

X-ray Consistency Check with DBSWIN

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Legal Requirements


See also Legal Requirements


Processing

Selection */X-Ray/Consistency Check* opens the menu window with the title Consistency Check.

All stored Consistency Checks and Acceptance Checks can be viewed by selecting the icon  *Load Tests*. The list displays all stored tests and each test can be viewed by selecting and double click.

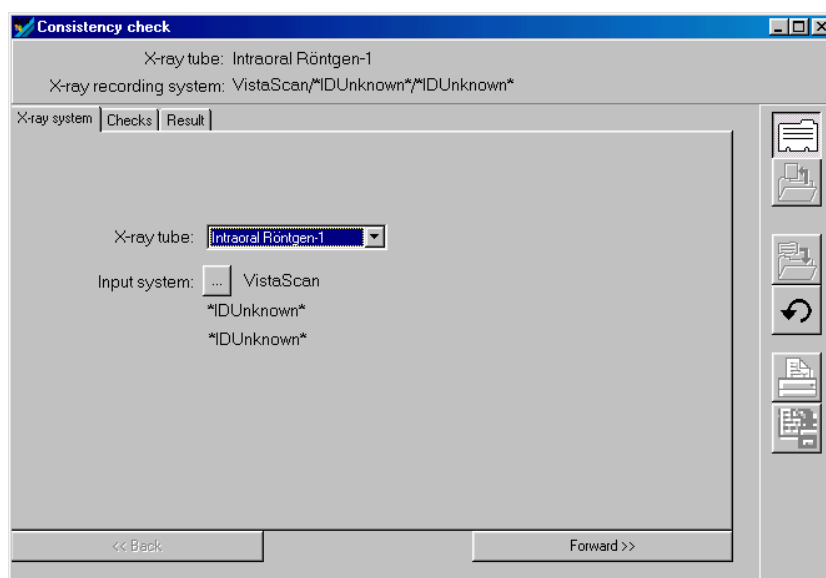
In order to carry out a new Consistency Check select the icon  *New Test* and select test type Consistency Check.

 The CCD sensor or storage phosphor foil should always be inserted in the test body all the way to the stop! If necessary fix it with soft material (cotton wool).

 An Acceptance Check can only be carried out under Configuration-Module (Menu/Configuration/Module/X-ray)!

In order to carry out a new Consistency Check, an Acceptance Check must already be stored for that X-ray station!

The optimal X-ray parameters for that X-ray device should be entered on first time use.



Select *Continue* to proceed to the test steps.

The X-ray parameters (kV, mA, ms) of the reference image (last set-up test or repeat test) will be displayed in the appropriate fields and must also be used for the Consistency Check.

Proceed by selecting *Continue* to go on to the check section.


The parameters for the X-ray image can be entered any time. A take can be repeated as often as desired by repeating the same test step. The program will ask whether an existing X-ray is to be overwritten. If a test step requires several takes (currently 4 images with 90-degree rotations of the X-ray tube to determine the circular useful radiation field area), the images are displayed with the corresponding numbers.




The X-rays can be selected with the up and down arrow keys on the right. Click on an image to open it and display an enlarged version next to the box. This scaleable image can be temporarily edited and examined with the image processing functions (measuring aid, contrast/brightness, etc.).

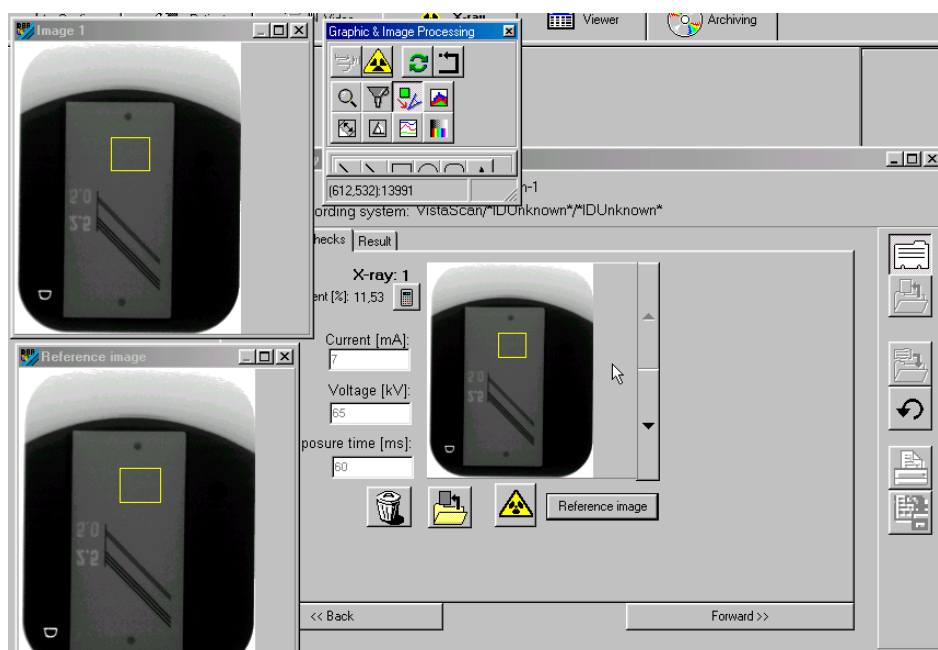
The image processing functions can be activated by double clicking in the image area.

The Reference image (i.e. the first recorded image on acceptance and set-up) can be loaded as the reference image. Select *Reference Image*.

The yellow square should be more or less in the same homogenous position as can be seen in the Reference Image. If this is not the case, then the sensor should be repositioned and a new exposure taken. Alternatively the yellow frame can be moved to the same position in the image.

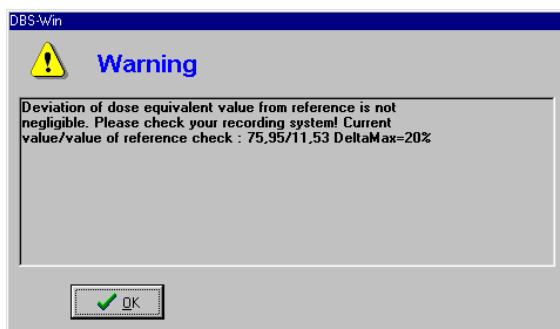
To do this, select the Image Edit icon  and select (click) the yellow frame within the image.

The frame can now be moved, when the cursor symbol changes from  to . Clicking again within the image field closes the movement window. After repositioning the icon  must be selected, in order that the Dose Equivalent Value can be recalculated.



Comparison of the Dose Equivalent Values allows DBSWIN to recognise whether the complete image parameters have changed since acceptance.

If there are variances greater than $\pm 20\%$ (e.g.: Set-up Value=40%, Consistency Check Value= 31%) then a pop-up window appears with a warning that the Dose Equivalent Value varies considerably from the last recorded value.

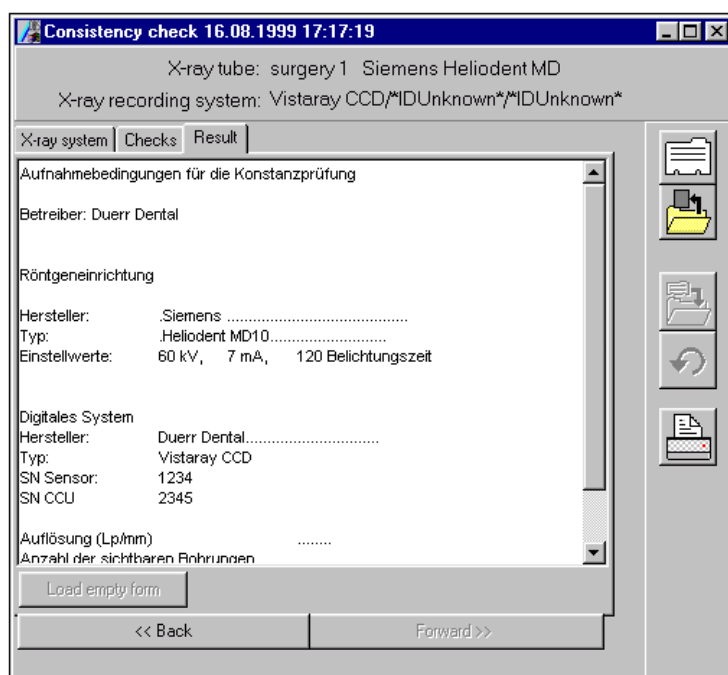


The system should be checked by a technician should this warning reappear during further testing!

The interval times for each of the regular test procedures (e.g. 5 years) and the Consistency Tests (e.g. 4 weeks) can, depending on configuration, be automatically monitored by the program and a pop-up message can appear for the user when the interval has been exceeded.

The necessary settings to carry this out can be found and carried out under *Configuration/Module/X-ray/Consistency-Acceptance Tests!*

Test results are entered in the *consistency check form* (this form can be modified: it is located in the file DBSWIN\bin\cres.rtf)



When all the necessary data has been entered, the form can be printed or saved.

Print preview

[illegible]

Print check

Preview Options

Layout

☒ Text at right side of image Space for text [%] 50

☐ Text below image

Format

☒ Portrait Font size [pt.] 10

☐ Landscape

Print selection Print Close

Stored acceptance and consistency checks

In the *Type* column, **acceptance** checks are identified by an *A* and **consistency** checks by a *C*. Click on the desired row (check) to load the data.

A double click on the appropriate row or a single click on the icon  loads the relevant test results.

The list can be sorted by dates by clicking on the *Date* column heading.

