 | Distance to opposing should be applied. | Functional test, Observation |
| 18 | Use the same for proximal tool to adjust distance to adjacent. | REQ\_039 | Distance to adjacent should be applied. | Functional test, Observation |
| 19 | Use the measuring toolkit to check the distance.  A black rectangular object with a blue ruler  AI-generated content may be incorrect.  A screenshot of a computer  AI-generated content may be incorrect.  A black rectangle with white text and green yellow and orange stripes  AI-generated content may be incorrect. | REQ\_040 | You should be able to measure undercuts, distances, and occlusions. | Functional test, Observation |
| 20 | Click next. | REQ\_083, REQ\_043 | Review step should be open.  A warning should be shown about the minimum thickness on the prosthesis 21 is not respected, autocorrection should be applied. | Functional test, Observation |
| 21 | Click next. | N/A | Nesting step should be open. | Functional test, Observation |
| 22 | Place your restoration in the blank as good as possible. | N/A | Restoration should fit in the blank. | Functional test, Observation / Screenshot |
| 23 | Place the sprue position and go next. | N/A | Sprue position should be applied. | Functional test, Observation / Screenshot |
| 24 | Click next. | REQ\_025, REQ\_041, REQ\_083 | You should be in the review step. | Functional test, Observation |
| 25 | Click on the "Export" button, the model builder is skipped. | REQ\_150 | The Export step should be open.  The model builder should not be visible in the left panel. No information about the Model should be displayed. | Functional test, Observation / Screenshot |

## UC001.4 - Simple Coping with Anatomy (Import DWorder)

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| Test Rail ID | C69035 |
| References | N/A |
| Requirements | REQ\_008, 038, 039, 040, 041, 047, 049, 060, 070, 076, 083, 086, 115, 150 |
| Preconditions | Download the attached order.  For each step of this test case, verify that the UI of the software matches the guideline: (REQ\_049)  <https://xd.adobe.com/view/653f816e-f775-434c-6755-1bfc28c38c63-130e/> |

| Step | Description | Requirement | Expected Result | Test Method / Objective Evidence |
| --- | --- | --- | --- | --- |
| 1 | Import the attached order. | REQ\_008, REQ\_070 | Order should be imported. | Functional test, Observation |
| 2 | Go to case management, select the case, and reset. | N/A | Case should reset. | Functional test, Observation |
| 3 | Go to active case. Select the case and open. | N/A | Trimming step should be open. | Functional test, Observation |
| 4 | Click Next. | N/A | Orientation step should be open. | Functional test, Observation |
| 5 | Click Next. | N/A | Tagging step should be open. | Functional test, Observation |
| 6 | Tag Teeth and click Next. | N/A | Anatomy library should be open. | Functional test, Observation |
| 7 | Select the anatomy. Click Next. | REQ\_076 | Anatomy should be applied. | Functional test, Observation |
| 8 | In the Anatomy step use the design tool (fit, shape and sculpt) to adjust the position of anatomy and click next | REQ\_086, REQ\_040 | Modifications should be displayed properly. Bottom step should be open. | Functional test, Observation |
| 9 | Make the following selection. Click Done.A screenshot of a computer  AI-generated content may be incorrect. | REQ\_ 115 | Bottom step should be opened. | Functional test, Observation |
| 10 | Select the margin line using proposal line. Delete the margin line use(dot-dot or smart detect). | REQ\_047 | Margin line should be placed correctly. | Functional test, Observation |
| 11 | Click next | N/A | Insertion path should be opened. | Functional test, Observation |
| 12 | Use the proposal or set to view of your choice. If the proposal is not correct adjust manually. | N/A | Proposal in insertion path should be done. | Functional test, Observation |
| 13 | Click next to fitting step. | N/A | You should be in fitting step. | Functional test, Observation |
| 14 | Use default setting to go next, check Marginal gap Chamfer gap, Cement gap, Collar offset.  Change something if needed. | N/A | You should see all the changes applied. | Functional test, Observation |
| 15 | Click next. | N/A | Shell step should be open. | Functional test, Observation |
| 16 | Click next. | N/A | Core step should be open. | Functional test, Observation |
| 17 | In core step, modify the Simple Coping with Anatomy, a color is displayed to verify that design constraints are met or not. | REQ\_ 083, REQ\_ 040, REQ\_ 060, REQ\_ 038 | You should have a warning message about the "minimum thickness" with an auto-correction applied. | Functional test, Observation / Screenshot |
| 18 | Use the Shape or sculpt toolkit to modify the design. | N/A | The design should be modified. | Functional test, Observation |
| 19 | Click Next for the review step. | REQ\_ 041, REQ\_ 083 | Review step should be open. | Functional test, Observation |
| 20 | Open the review step and click on Export. | REQ\_150 | The export step should be open.  The model builder should not be visible in the left panel. No information about the Model should be displayed. | Functional test, Observation / Screenshot |

## UC001.5 - Diagnostic Crown (Import DWorder)

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| Test Rail Test Case ID | C69036 |
| References | N/A |
| Requirement | REQ\_008, 038, 039, 040, 041, 047, 052, 060, 070, 076, 083, 108, 109, 115, 145 |
| Preconditions | Download the scan files/order from the resource folder C59634. Go to <https://3dconnexion.com/us/drivers/> and download the latest drivers. Use a 3D mouse (available from our support team). |

| Step | Description | Requirement | Expected Result | Test Method / Objective Evidence |
| --- | --- | --- | --- | --- |
| 1 | Import the attached order and open it. | REQ\_008, REQ\_070 | The order Should be imported and open. | Functional test, Observation |
| 2 | Use the toolkit to clean your file | N/A | Trimming step should be open, the files should be trimmed and cleaned. | Functional test, Observation |
| 3 | Click Next | N/A | Orientation step should open | Functional test, Observation |
| 4 | Assign the tagging point on the model. | N/A | The tagging points should be assigned. | Functional test, Observation |
| 5 | Click next | N/A | The Anatomy library should be open. | Functional test, Observation |
| 6 | Choose the anatomy and click next. | REQ\_076 | The anatomy should be display and the Anatomy step should be open. | Functional test, Observation |
| 7 | Click Next | N/A | The Bottom step should be open. The lab slip should be opened automatically. | Functional test, Observation |
| 8 | Select Diagnostic crown for 14 with PMMA and diagnostic pontic for 16 with PMMA Click on "Done". | REQ\_115 | The Lab slip should be complete, and the Bottom step should be open. | Functional test, Observation |
| 9 | Delimitate the margin line for 14. Continue to the insertion path, the fitting and the material thickness. | REQ\_039, REQ\_047,  REQ\_060 | The margin line should be delimitated, and the minimum thickness should be applied. | Functional test, Observation / Screenshot |
| 10 | Continue to the Next step. | N/A | The Shell step should be open. | Functional test, Observation |
| 11 | Select "Button" in the 3D connection application and change the left and right option. A DWOS client folder is available, and link with specific action in EASY. | N/A | The left and right option for the 3d mouse should be changed. | Functional test, Observation |
| 12 | Test different combinations during the design. | REQ\_145 | The buttons corresponding to the various actions should work as expected. | Functional test, Observation / Screenshot |
| 13 | Adjust the design if needed. | REQ\_108 REQ\_109, REQ\_040, REQ\_038 | The design should be done. | Functional test, Observation |
| 14 | Continue to the review step and the export step by skipping the model builder. | REQ\_041, REQ\_083 | The export step should be open. | Functional test, Observation / Screenshot |
| 15 | Click on the finish button and go to the output folder. Check your files. | REQ\_052 | The case should be finished, Active cases should be open. The files should be the same as those designed. | Functional test, Observation |

## UC001.6 - Custom Abutment (Mesh Import STL)

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| Test Rail ID | C69037 |
| References | N/A |
| Requirements | REQ\_004, 018, 032, 035, 037, 038, 039, 040, 041, 046, 058, 060, 070, 076, 083, 115, 119, 121 |
| Preconditions | Download the attached scan file**.**  This test needs to be tested on a 4k screen |

| Step | Description | Requirement | Expected Result | Test Method / Objective Evidence |
| --- | --- | --- | --- | --- |
| 1 | Open the application. Create a case with attached file and open the case.  Select Implant for 42. | REQ\_004,  REQ\_121, REQ\_070 | The order should be created and open. | Functional test, Observation |
| 2 | Complete the trimming step and click next. | REQ\_046 | Orientation step should be open. | Functional test, Observation |
| 3 | In tagging, tag teeth as shown in photo. Click next.A screenshot of a computer  AI-generated content may be incorrect. | N/A | Tag Teeth should be applied, and treatment plan should be open. | Functional test, Observation |
| 4 | In the "Define scanbodies" plan, make the selection as shown in the screenshot and click Done. | N/A | Scanbodies step should be open. | Functional test, Observation |
| 5 | Select the tooth and select the 3-point match. | N/A | Match scanbody should be open. | Functional test, Observation |
| 6 | Select the 3-point on scanbody and scanned model as shown in screenshot. Click Done.  A screenshot of a computer  AI-generated content may be incorrect. | N/A | The scanbodies should be open. | Functional test, Observation |
| 7 | Select Design. | N/A | Anatomy library step should be open. | Functional test, Observation |
| 8 | Select anatomy and click Next.A screenshot of a computer  AI-generated content may be incorrect. | REQ\_076 | Anatomy step should be open. | Functional test, Observation |
| 9 | Use Fit to change the angle, X-axis, Y-axis and Z-axis. | N/A | Adjustments should be applied. | Functional test, Observation |
| 10 | Use Shape and sculpt as needed to place your anatomy and click Next. | N/A | Bottom step should be open. | Functional test, Observation |
| 11 | In Treatment plan, select:  Custom Abutment  Material:  ® Metal: Ti for Straumann® CARES® Abutment  Click Done.  A screenshot of a computer  AI-generated content may be incorrect. | REQ\_115 | Treatment plan should be applied | Functional test, Observation |
| 12 | In prosthetic component, choose group and connection as shown. Click Next.  A screenshot of a computer  AI-generated content may be incorrect. | N/A | Fitting step should be open. | Functional test, Observation |
| 13 | Choose cement gap as default, Material thickness. Click next. | N/A | Emergence line step should be open. | Functional test, Observation |
| 14 | Manually draw or propose emergence line. Click Next. | N/A | Emergence profile step should be open. | Functional test, Observation |
| 15 | Use 2D cross section, measuring grid, make adjustment, and click Next. | N/A | Shell step should be open. | Functional test, Observation |
| 16 | Use the measuring toolkit to check the distance. | REQ\_039 | The distances should be measured. | Functional test, Observation |
| 17 | Click Next. | N/A | Core step should be open. | Functional test, Observation |
| 18 | Try to use the "Set to view" button out of 30° from the axe of the implant. In the abutment toolkit, change the insertion path by setting it to view under 30°. | REQ\_032, REQ\_058, REQ\_083 | When the angle between the insertion path and the implant axis goes above 30 degrees, the "Set to view button should be unavailable. The setting should be applied. | Functional test, Observation / Screenshot |
| 19 | In abutment, change the reduction to 0.9 and click Apply. | N/A | Adjustment should be applied | Functional test, Observation / Screenshot |
| 20 | In abutment, change the reduction to 5 and click Apply. | REQ\_037 | Adjustment should not be applied. Will return to the min reduction of 2 mm. | Functional test, Observation / Screenshot |
| 21 | Use handles in Shape tool to flatten the abutment. The software protects the implant interface from modifications. | REQ\_040, REQ\_119 | The software should protect the implant interface from modifications. | Functional test, Observation |
| 22 | Proceed to the Export step.  A screenshot of a computer  AI-generated content may be incorrect. | REQ\_035, REQ\_083 | The user should not be able to access to the Export step.  In the Review step, an error message should be displayed indicating the safety check is unsuccessful. (Enable the support mode to display detailed information.) | Functional test, Observation / Screenshot |
| 23 | Go back, change the material to reset the abutment.  Design the abutment in the Bottom, Shell, and Core step. | REQ\_018, REQ\_041  REQ\_083 | The abutment should be properly design. | Functional test, Observation |
| 24 | Continue to the review step and the export step by skipping the model builder. | REQ\_041, REQ\_083 | Export step should be opened without error message. | Functional test, Observation / Screenshot |

## UC001.7 -Full & Reduced Crown on Implant (Import mesh PLY + 4K)

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| --- | --- |
| Test Rail Test Case ID | C69038 |
| References | N/A |
| Requirement | REQ\_ 004, 019, 020, 033, 036, 038, 039, 040, 041, 052, 060, 070, 076, 078, 083, 115, 121 |
| Preconditions | This test must be executed on a 4K display. (Req 121)  Make sure that the Model Builder module is NOT available in the license. Download the files from the resource folder “C69038” |

| Step | Description | Requirement | Expected Result | Test Method / Objective Evidence |
| --- | --- | --- | --- | --- |
| 1 | Go to Settings, Implant, click on 3 dots, Import the attached Implant library file (Zip). | REQ\_078 | The implant library should be imported. | Functional test, Observation / Screenshot |
| 2 | Create a case with attached file and open the case.  Select: 32-42 for implants. | REQ\_004, REQ\_070 | The order should be created and open. | Functional test, Observation |
| 3 | Complete the trimming step and click next. | REQ\_046 | Orientation step should be open. | Functional test, Observation |
| 4 | In tagging, tag teeth and click Next. | N/A | Tag Teeth should be applied, and treatment plan should be open. | Functional test, Observation |
| 5 | Check if the imported implant library is displayed in the labslip in the Third-party implant libraries. | REQ\_078 | The imported implant library should be displayed. | Functional test, Observation / Screenshot |
| 6 | In treatment plan, select:  -32: Straumann RC.  -42 Straumann NC.  Click Done. | N/A | Scanbodies step should be open. | Functional test, Observation |
| 7 | Select the tooth and select the 3-point match. | N/A | Match scanbody should be open. | Functional test, Observation |
| 8 | Select the 3-point on scanbody and scanned model as shown in screenshot. Click Done. | N/A | You should be back in scanbodies. | Functional test, Observation |
| 9 | Select Design. | N/A | Anatomy library step should be open. | Functional test, Observation |
| 10 | Select anatomy and click Next.  A screenshot of a computer  AI-generated content may be incorrect. | REQ\_076 | Anatomy should be open. | Functional test, Observation |
| 11 | Use Shape and sculpt as needed to place your anatomy and click Next. | N/A | Your anatomy should be placed, and the treatment plan should be open. | Functional test, Observation |
| 12 | Treatment plan should be open and select:  Full crown on 32  Material: DWOS PMMA  Reduce crown on 42 implant  Material: DWOS Zirconia  Click Done. | REQ\_015 | Bottom step should be open. | Functional test, Observation` |
| 13 | Select your angled prosthetic component click Next. | N/A | The rotation step should be open. | Functional test, Observation |
| 14 | Modify the rotation if needed and click next. | N/A | Fitting step should be opened. | Functional test, Observation |
| 15 | Choose the cement gap and click Next. | N/A | The Material thickness should be open. | Functional test, Observation |
| 16 | Material thickness is open and is 1 mm. Click Next. | REQ\_060 | The minimum material thickness should be represented by the red area.  The Emergence profile should be open. | Functional test, Observation |
| 17 | Modify the emergence profile, use adapt or propose to the anatomy, make adjustment, and click Next. | N/A | Shell step should be open, and the minimum thickness should be applied during the Shell step opening. | Functional test, Observation |
| 18 | The Shell is open, adjust the design if needed. | REQ\_019, REQ\_020, REQ\_038, REQ\_040 | The design should be done. | Functional test, Observation / Screenshot |
| 19 | Use Occlusal to set distance to opposing and apply. And use the measuring toolkit to check the distance. | REQ\_039 | Adjustment should be applied. | Functional test, Observation |
| 20 | Click Next. | N/A | Core step should be open. | Functional test, Observation |
| 21 | In the Core step, modify the angulation of the Screw channel.  Change the value of the protection thickness. | N/A | The angulation of the Screw channel should be updated and limited to 20 degrees.  The red area representing the protection thickness should be modified. | Functional test, Observation |
| 22 | For the 42 modify the reduction and apply it. | N/A | The reduction should be applied. | Functional test, Observation |
| 23 | Click next. | REQ\_041, REQ\_083, REQ\_033, REQ\_036 | Review step should be open.  The changed applied to the Screw channel should be applied.  And the minimum thickness should be the limiting the design thickness. | Functional test, Observation / Screenshot |
| 24 | Proceed to the Export step. | N/A | The Model Builder section should not be available in the workflow.  Export step should be opened. | Functional test, Observation |
| 25 | Finish the case. | N/A | Since all materials are STL output, the restoration files should be exported in the desired location folder. | Functional test, Observation / Screenshot |
| 26 | Go to the output folder.  Check your files. | REQ\_052 | The files should be the same as those designed. | Functional test, Observation |

## UC001.8 - Full Crown (Inbox Case)

|  |  |
| --- | --- |
| Test Rail Test Case ID | C69090 |
| References | N/A |
| Requirement | REQ\_ 008, 011, 038, 039, 040, 041, 047, 050, 051060, 070, 076, 083, 115 |
| Preconditions | Enter valid SAP Credentials (0,1,0).  Download the file case into a local folder. |

| Step | Description | Requirement | Expected Result | Test Method / Objective Evidence |
| --- | --- | --- | --- | --- |
| 1 | * Open Inbox. * Create a local connection pointing to the folder created in the precondition | N/A | * The connection should be created. | Functional test, Observation |
| 2 | * Accept the case in Inbox. | N/A | * The case should be accepted. * The case should be imported in Nova. | Functional test, Observation |
| 3 | * Open the case in Nova. | REQ\_008  REQ\_070 | * The case should be open. | Functional test, Observation / Screenshot |
| 4 | * Complete the trimming step. * Complete the Orientation step. * Complete the Tagging step. * Proceed to the Anatomy Kit step. | N/A | * Orientation step should be opened. * Position should be applied. * Teeth should be tagged. * Anatomy Kit step should be open. | Functional test, Observation |
| 5 | * Choose an Anatomy kit. * Proceed to the Anatomy step. | REQ\_076 | * Anatomy kit should be applied. * Anatomy step should be open. | Functional test, Observation / Screenshot |
| 6 | * In the Anatomy step, use the design tool (fit, shape and sculpt) to adjust the position of anatomy. * Proceed to the Bottom step. | REQ\_038 REQ\_040 | * The anatomy design should be automatically proposed. * Modifications should be applied on the anatomy design. * Bottom step should be open. | Functional test, Observation / Screenshot |
| 7 | In the bottom step, fill the Lab Slip.   * - Full Crown * - Output (Straumann Centralized Manufacturing) * - Material (IPS Emax CAD HT) * - Color (A1)   Click done. | REQ\_ 011, REQ\_ 115 | * The Lab Slip should be open automatically when entering in the Bottom step. * The Lab Slip should be filled. | Functional test, Observation |
| 8 | * In the Bottom step, draw the margin lines. * Click Next on the bottom step toolkit. | REQ\_047 | * Margin lines should be drawn correctly. * Insertion path settings should be open in the toolkit. | Functional test, Observation |
| 9 | * Use the proposal or set to view of your choice (If proposal is not correct adjust manually). * Click Next on the bottom step toolkit. | N/A | * The insertion path should be set correctly. * The Fitting settings should be open in the toolkit. | Functional test, Observation |
| 10 | * Change the fitting settings (Marginal gap, Chamfer gap, Cement gap, Collar offset) if needed. * Click Next on the bottom step toolkit. | N/A | * Fitting settings should be applied. * The material thickness settings should be open in the toolkit | Functional test, Observation |
| 11 | * Try to set the minimum thickness under its minimum value (depending on the material). * Click Next. | N/A | * Going under the minimum value should not be possible. * The Shell step should be open. | Functional test, Observation / Screenshot |
| 12 | In Shell step, use the design tool (shape and sculpt) to adjust and modify the anatomy. | REQ\_ 040, REQ\_ 060 | * A color should be displayed to verify that design constraints are met. * Modification to the design of the anatomy should be applied. | Functional test, Observation |
| 13 | * Use the occlusal and proximal tools to adjust distance contact area to opposing and apply. * Verify the distance with the measuring tools. | REQ\_039 | * Occlusal and proximal tools should apply distance between teeth. * The measuring tools should measure the distance in mm. | Functional test, Observation |
| 14 | * Proceed to the Review step. * Review the design. | REQ\_041 REQ\_ 083 | * The Review step should be opened. * The design should be displayed in order to be reviewed. | Functional test, Observation |
| 15 | * Go to Cases Management. * Export the current case. | REQ\_050 | The case should be exported in the selected folder | Functional test, Observation |
| 16 | Import the order and open it. | REQ\_008 | * The order should be opened. * The case should open in the same previous step. | Functional test, Observation / Screenshot |
| 17 | Finish the nesting step and continue the workflow to the Model Builder. | N/A | * The Editing step of the Model Builder should be open. * The labslip should be open automatically. | Functional test, Observation |
| 18 | * Design the Model in the Model Builder Section. * Proceed to the Export step. | N/A | The Export step should be open. | Functional test, Observation |
| 19 | In the Export step check the "Anonymize" button.  Send the case. | REQ\_051 | The case should be sent. | Functional test, Observation |

## UC001.9 - Full & Reduced Crown and send to Centralized Manufacturing

|  |  |
| --- | --- |
| Test Rail Test Case ID | C74168 |
| References | N/A |
| Requirement | Req 002, 004, 007, 010, 011, 038, 039, 040, 041, 042, 043, 047, 050, 060, 062, 070, 076, 083, 115, 121 |
| Preconditions | use the models EM-411 in the V&V room.  Enter valid SAP Credentials to send to Centralized Manufacturing: 31000495-71864063-38529  And the following shipping information:    For more information consult the procedure to send a case to Straumann Centralized Milling.  This test needs to be tested on a 4k screen. |

| Step | Description | Requirement | Expected Result | Test Method / Objective Evidence |
| --- | --- | --- | --- | --- |
| 1 | Start Easy and login with the password. | REQ\_062 | The software should be open. | Functional test, Observation / Screenshot |
| 2 | Create and open a new case with preparation on the 11th and 13th teeth. The name of the patient must be:%%@c10000%%, %&@AUTOCANCEL%%  The name of the dentist must be:Dental Wings Import the files. | REQ\_004, REQ\_115 | The case should be created. | Functional test, Observation |
| 3 | Open the case. | N/A | The case should be open. | Functional test, Observation |
| 4 | Clean the mesh if necessary and proceed to the Orientation step. | N/A | The Orientation step should open. | Functional test, Observation |
| 5 | Orient the model.  Then tag the teeth in the tagging step and select the anatomy library.  Proceed to the Design Anatomy step. | REQ\_076 | The model should be oriented, teeth should be tagged, and anatomy library selected.  The Design Anatomy step should open. | Functional test, Observation / Screenshot |
| 6 | Adjust the anatomy design and positioning with the Fit, Shape and Sculpt tools.  Proceed to the Bottom step. | REQ\_011, REQ\_010, REQ\_038 | The anatomy should be positioned and designed properly.  The Lab slip should be open automatically. | Functional test, Observation / Screenshot |
| 7 | Select a Full crown for the 13th and a Reduced crown on the 11th with Straumann Centralized Manufacturing materials.  Click on Done for close the labslip. A screenshot of a computer  AI-generated content may be incorrect. | REQ\_115 | The command should be saved, and the Bottom stem should be open. | Functional test, Observation / Screenshot |
| 8 | Select the margin line using proposal or manually and click next. | REQ\_047 | Margin line should be placed correctly. | Functional test, Observation / Screenshot |
| 9 | Click next. | N/A | Insertion path should be open. | Functional test, Observation |
| 10 | Use the proposal or set to view of your choice. If the proposal is not correct, adjust manually. | N/A | Proposal in insertion path should be done. | Functional test, Observation |
| 11 | Click next to fitting step. | N/A | The Fitting step should open. | Functional test, Observation |
| 12 | Use default setting to go next, check Marginal gap and change the size, check the cement gap, and change the size and change the color offset and Chamfer gap. | N/A | You should see all the changes applied. | Functional test, Observation |
| 13 | Click next. | REQ\_060 | You should be in Minimum thickness step. | Functional test, Observation / Screenshot |
| 14 | Make changes in the minimum thickness.  Change the minimum thickness get a warning message. Click Next. | REQ\_043, REQ\_ 060, REQ\_ 083 | The changes on minimal thickness should be applied and represented by the red area on the screen.  You should not be able to go under the minimum value, depending to the material, also auto-correction should be applied if the minimal thickness is not respected.  You should be S+hell step. | Functional test, Observation / Screenshot |
| 15 | Use Sculpt to add and smooth the anatomy. | REQ\_ 040 | Adjustment should be applied. | Functional test, Observation / Screenshot |
| 16 | Use the measuring toolkit to check the distance. | REQ\_ 039 | You should be able to measure undercuts, distances, and occlusions. | Functional test, Observation / Screenshot |
| 17 | Click next. | N/A | Core step should be open. | Functional test, Observation |
| 18 | In reduction, Modify the reduce crown to have color displays to verify that design constraints are met.  Click next. | REQ\_ 038, REQ\_043, REQ\_ 060, REQ\_ 083 | Auto-correction of the thickness should be applied if the reduction goes under the minimal thickness.  Review step should be open. | Functional test, Observation / Screenshot |
| 19 | Click Next. | REQ\_ 042 | The Nesting step should be open. | Functional test, Observation / Screenshot |
| 20 | Click Next. | REQ\_ 041 | The Review step for the nesting should be displayed. | Functional test, Observation / Screenshot |
| 21 | Continue to the review step and the export step by skipping the model builder. | N/A | Export should be open. | Functional test, Observation |
| 22 | Go to Settings, Preferences, Actives cases and change the export location. | N/A | Export location should be changed.  A screenshot of a computer program  AI-generated content may be incorrect. | Functional test, Observation |
| 23 | Go to Cases manager and export the case to the default location. | REQ\_050 | The default location should be the location set in the previous step.  The case should be exported.  A screenshot of a computer  AI-generated content may be incorrect. | Functional test, Observation / Screenshot |
| 24 | Reopen the case. | N/A | The case should open at the Export step. | Functional test, Observation |
| 25 | Send the order to Straumann.  Verify with CCA that Straumann Centralized Manufacturing received all expected files. | REQ\_007 | Straumann Centralized Manufacturing should receive all expected files. | Functional test, Observation / Screenshot |

## UC001.10 - Minimum thickness protection (FDA CON – 2096)

|  |  |
| --- | --- |
| Test Rail Test Case ID | C126577 |
| References | 47489, 47663 |
| Requirement | Req 008, 043, 052, 058, 078, 083, 084 |
| Preconditions | Download the scan files/order from TestRail C461177.  Download the implant kit file |

| Step | Description | Requirement | Expected Result | Test Method / Objective Evidence |
| --- | --- | --- | --- | --- |
| 1 | Open Nova application. Open the Implants section in Settings. | N/A | The Implant section is open. | Functional test, Observation |
| 2 | Click on 3 Dots, Import the attached Implant kit file (Ipflib). | REQ\_078 | The implant kit is imported. | Functional test, Observation / Screenshot |
| 3 | Import and open the attached order. | REQ\_008 | The case should be imported and open in the Bottom step of the design. | Functional test, Observation / Screenshot |
| 4 | Set the Material Thickness of the tooth 25 to 0.2mm. | REQ\_058 | The software should indicate a warning that the thickness is below the minimum value for this material. | Functional test, Observation |
| 5 | Proceed to the Shell step. With the Shape and Sculpt tools, make the minimum thickness visible on the surface of the tooth-borne and on the implant-borne crowns. Click next. | REQ\_043 | The anatomy should be computed and should respect the minimum thickness of the material with the auto correct on both restorations. | Functional test, Observation |
| 6 | Proceed to the Export step. And send the case. | REQ\_052, REQ\_058, REQ\_083, REQ\_084 | In the Export step a warning should be displayed on the non-compliant object. When sending the case, a disclaimer popup should be displayed indicating that the Full crown on implant does not comply with the manufacturer guidelines. A black and white text on a black background  AI-generated content may be incorrect. | Functional test, Observation / Screenshot |
| 7 | Go in C:\ProgramData\Dental Wings\DWOS Easy\Default\logs to check the safety\_protocol.log | REQ\_043 | The requirement “Minimum thickness to the abutment interface” should be applicable and should be passed for the crown on implant and not applicable for the tooth-borne crown. The safety\_protocol.log should show that the custom abutment has passed the Safety Gate. | Functional test, Observation / Screenshot |

# Referenced Documents

[1] DEV-0044354 DWOS Product Requirements Specifications (Rev 7)

[2] DEV-0044421 DWOS Easy Validation Report UC001 Single Crown Restoration

[3] DEV-0044408 DWOS Software Verification and Validation Plan (Rev 5)

[4] DEV-0044824 Straumann NOVA VV Plan Appendix CR-250128-DWOS-1 (Rev 1)

[5] DEV-0044409 Verification and Validation Summary Report

[6] WI-000424 Management of anomalies in V&V for DW Inc (Rev 2)

[7] PRC-000116 Control of nonconforming products (Rev 5)

[8] DEV-0044787 Test Result Impact Assessment for DEV-0044421 Rev 4 (Rev 1)

# Anomalies

If anomalies other than the ones included in this specification occur, a summary description is given in the related test report, in *DEV-0044409* *Verification and Validation Summary Report (FMR-000716)* [*[5]*](#_Referenced_Documents) as per *WI-000424 Management of anomalies in V&V for DW Inc* [6] and *PRC-000116 Control of nonconforming products (PRC-000116)* [*[7]*](#_Referenced_Documents) is applied.

# Document History

|  |  |  |
| --- | --- | --- |
| **Version** | **Author** | **Change to previous version** |
| 1.0 | TBD | TBD |
| 1.1 | TBD | TBD |
| 2.0 | Benjamin Lescout | First use of QUF73-2484 Template Test Specifications to align with the change in the scope of DES73-3240 DWOS software Product Requirements Specifications (v5.1) |
| 2.1 | Théo Legrais | Adjustments on TC UC001.1, 001.2, 001.3, 001.4, 001.5, 001.6, 001.7 (steps added or deleted)  Table formatting. |
| 2.2 | Benjamin Lescout | Adjustments on TC UC001.5 (steps added) to include the requirement 145 (3D mouse) |
| 2.3 | Benjamin Lescout  Brigitte Johanne Auclair | For DEX75-6080 CR-20230725-DWOS-1\_Gladiator Accommodation & Straumann Portfolio:  For DEX75-6153 CR-231128-DWOS-1 Easy and Win 11, added UC001.8, UC001.9 and UC001.10 cases to complete testing of the (Redistributables CR) and modified all Test Rail Test Case IDs as it has changed.  The requirement 150 is applicable for the new workflow, because we can skip the model and go directly to export step. |
| 3.0 | Daryll Miqueli | Add REQ\_121 in 4.6 UC001.6  Add REQ\_078 in 4.10 UC001.10  Update 4.8 due to the deviation from specification in the previous release  Update Reviewers in section 7  Update versions and remove REQ\_049 in section 1 according to DES73-3240 DWOS software Product Requirements Specifications (v6.1) |
| 4 | Daryll Miqueli | Add a step in 4.5 and update one step action  Add a step in 4.6 and update some steps information |
| 5 | Daryll Miqueli | Updated information and references of new ETQ documents in sections 1, 2 and 3  Added References in section 5  Updated test 4.10 step 6 because of the actions in the failure Impact Assessment DEV-0044787 Test Result Impact Assessment for DEV-0044421 Rev 4 [[8]](#_Referenced_Documents) |

# Review & Approval

Content Approver of this document confirms that the Reviewer(s) listed below have reviewed and approved the content of this document version.

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Role** | **Function** | **Name** | **Date** |
| SQA SME | Review | Benjamin Lescout | 2025-03-13 |
| Quality Design | Review | Sanaa Bounhis | 2025-03-13 |
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| SQA Manager | Content Approval | Adrien Desbois | 2025-03-17 |
| Dev SME | Authorization for use | Benjamin Blanc | 2025-03-12 |

# Signatures

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