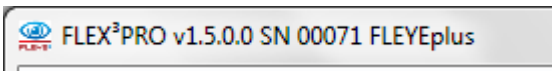
FLEX³PRO FLEYEplus preliminary user manual

Introduction

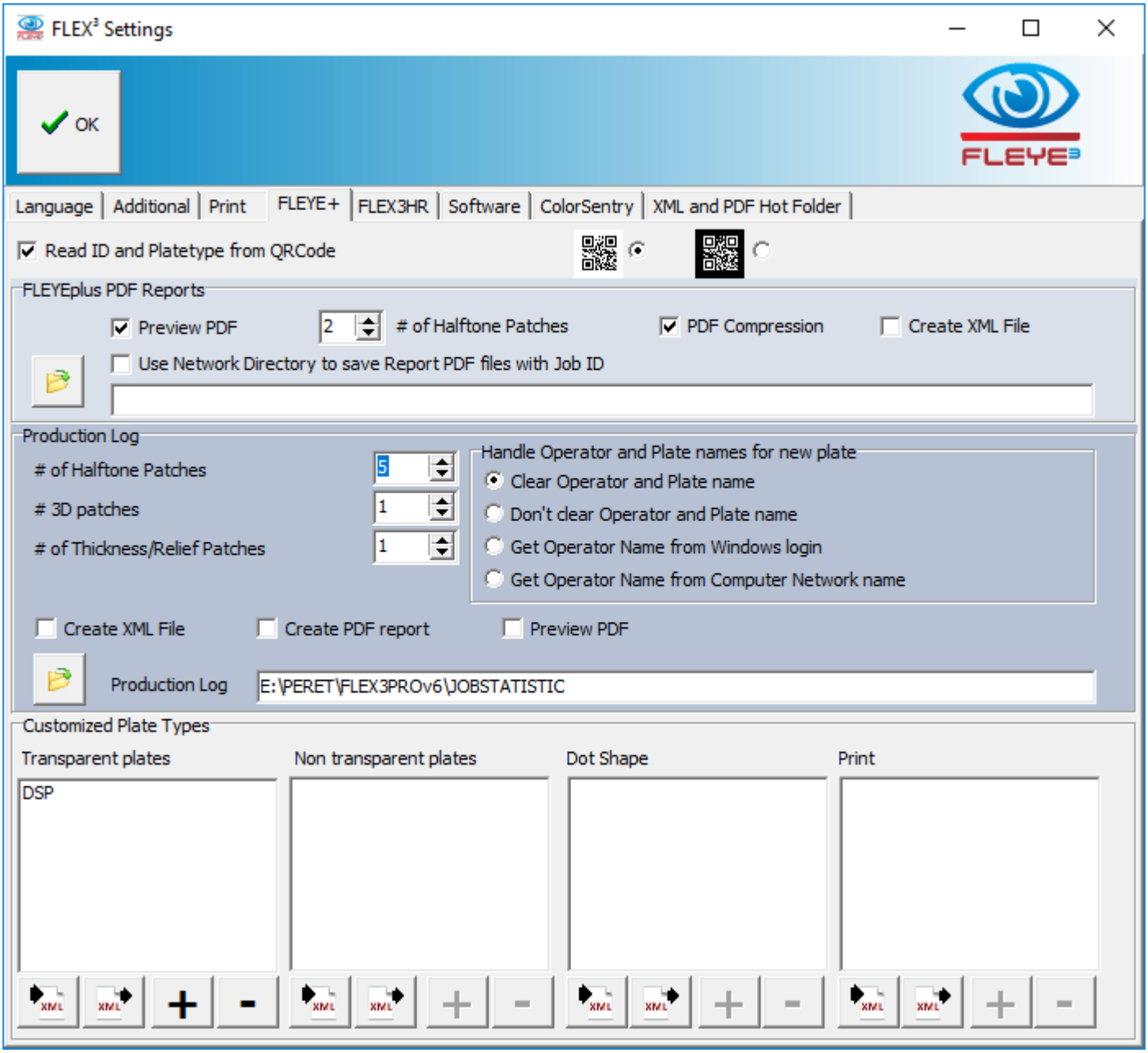
FLEYEplus is an optional software Module that makes the FLEX³PRO a fast and efficient quality control system for daily manufacturing. FLEYEplus adds reporting functions to the existing FLEX³PRO software. Every system comes with a free, 100 day timed demonstration version of FLEYE+ to allow you to evaluate the software. If you have purchased the permanent FLEYEplus license and it is activated on your system than you will see FLEYEplus in the title line of the main window.



Important: *This manual describes the current version of the FLEX³PRO hardware and software. Future enhancements or modifications are reserved.*

FLEYEplus Settings

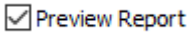
The FLEYEplus Software module offers an additional page in the File/ Settings tab to support managing your files and features.



Use Micro QR Codes for Plate Identification

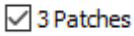
Enable the QRCode decoding function on the FLEYE+ Page of the Settings Window. Select inverse QRCodes or standard QRCodes, depending on your usage.
The QRCode is aimed to be composed by a preceding Job ID number of up to a maximum of 13 alphanumeric characters, followed by 3 hex code characters, identifying the material reference to be used for the specific plate.
The QRCode will be decoded. The preceding JOB ID will automatically be copied into the proper fields. The last 3 characters will be used to search the references and tolerances in the material reference database.

Preview the PDF report when created



Select Preview Report to preview the PDF report after creation.

Use 3 Patches



The standard application measures the pixel version 50% patch of the DFTA Control wedge which is job independent and used as a black box control of the plate making process. In addition there is a second 50% patch that is affected by all work flow process steps such as dot compensation, ICC profile, job dependent screen ruling, screening angle etc. This will lead to a different dot sharpening compared to the pixel version and help to identify the dot loss that is dependent upon the current job parameters.

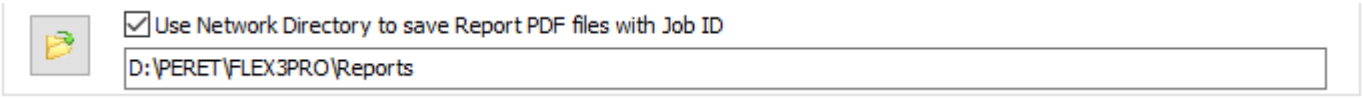
Version 3.0.1 now supports three measurement patches in the top view, dot area mode. This third patch can be a second work flow-dependent control patch of your choice

As an alternative you can use any three tint percentages as a reference and create a report.

Create XML file in the XML Hot Folder

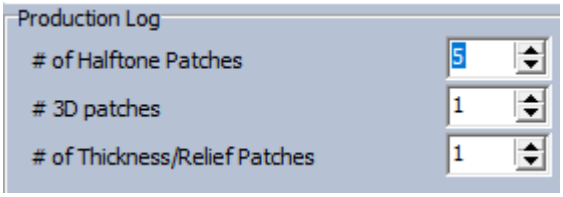
If the <Create XML File> flag is checked, an XML file will be written to the XML output Hot folder as shown below

Use Network Directory to save Report PDF files with JOB ID



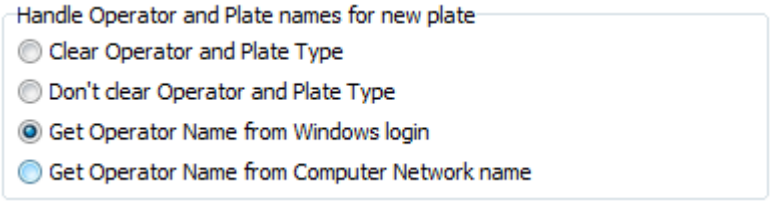
If this setting is checked, then the software will prompt for acceptance of the report file name such that any information can be added (for example version number of a plate). In this case a copy of the PDF reports will be saved to the directory specified right below using the modified file name.

Number of control Patches in Reports/Job statistics

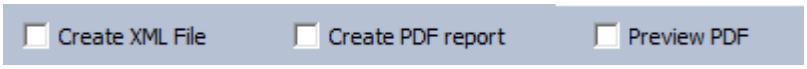


Specify the number of halftone patches, the 3D patch if any, and thickness and relief pair patches used in your control wedge. This will set the number of columns of the spread sheet containing the measurement data to match your control wedge.

Select how to pre-select operator and plate name



XML and PDF Output

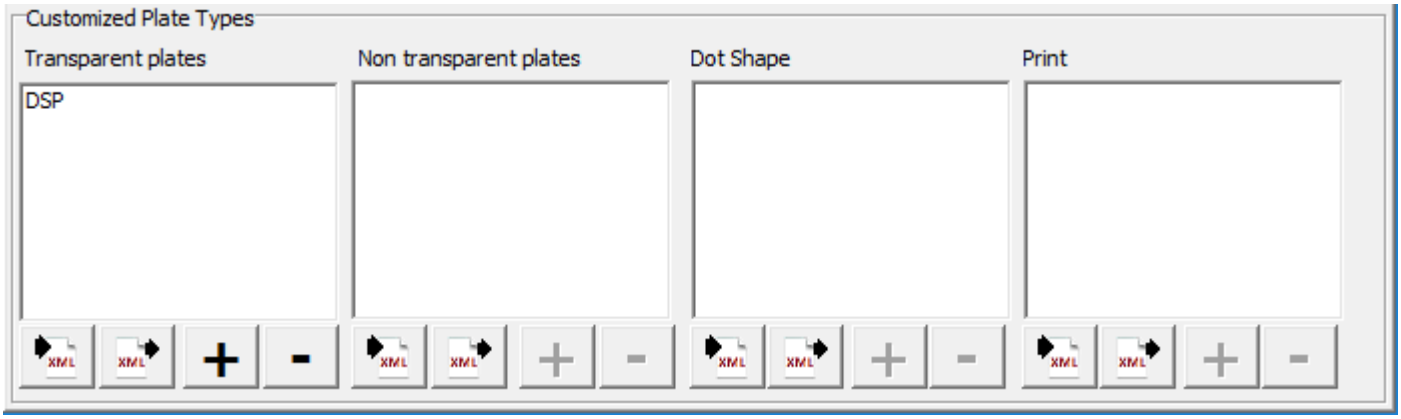


Select if an XML file and PDF report should be written to the XML Hot Folder. Select if you want to preview the PDF report for printing purpose.

Job Statistics Path

The Job Statistics path setting is used to specify the folder where Job statistics data should be saved. This file path is used in the Job statistics of the Tools/Statistics Window as well as for data of the Tools/Reports/Job Statistic function.

Customized Plate Types



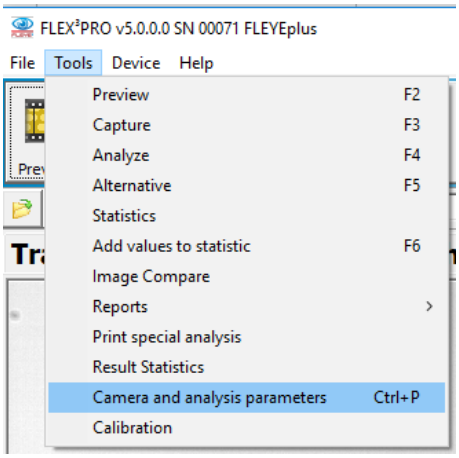
Customized Plate Types are helpful when none of the standard Plate Type settings (Light Flexo Plate, Medium Flexo Plate, Medium Dark Flexo Plate, Dark Flexo Plate, etc.) consistently produce the optimum image quality and measurement result. Before adding a customized plate type, the plate must be tested using the functions of the main window. When the optimum setting is determined in the main window, open the settings and click the + icon. Enter a customized Plate name. All of the settings used in the main Window application (Fuzzy, Max Brightness, Smooth, Exposure, Brightness, and Contrast) are linked to the new plate type. The new plate name will be automatically added to the plate type list of the main Window. This feature is offered for transparent plates and non-transparent plates.

A pre-defined plate type can be removed by clicking the '-' icon. Use this function with care as the definition is deleted permanently. Do not delete a plate type after it has been put into production.

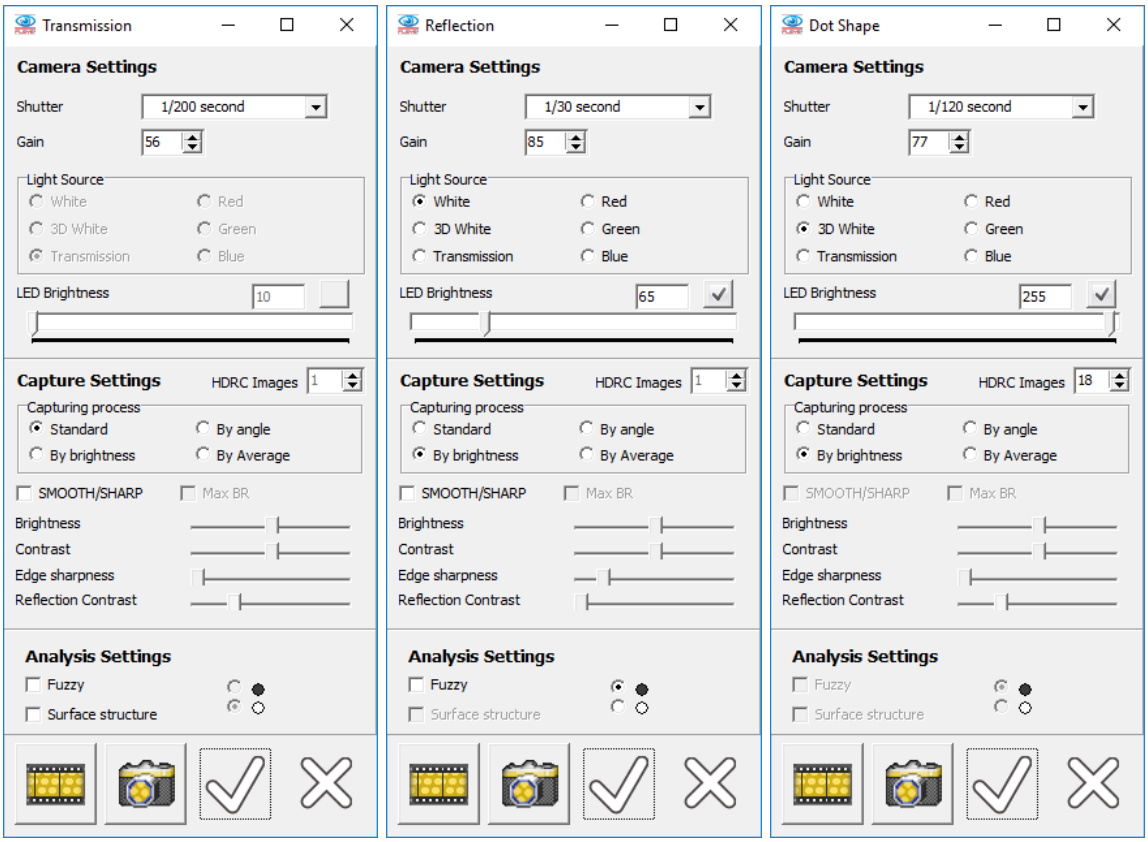
Customized plate types and substrate types

There are various parameters that can be used to define a special plate type. Plate measurement now has the ability to test the best camera settings, the optimum capture and image filter settings, and the analysis parameters. Earlier Software versions required settings to be changed in various locations of the Software, and some settings couldn't be modified at all. Version v5.x now makes the definition of customized plates significantly easier and more flexible.

Select Camera and analysis parameters from the Tools menu or press Ctrl+P on your Keyboard.

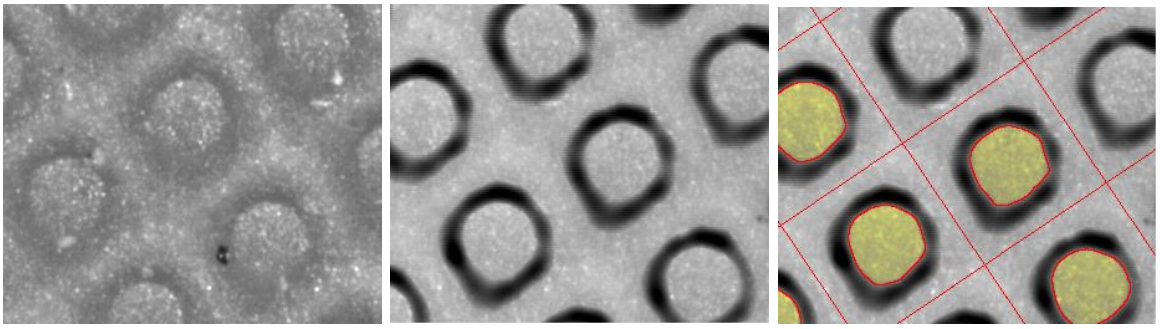


A secondary Window will open giving access to all parameters that can be changed for a special measurement mode: TRANSMISSION, REFLECTION, and DOTSHAPE.

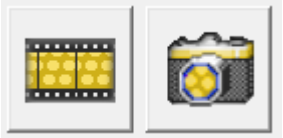


This feature makes it possible to measure plates that cannot be measured with standard plate settings.

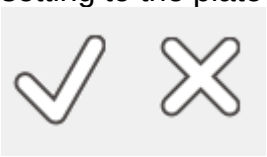
Using customized plates enhances the range of plate types that can be measured with the FLEX³PRO.



Use the Preview and Capture buttons of the camera settings Window to perform a test using the settings of the camera settings Window.

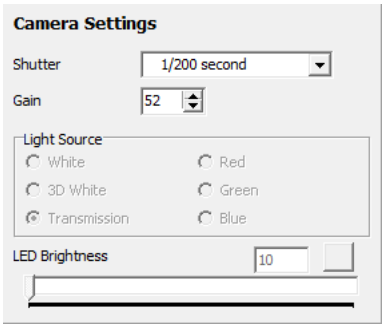


Once the settings are properly defined, click the check icon √ to save and add the new plate setting to the plate list. Use the X icon to close the window.



Camera Settings

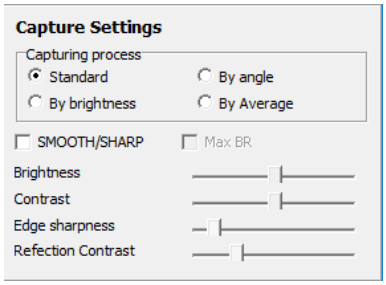
There could exist a plate type, where the [Medium Flexo Plate] preset results in dark images and the [Medium Dark Flexo Plate] preset results in excessively bright images. A setting between these two would give the best measurements. In this case the Camera Setting can be used to find the proper settings.



A short Shutter speed will result in darker images; a longer shutter will result in brighter images. A low Gain number will result in dark images; a high Gain value will result in brighter images. The LED Power itself can also be adjusted for all Light sources except the transmission light source which is fixed.

Capture Settings

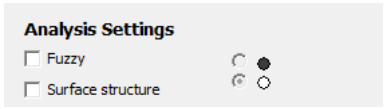
The capture of the image can be configured by the capturing process and filters that are going to be applied to the image after the capturing process is finished.



The Capturing process can be Standard, whereby one single image is captured with the current brightness settings. The capturing process [By brightness] will capture a series of images with different brightness settings and calculate a HDRC [High Dynamic Range Capture] image based on the image sequence. The [By angle] will capture images with illumination at different angles and calculate the resulting image based on that. Finally, the [By Average] will capture a series of images by varying the camera settings and calculate the average image based on that.
The Filters that can be applied are the same as the filters on the main Window.

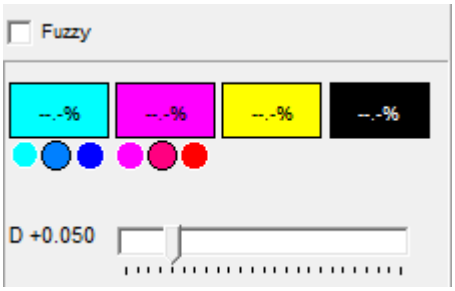
Analysis Settings

The same Analysis parameters that appear on the main Window can be selected and stored along with the customized plate setting.



PRINT mode customized substrate types

V5.x now supports the creation of customized substrate types if the FLEYEplus option is installed.
The settings Window now contains a list of customized print substrates.
Test a substrate including zeroing and calculation parameters using the PRINT page in the main Window.



Open the File/Settings Window and select the FLEYEplus page. There can be created customized Plate Types containing camera, capture and analysis settings for measurements in Transmission, Reflection, 3D, and Print mode. The customized plate types created here are listed in the FLEYEplus Settings Window.

Write the selected customized plate type to an XML file

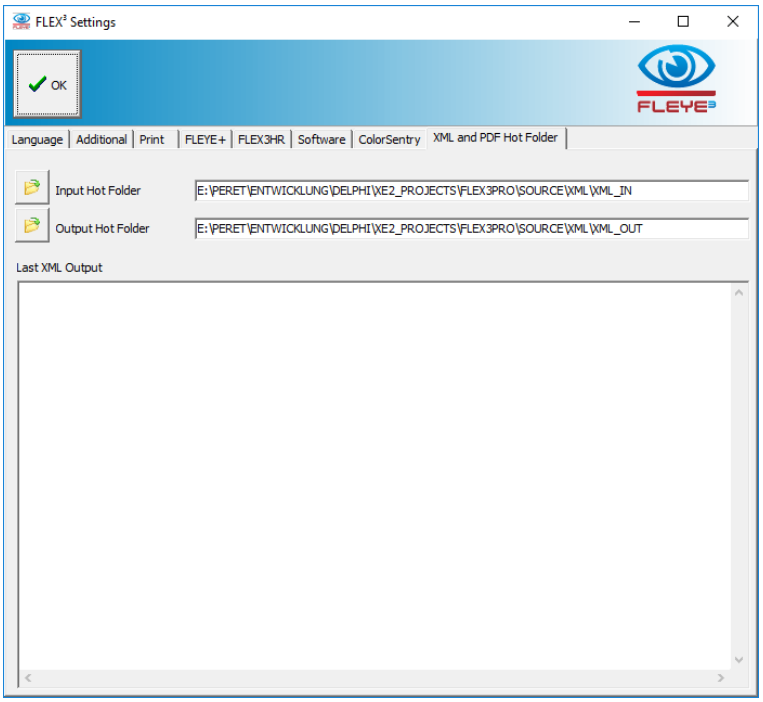
Read a customized plate type from an XML file


Create a new customized plate type using the current camera, capture and analysis settings.

 Remove the selected customized plate type permanently from the list.

XML Hot Folder

The FLEYEplus Software v6.x now supports the use of two separate Hot folders to exchange XML files or to output PDF reports.
If a Path field is empty, no files will be created. Select the Hot Folder to be used for XML and PDF files exchange.
This page always displays the most recent XML file, written to the XML output folder. See this file to see the syntax that's used for the XML files.
The XML input syntax is identical to the XML output syntax, although the input XML may contain only one single section. You may, for example, write an XML file for a reference specification with one FLEYEplus installation in one company site, and use the identical reference at another installation of FLEYEplus at a different company site. This assures coordination of plate measurement techniques.



The reference XML file name is composed of REF_ followed by the QRCode ID, followed by .XML

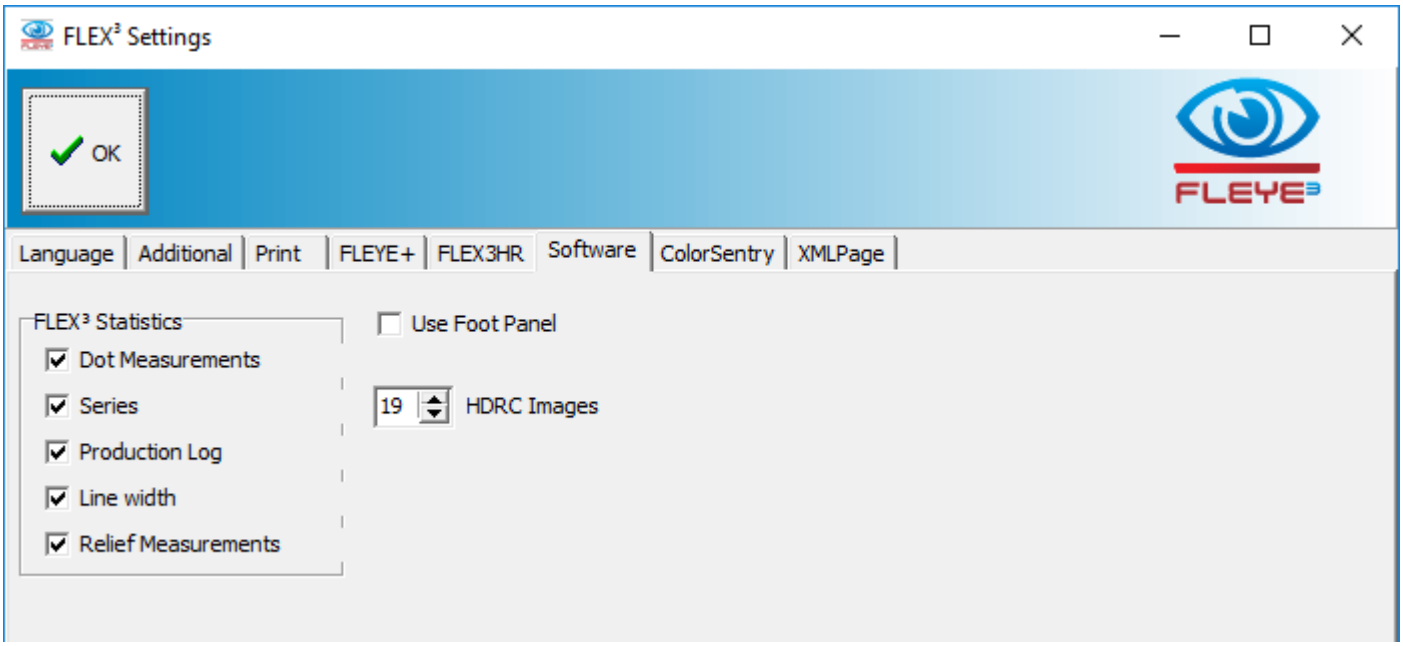
- REF_123.XML will be the file name for the QRCode ID 123.

A Plate Type XML file name composed of a Mode Specifier, followed by the Plate Type Name and .XML.
Mode Specifier:

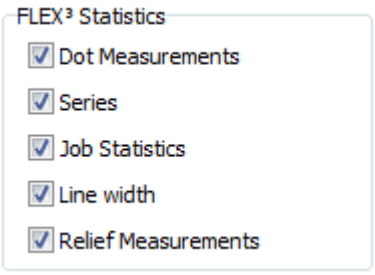
- TRP_ : for Plate Types to be used in Transmission mode
- REF_ : for Plate Types to be used in Reflection mode
- D3P_ : for Plate Types to be used in Dot Shape mode
- PRT_ : for Plate Types to be used in Print mode.

The reference input XML file does not need to contain all data. As long as the XML syntax is maintained correctly, even only a single value can be changed.

Software Settings:



Enable / Disable Pages of the statistics Window



Not all statistical functions are typically used for daily work. By un-selecting some of these the Statistics window becomes less cluttered.

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USB Foot Pedal

FLEYEplus allows the use of a USB Foot Pedal. Select the proper Item in the settings menu. The USB Foot Pedal option is particularly useful when handling large plates with the XXL Long Arm Adaptor. The three pedals are mapped to the most frequently used Function keys; F2 [Preview], F4 [Capture and Analyze], and F6 [Write Data].

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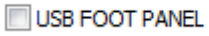


FLEYEplus DFTA wedge Function philosophy

FLEYEplus is based on the principles of the DFTA Control wedge and on the idea that the plate manufacturing process is black box that has to be kept constant and repeatable. All job-specific variations required in plate making are done in image setup before downloading the digital image to the plate making process.

The plate making process (Image Setter, Exposure, Wash-out, Drying) is optimized for a material (plate type) and tested using the DFTA-Control Wedge in pixel format or any other similar control wedge in pixel format. The pixel format makes sure that no job-specific settings (screen ruling, DGC-curve) will have an impact on the result. As a result of this initial test step the following reference information is stored for a specific material:

Imaging process (Laser)

- **Laser power:** the maximum Stain density is controlled during daily work and should never be higher than the reference. Stain density can be lowered by adjusting the laser power or the RPM.
- **Laser linearity:** The Dot area value of the 50% patch in pixel format is measured on the mask before washout. The resulting value is an indicator for the linearity of the imaging process and typically will be close to 50%. If the Stain density is in tolerance, but the 50% patch is out of tolerance, there might be a Laser Focus problem.

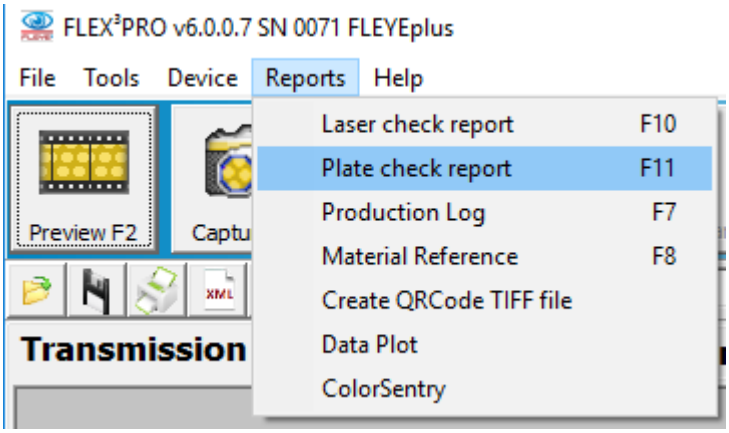
Plate making process (Exposure, washout, drying, finishing)

- **DOT LOSS:** In digital plate making there is usually a dot loss between imaged dots on the ablation mask and the final plate. This dot loss compensates the dot gain in print such as the overall process gets more linear. The dot loss should be kept constant to make sure that the image preparations can be done based on a predictable physical plate making process. The dot loss is controlled by measuring the 50% pixel oriented patch of the DFTA Control Wedge.
- **Minimum dot shape control – UV Exposure**. The minimum dot is selected once during the Plate making process characterization (for example one out of the A-U patches of the DFTA-control wedge) and a patch in pixel format is provided on every production plate. In case of minimum dots the shape is more important than the apparent dot area. Therefore a reference of the shape is saved. The minimum dot shape is quite sensitive to changes in UV Exposure.
- **Washout and drying, Relief Depth:** In addition it is possible to directly add relief depth characteristic measurements to the reports
    - 100% - measures the thickness of the plate
    - 50% - TO measure the difference between 100% and one of these patches as an indicator for the drying process. Solvent will lead to swelling of the plate during wash out. Drying causes solvent to leave the plate. The closer the 100% is to the 50%/TO the more solvent has left the plate.
    - Relief depth – measures the maximum Relief depth.

Dot area value of the 50% in vector format. This patch shows the effect all job specific adjustment in plate making such as screen ruling or Dot Gain Correction-curve.

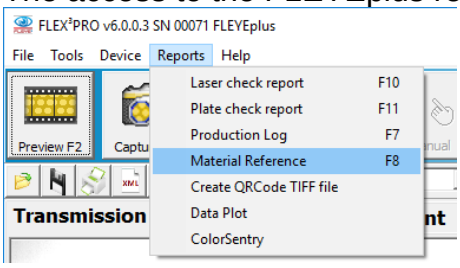
FLEYEplus functions

The FLEYEplus functions can be accessed clicking the Reports in the main menu items.

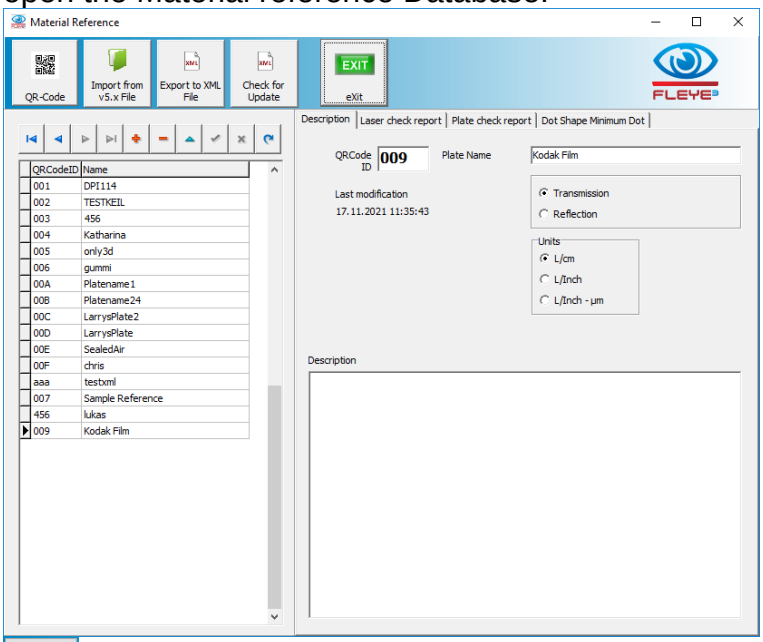


Material References

Various Reporting features of the FLEYEplus software in v6.x are now using a common database. The identical references can be used for Plate Check Report and for Production Log. There is no need to create two identical material references any more. This makes it easier to keep the quality control consistent and to export or import material references.
The access to the FLEYEplus reporting functions has been moved to the main menu.



Select the Material Reference from the Main Menu or use function key F8 on your keyboard to open the Material reference Database.

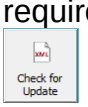


Read the QRCode ID for a new Reference directly from a physical flexo plate using the QRCode decoding function of the FLEYEplus Software. If a QRCode is not available on a physical plate, the operator can type in a code directly. The QRCode ID is a unique hexadecimal digit from 000 to FFF and used to identify the reference record by QRCode decoding.

If the QRCode ID detected does already exist in the database, the proper record is automatically selected. If it does not exist, the QRCode ID is assigned selected Material reference.

Data may be imported from the existing reference files used by earlier FLEX³PRO Software versions. The software will prompt for confirmation for any single Reference specification.

The current reference can be exported to an XML file. The Software will prompt for an output folder and propose the QRCode Id as file name. Any other file name and folder can be used, if required.



Click this icon to check the XML Input Hot folder for an update of the currently selected record. The FLEYplus Software will check for an XML file with the name REF_xxx.XML whereby the xxx is the QRCode ID. If an update exists, the references, tolerances and other information will be updated in the database. After updating, the software will automatically search for an update of the Plate Type used in this reference definition. A Plate Type update needs to be available in the XML Input Hot folder with a file name composed of a Mode Specifier, followed by the Plate Type Name and .XML.
Definition Specifier:
TRP_ : for Plate Types to be used in Transmission mod
REF_ : for Plate Types to be used in Reflection mode
D3P_ : for Plate Types to be used in Dot Shape mode
PRT_ : for Plate Types to be used in Print mode.

Material Reference description

The first page contains the following information

- 3 character ID that is used as Identification for the Material Reference definition in the QRCode. The QRCodeID can also inserted by reading a physical QRCode on a plate. The ID should be a hex code between 000 and FFF.
- The Plate Name is an operator- understandable name (for example DuPont DPS1067), that will be listed for selection in the drop-down lists of the report windows.
- A Material Reference can be defined for transparent plates or for non-transparent plates. This is used to preselect the measurement page ‘TRANSMISSION’ or ‘REFLECTION’ on the main Window, once a Material Reference is selected.
- Unit of Measure to be used Metric or Imperial or Mixed
- Description – any additional information

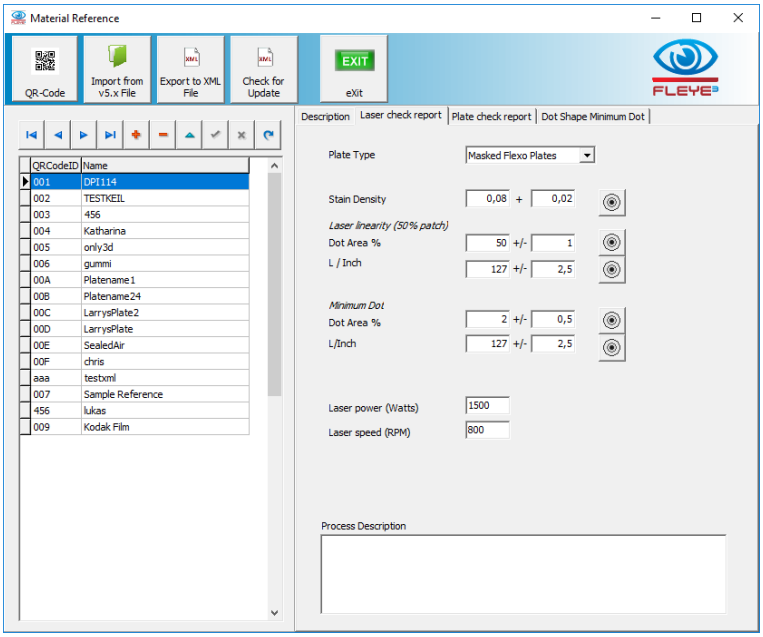
This page will always show up the last modification date and time. This can help to verify, if any instance is using the most recent Material Reference specifications.

Laser Check Report

If you execute the function <Import from File>, all data on this page is imported from the reference file linked to the LaserCheck report.

Clicking the  will copy the most recent reading from the main Window into the proper database field.

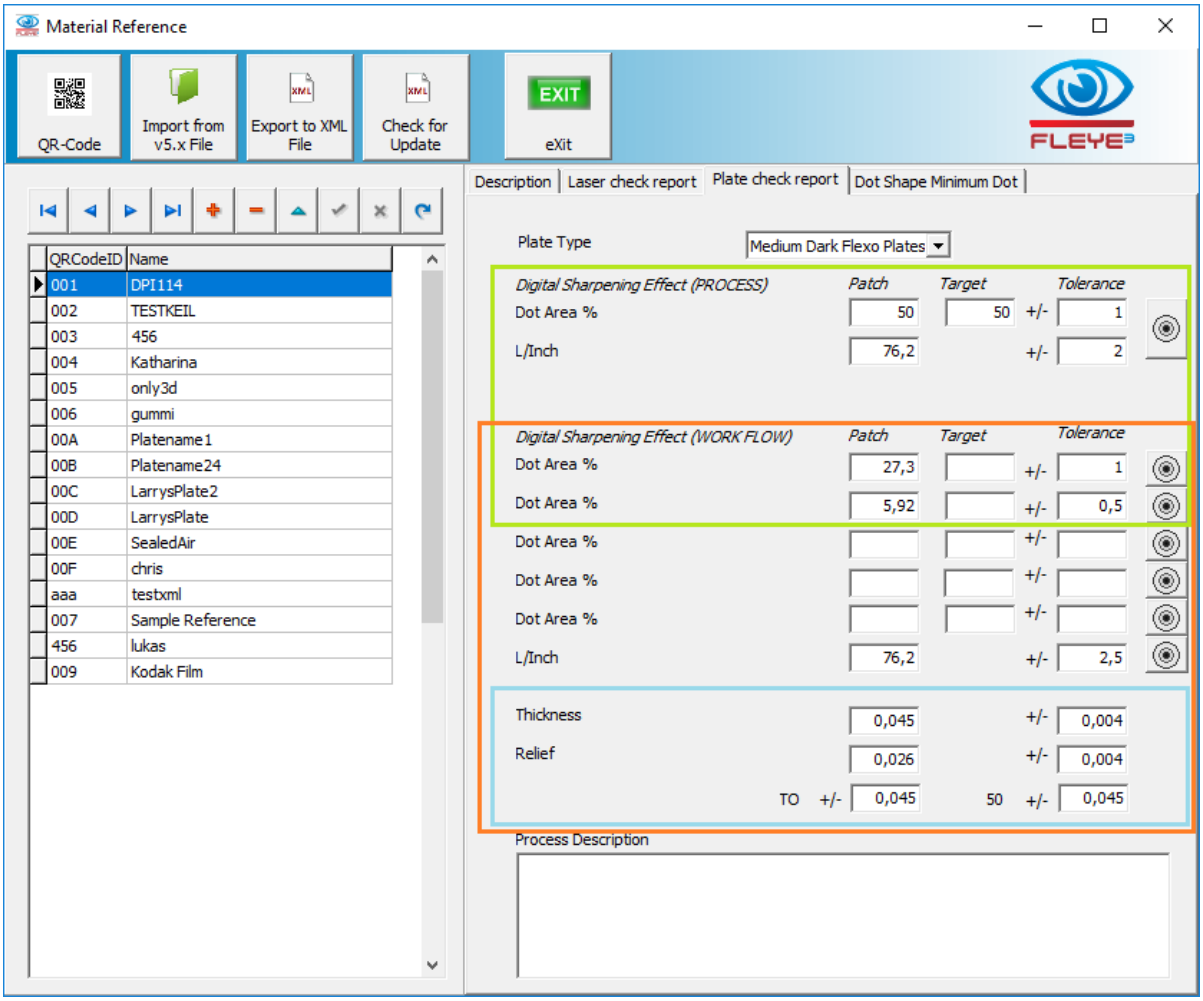
Any modification or a series of modifications must be confirmed by clicking the icon 



Please note that there can be different screen rulings specified for the Linearity Patch and the Minimum Dot. This is an important new feature, as the minimum dot is more sensitive to screen ruling than the 50% dot.

Plate Check Report

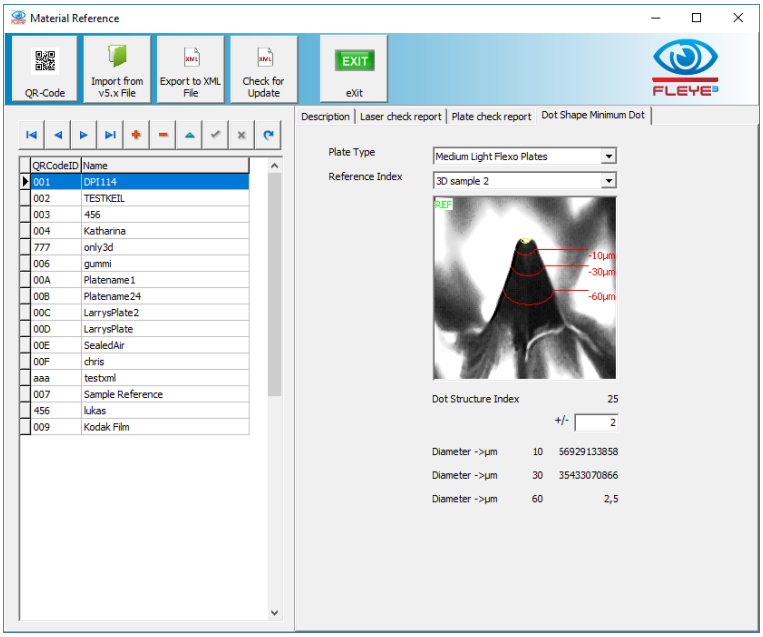
The new Database now contains six Dot Area references. The first reference (PROCESS) is aimed to control the repeatability of the exposure and washout process by always using the identical 50% TIFF file. The same patch is also used to control the linearity of the Laser. Therefore, it requires a separate screen ruling definition.



The Plate Check report can be configured to measure 1 to 3 Patches for a PDF report. This report is always using the PROCESS reference and as defined the first and second WORKFLOW references, highlighted in the green frame.
The Production Log can be configured to use 1 to 5 patches on a strip. This function is using the WORKFLOW references shown in the red frame.
The Thickness and Relief reference definitions are the same for both reporting functions shown in the blue frame. They are not Workflow dependent.
Additional Information to describe special process parameters may be added, if required.

Dot Shape Minimum Dot

The Dot Shape Reference specifies the Camera Settings to capture the image, contains a reference image and the reference measurement data. There can also be defined a tolerance for the Dot Structure Index.



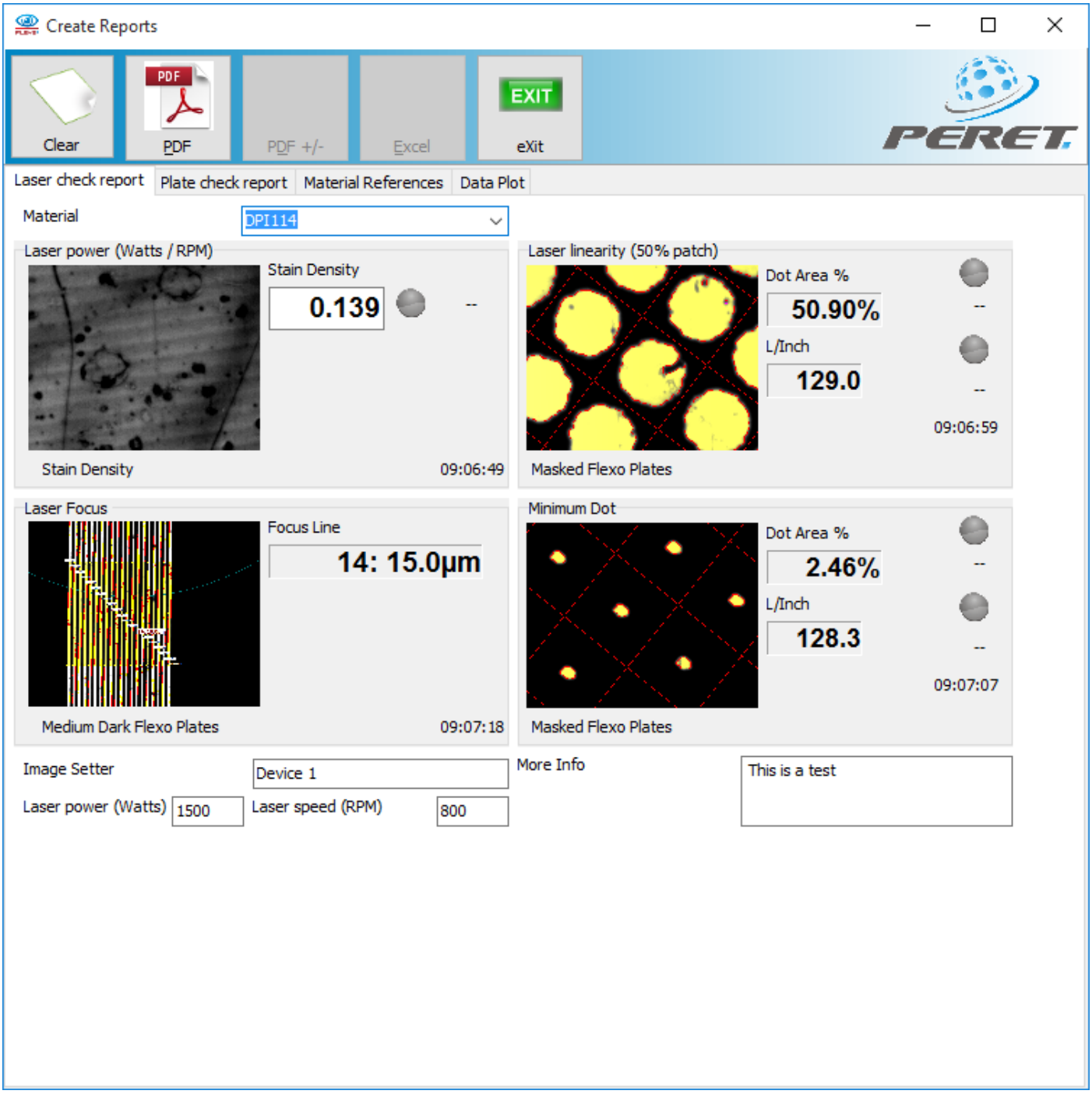
One Dot Structure measurement is now also available for the Production Log.

Perform a Laser Check

A Laser Check report should be run once a day, when you change material, or when you clean the optics.

To create a new Laser Check report click on the Clear symbol 

and select the material from the materials list (if there is no material to select, create a new material reference)



Click inside the Laser Power Image Panel to start a Stain Density measurement. The Reports window will close and the main FLEX³PRO application will automatically be set to Stain Density measurement. Zero on a tape-pull area and then measure the Stain Density as usual. The Result is automatically copied to the Reports Window. The Reports Window will automatically re-open.

Click inside the Laser Linearity image panel to start a Laser Linearity measurement. The Reports window will close and the main FLEX³PRO application will automatically be set to MASK measurement. Measure the 50% patch on the mask as usual. The Result is automatically copied to the Reports Window. The Reports Window will automatically re-open.

Click inside the Minimum Dot Image Panel to start the measurement of the Minimum Dot. The Reports window will close and the main FLEX³PRO application will automatically be set to MASK

measurement. Measure the minimum dot on the mask as usual. The Result is automatically copied to the Reports Window. The Reports Window will automatically re-open.

Click inside the Focus Test Image. Execute a Focus Test. The Result is automatically copied to the Reports Window. The Reports Window will automatically re-open.

The green icon adjacent to the measurement results indicates the result is within tolerance of the selected material record. In case the icon turns red the results don't fit with the selected material record.

Add additional Information such as Image Setter or other comments.

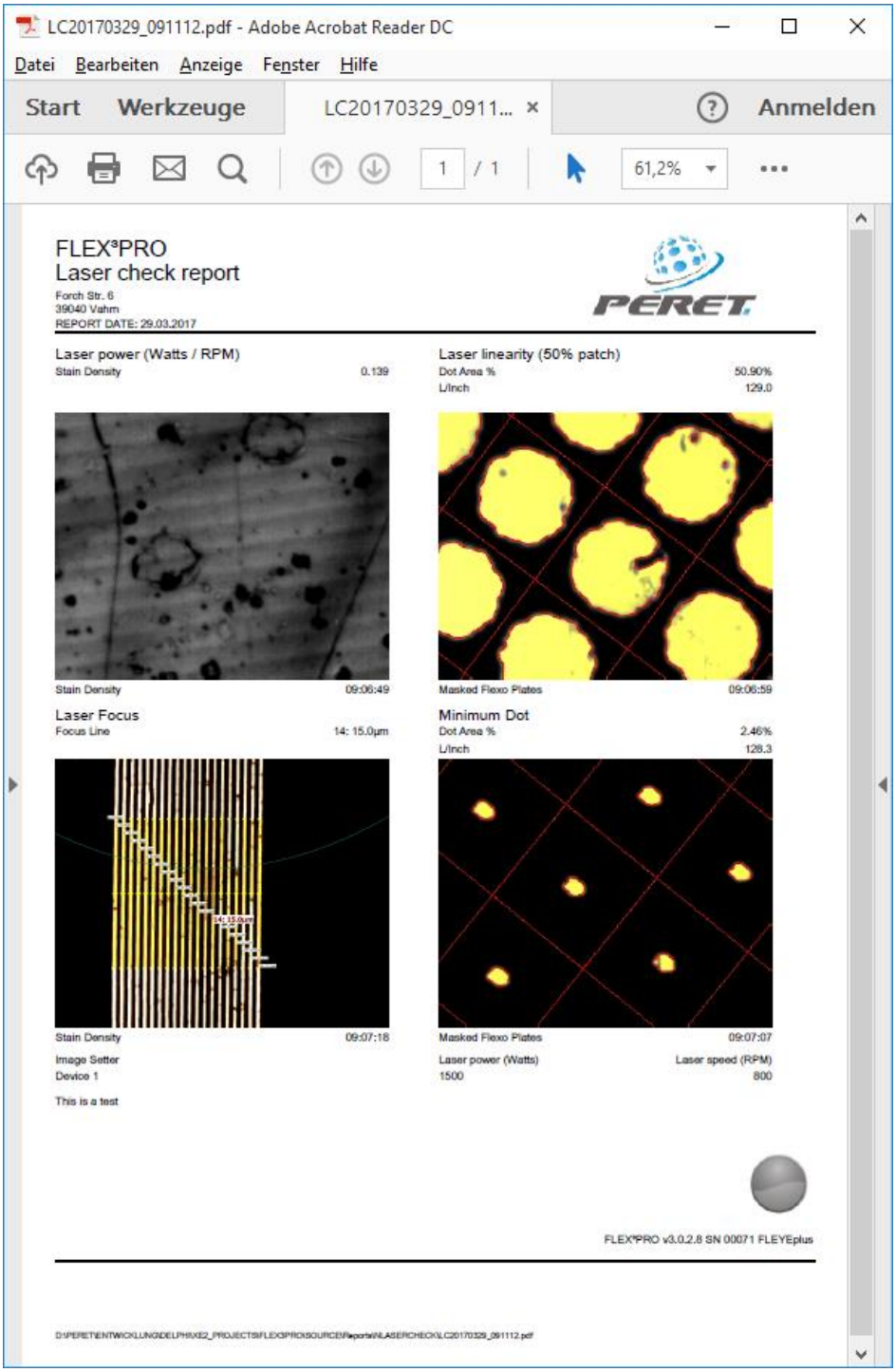
Create a Laser Check Report

There are two different reports that can be created: One Report without reference and tolerance information suitable for distribution to customers and one Report with tolerance Information suitable for QC department documentation.

Click the PDF Icon to create a report without references

Click the PDF+/- Icon to create a report including references


The report is created as a PDF file and displayed using the Windows Browser. Sometimes Windows is not fast enough in running the browser. Click the refresh Icon in this case until you get the report is displayed properly.



If you are using an older version of the software the report is automatically saved as PDF file in the subdirectory

…PERET\FLEX3PRO\Reports\LASERCHECK

If you use the software version 1.5.x or newer the PDF is saved in the subdirectory

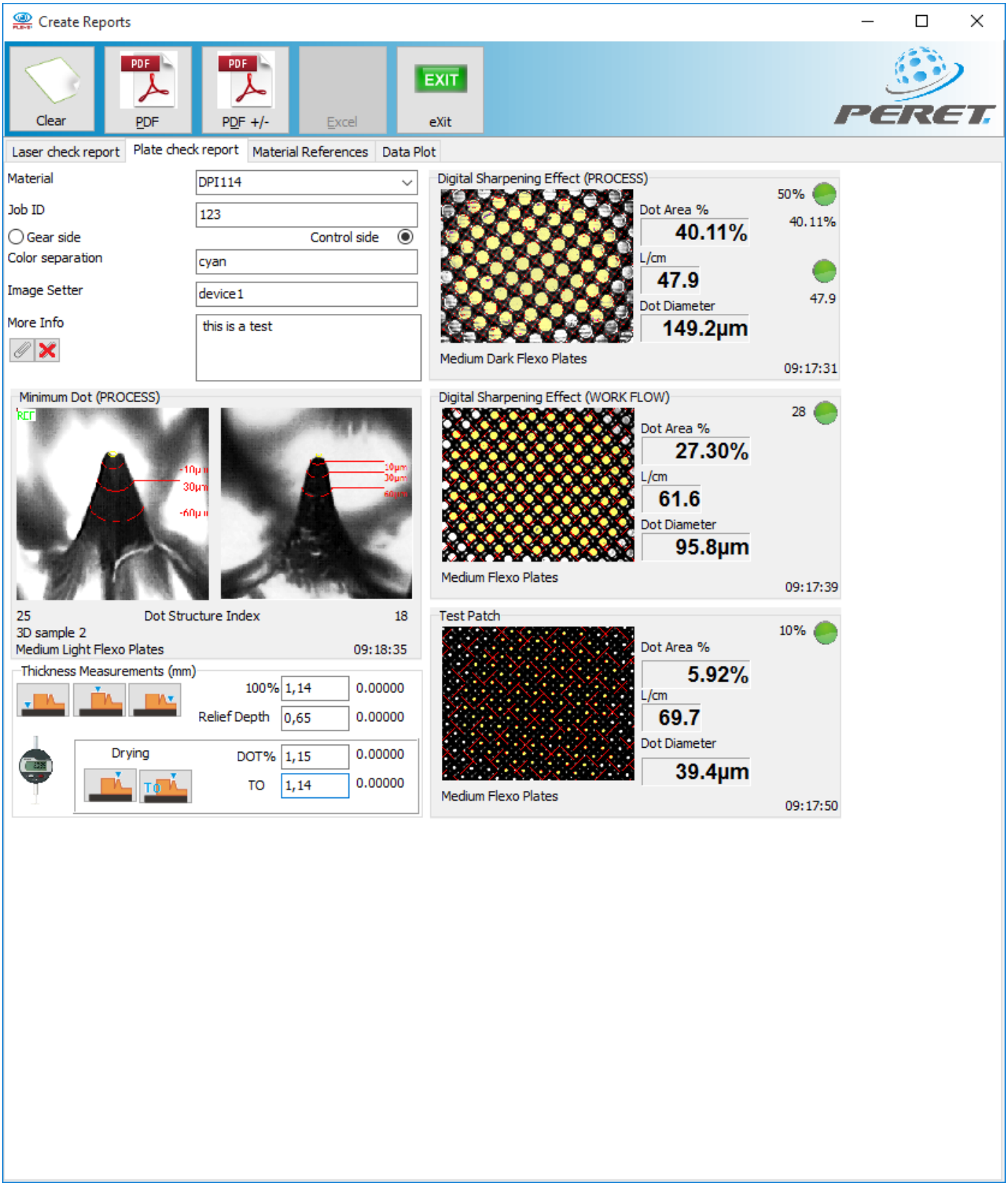
…PERET\FLEX3PRO\Reports\NLASERCHECK

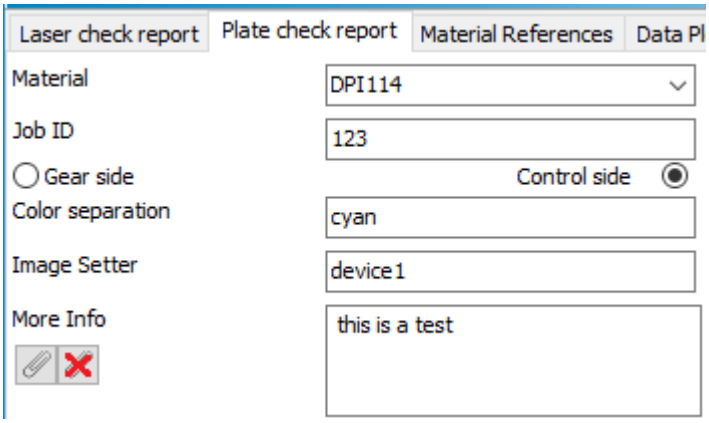
Perform a Plate Check

A Plate Check report is typically run for every single plate made.

To create a plate check report first click on the Clear symbol 

and then select the material from the Materials list (if there is no material to select, create a new material reference).


Create Reports
Clear
PDF
PDF +/-
Excel
eXit
PERET
Laser check report
Plate check report
Material References
Data Plot
Material
DPI114
Job ID
123
Gear side
Control side
Color separation
cyan
Image Setter
device1
More Info
this is a test
Digital Sharpening Effect (PROCESS)
50%
Dot Area %
40.11%
40.11%
L/cm
47.9
47.9
Dot Diameter
149.2µm
Medium Dark Flexo Plates
09:17:31
Minimum Dot (PROCESS)
25
Dot Structure Index
18
3D sample 2
Medium Light Flexo Plates
09:18:35
Digital Sharpening Effect (WORK FLOW)
28
Dot Area %
27.30%
L/cm
61.6
Dot Diameter
95.8µm
Medium Flexo Plates
09:17:39
Test Patch
10%
Dot Area %
5.92%
L/cm
69.7
Dot Diameter
39.4µm
Medium Flexo Plates
09:17:50
Thickness Measurements (mm)
100%
1,14
0.00000
Relief Depth
0,65
0.00000
Drying
DOT%
1,15
0.00000
TO
1,14
0.00000

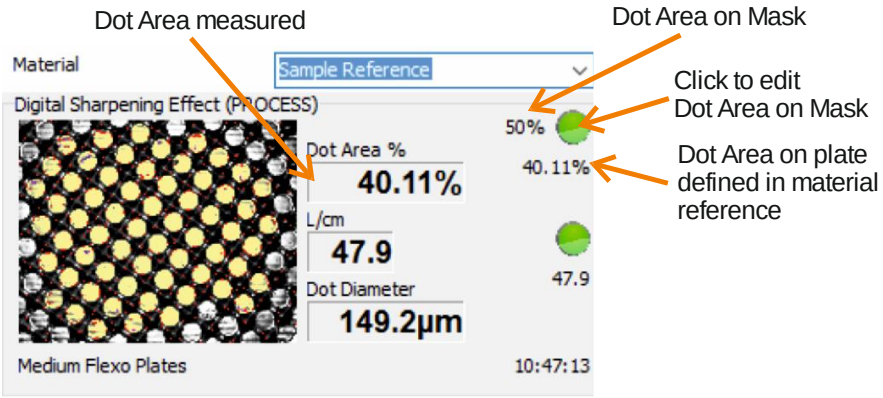


Select the Material reference, insert the Job ID, specify the strip location, specify the color of the plate and the image setter on which it has been imaged. Add any additional information required.

Add an image representing the job by clicking this icon.

Remove the image representing the job by clicking this icon.

Click inside the Digital Sharpening Effect (PROCESS) panel to start a Dot Area measurement on the **Pixel** variant of the 50% patch. The Reports window will close and the main FLEX³PRO application will automatically be set to dot area measurement. Measure the 50% pixel oriented patch as usual. The Result is automatically copied to the Reports Window. The Reports Window will automatically re-open.



Click inside the Digital Sharpening Effect (WORK FLOW) panel to start a Dot Area measurement on the **Vector** variant of the 50% patch. The Reports window will close and the main FLEX³PRO application will automatically be set to dot area measurement. Measure the 50% vector oriented patch as usual. The Result is automatically copied to the Reports Window. The Reports Window will automatically re-open.

Click inside the Test Patch panel to start the measurement of the additional test patch. This is available only if '3 Patches' are selected on the settings FLEY+ page.

Click inside the Minimum Dot (PROCESS) panel to start a 3D Minimum Dot analysis. The Reports window will close and the main FLEX³PRO application will automatically be set to Dot Shape measurement. Measure the minimum Dot as usual. The Result is automatically copied to the Reports Window. The Reports Window will automatically re-open.

Measure the thickness of the relief with the RELIX. The results will appear in the selected fields with a mouse click.

 Digital zero the micrometer on the instrument surface without a plate.

 Measure the solid (100%). The difference between the zero and the solid measurement value tells you the thickness of your plate. The solid measurement is stored permanently as the solid reference.

 Measure the relief depth clicking the relief depth icon. The relief depth is the difference in thickness between the previously measured solid on the printing area and the thickness of the non-printing area.

 In addition there are measurements available to control the drying process. Perfect drying is achieved when the height of the 50%patch or the TO micro line patch matches the 100%. If drying is continued after this point in time, the plate might be damaged.

Add additional Information like Image Setter, Color separation, or other comments.

Create a Plate Check Report

There are two different reports that can be created: One Report without reference and tolerance information suitable for distribution to your customers and one Report with tolerance Information typically used by management

Click the PDF Icon to create a report without references

Click the PDF+/- Icon to create a report including references


The report is created as a PDF file and displayed using the Windows Browser. Sometimes Windows is not fast enough in running the browser. Click the refresh Icon in this case until you get the report displayed.

FC320170329_092302.pdf - Adobe Acrobat Reader DC

Datei Bearbeiten Anzeige Fenster Hilfe

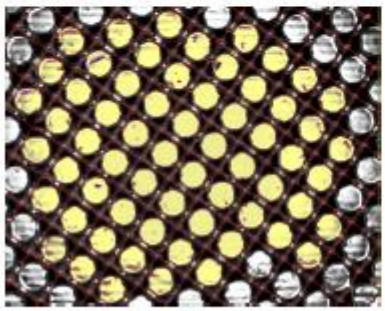
Start Werkzeuge FC320170329_092... Anmelden

1 / 1 61,2%

FLEX³PRO
Plate check report

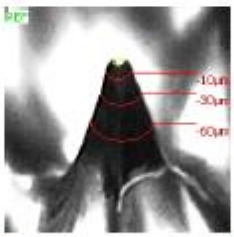
Forch Str. 6
39040 Vahm
REPORT DATE: 29.03.2017

PERET



Medium Dark Flexo Plates
N:50%
R:40.11%
D:0.00%

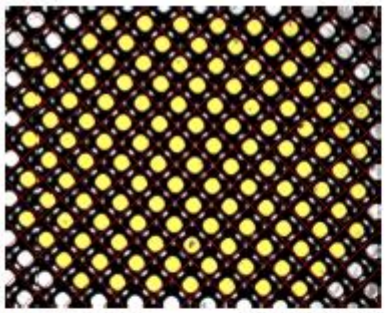
Dot Area %: 40.11%
L/cm: 47.9
Dot Diameter: 149.2µm
09:17:31



3D sample 2 25

Dot Structure Index 18
09:18:35

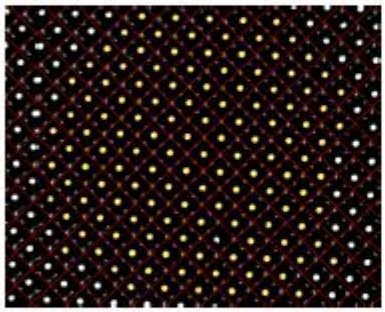
Thickness Measurements (mm)		Drying	
100%	1,14	DOT%	1,15
Relief Depth	0,65	TO	1,14



Medium Flexo Plates
N:28
R:27.30%
D:0.00%

Dot Area %: 27.30%
L/cm: 61.6
Dot Diameter: 95.8µm
09:17:39

Job ID	123
Color separation	cyan
Image Setter	device1
	Control side
More Info	this is a test



Medium Flexo Plates
N:10%
R:5.92%
D:0.00%

Dot Area %: 5.92%
L/cm: 69.7
Dot Diameter: 39.4µm
09:17:50

DPI114

FLEX³PRO v3.0.2.8 SN 00071 FLEYEplus

D:\PERET\ENTWICKLUNG\DELPHIXE2_PROJECTS\FLEX3PRO\SOURCE\Reports\NDPLATECHECK\FC320170329_092302.pdf

The report is automatically saved as PDF file in the subdirectory

…PERET\FLEX3PRO\Reports\PLATECHECK

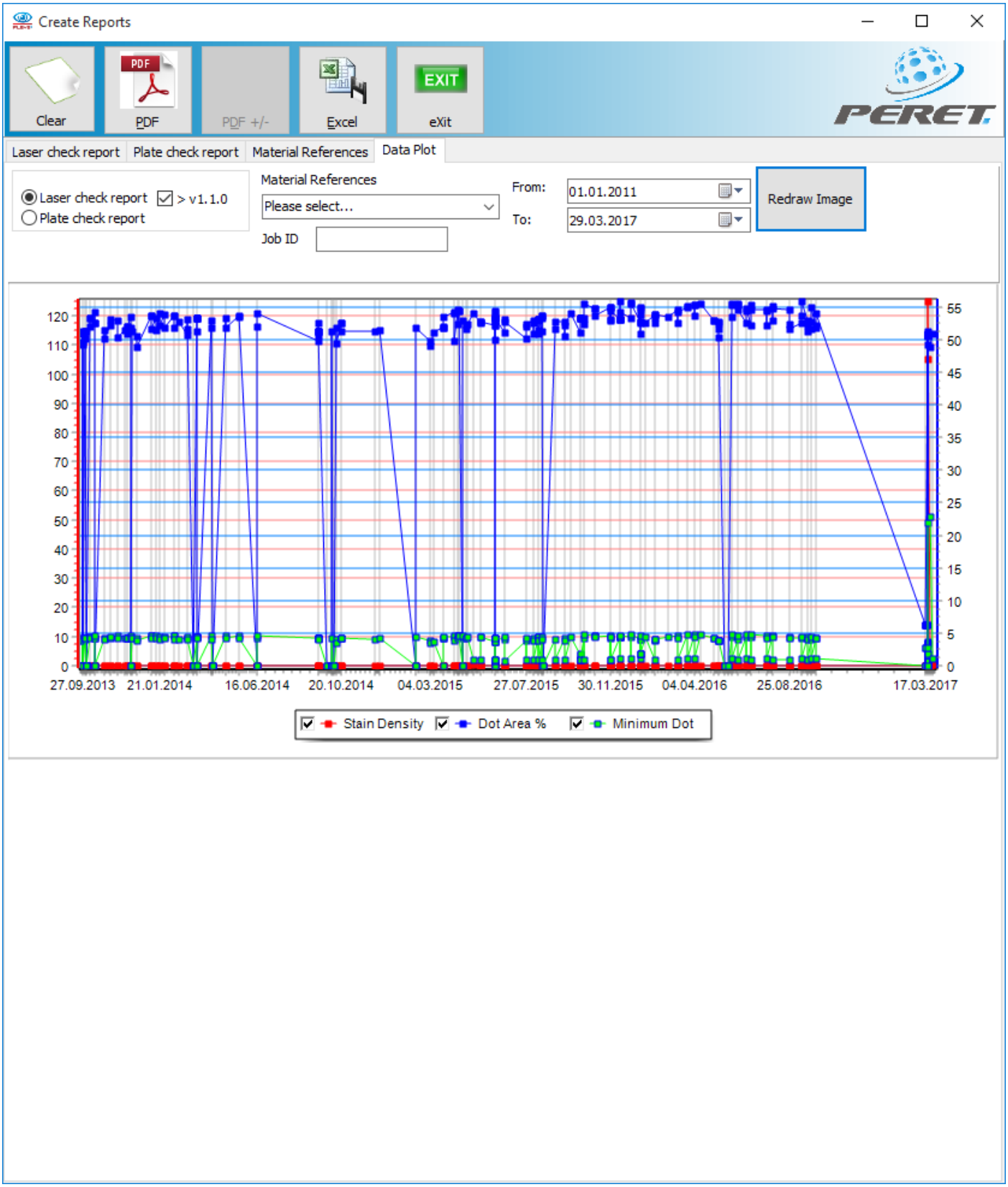
If the software version is 1.5.x or newer the PDF will be saved in

…PERET\FLEX3PRO\Reports\NPLATECHECK

If 3 patches are used the software will be saved in

…PERET\FLEX3PRO\Reports\N3PLATECHECK

Report Data Plot

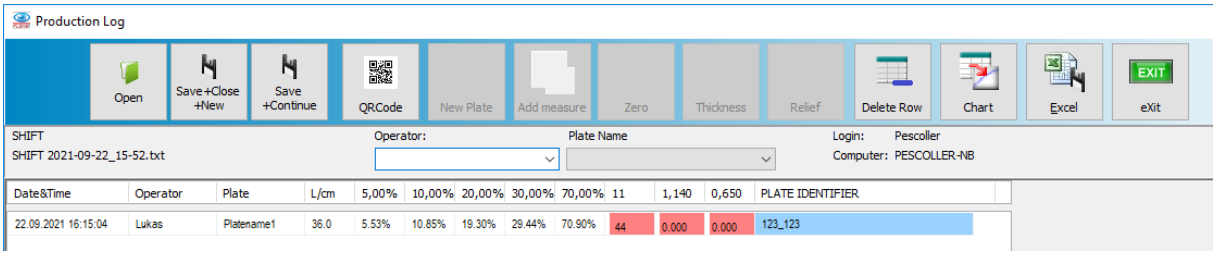


- Select Laser Check reports if you would like to analyze the behaviour of your Laser over time.
- Select Plate Check Reports if you would like to analyze the your plate production
- Select the Material from the Materials list you would like to analyse

- Select the time frame you would like to analyse
- Click Redraw Image to draw the graph
- You can zoom the diagram with the mouse
- Click on an Item of the graph to show the proper report file name. Click on the filename to open the report.
- Click on the PDF Icon to create a Summary Report.
- Click on the EXCEL Icon to export data to EXCEL

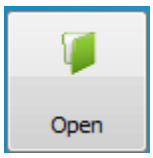
Reports Job Statistics (Production Log)

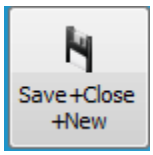
Select Job Statistics from the Tool/Reports Menu or press F7 on your keyboard to open the Job Statistics panel. It is important to understand that the References and Tolerances are now linked to the Plate Type setting, which also controls the exposure and other image capture and analysis parameters.

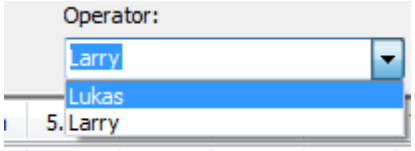


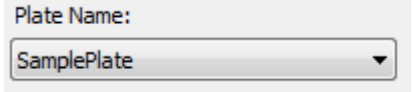
Start a new shift data collection

In order to start to collect data the following conditions have to be true:

- A file name has to be selected by OPEN or SAVE+CLOSE+NEW function
  - 

Open an existing data table
  - 

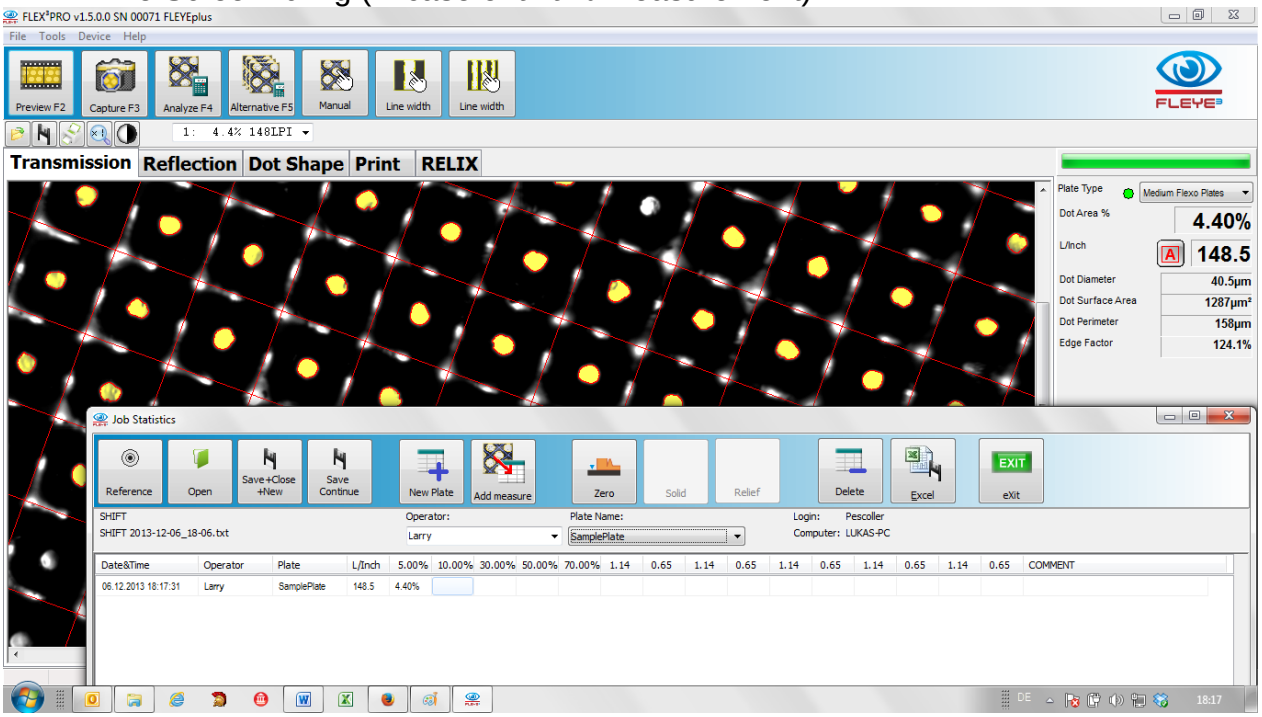
Save the current data table, close it and create a new data table.
- An Operator's name must be inserted next. Insert the name and press ENTER on your key board. The operator's name will be added to the operators name list and can be selected the next time from the list. After a restart of the Software this list will be empty.
  - 

- A Plate name has to be selected. Select one from the drop down list.
  - 

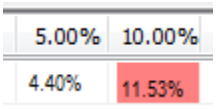
Execute a halftone dot area measurement on the main screen as normal by pressing F2 for preview, F4 for capture and analysis.

Press F6 or Click Add Measure to add the first measurement to the current row. As it is the first column of the row, the following fields will be inserted automatically

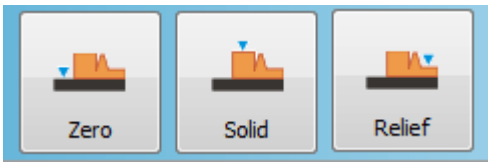
- A Date & Time stamp
- The Operator's name
- The Plate name
- The Screen ruling (in case of tint % measurement)



If the measurement is in tolerance, the value will be displayed on white background. In case it is out of tolerance the value will be displayed on red background.

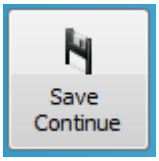


Continue to insert all measurements followed by thickness and relief measurement.

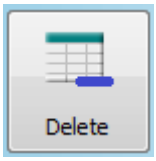


Finally the software will prompt for a comment.

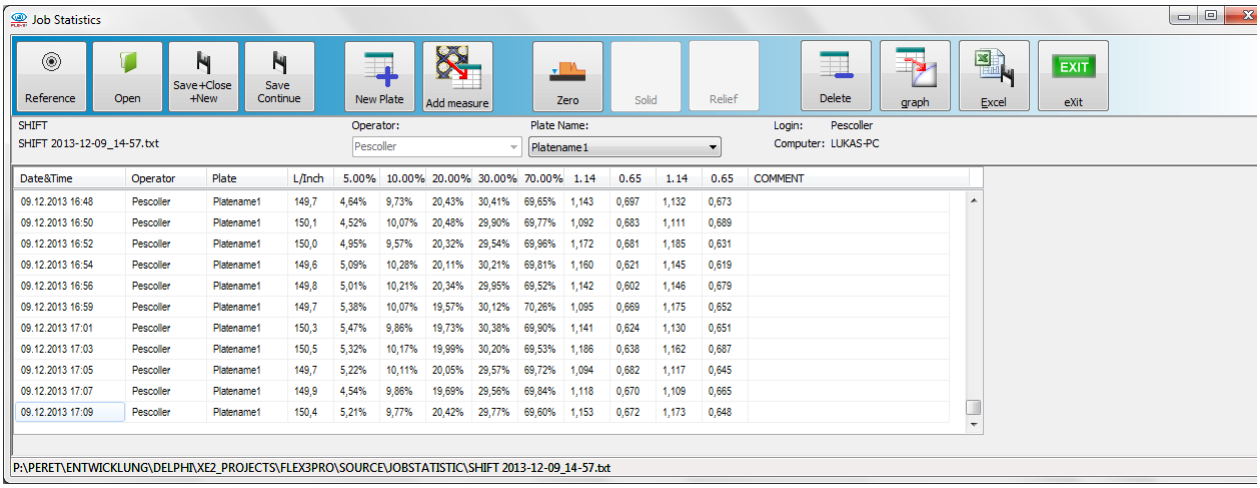
Click the New Row to proceed with the next plate.



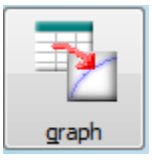
Save your data from time to time to make sure it does not get lost



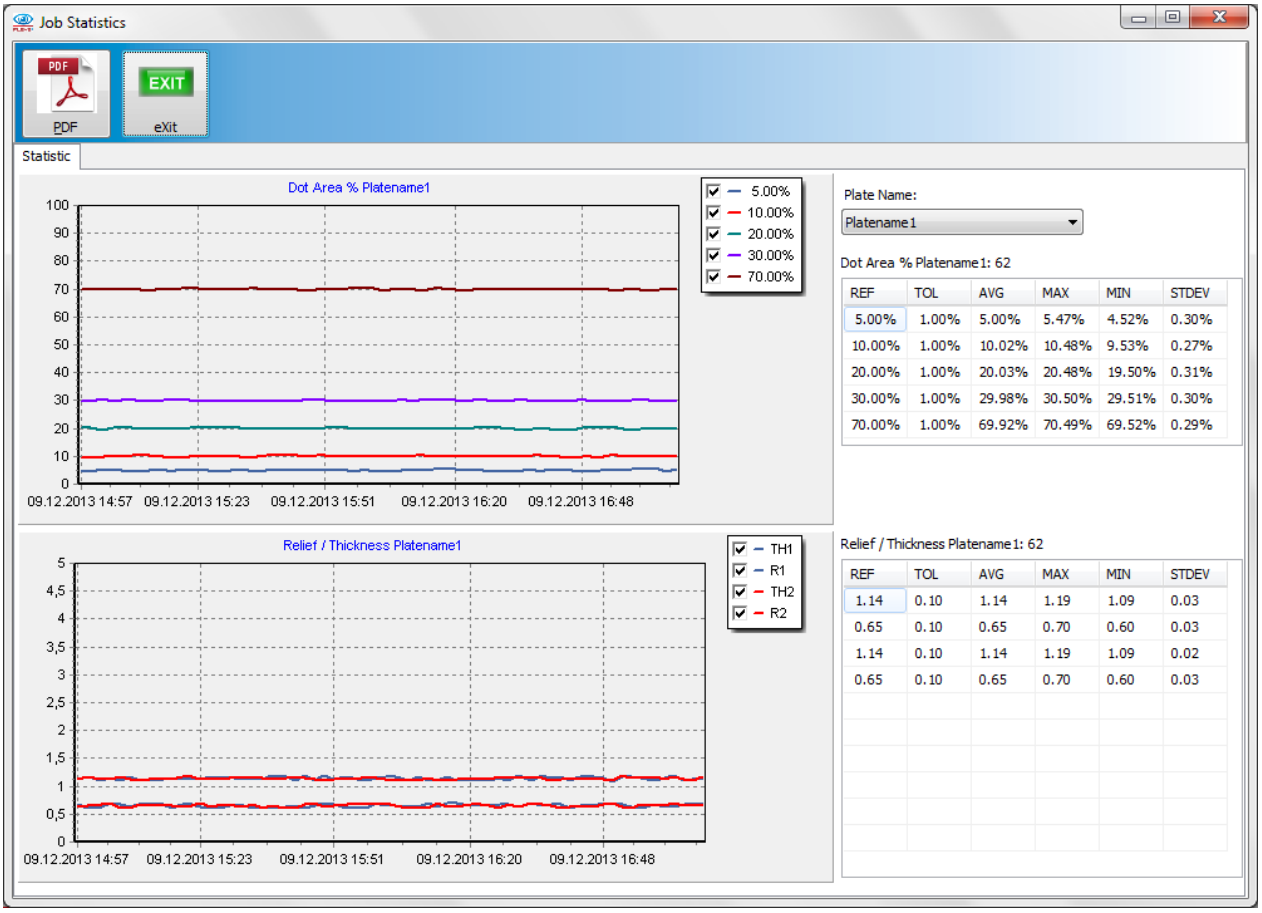
Delete the current row from the table permanently



Export the data to an EXCEL file.



Click the graph icon to open the summary report

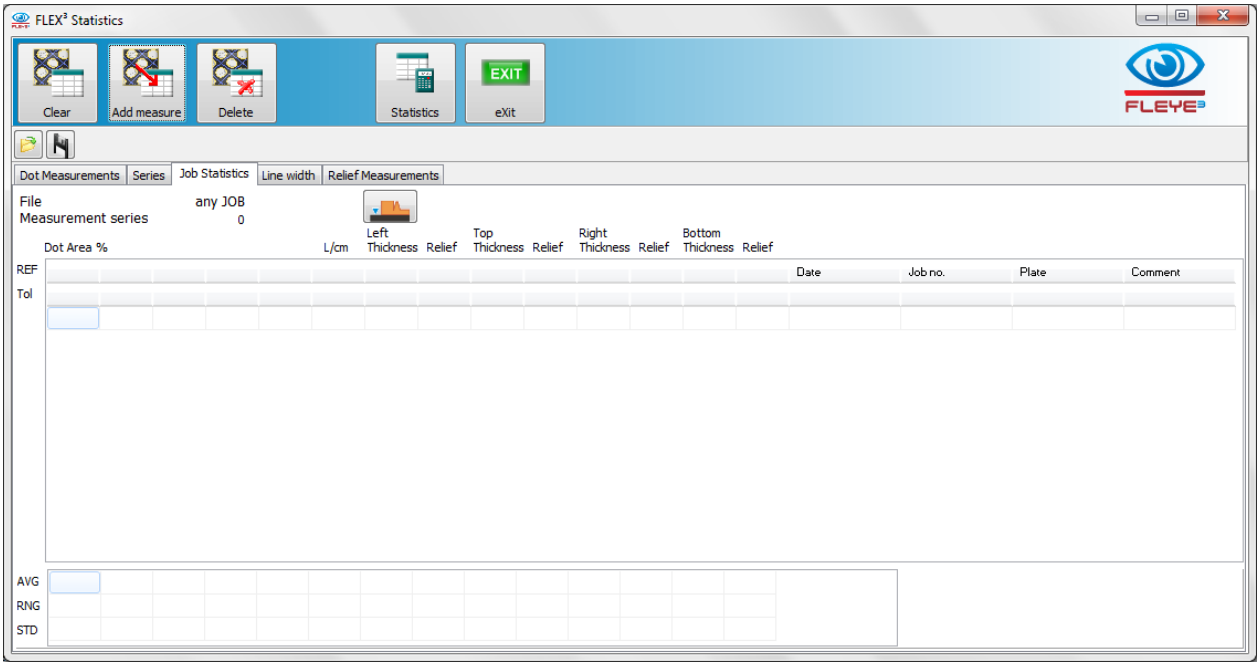


Click the PDF Icon to create a PDF report.

For the workflow integration read the FLEX3PRO v6.x Workflow Manual located in the installer directory.

Fast Job Statistics

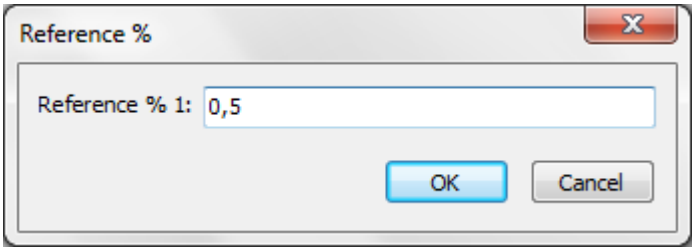
The FLEYEplus license offers an additional data table in the statistics form. Open the Statistics Window from the Main Menu / Tools. Select the job statistics page.



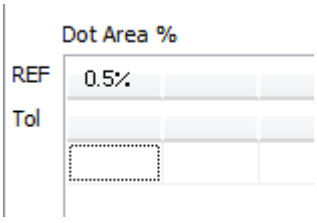
Definition of the control wedge and RELIX references

The job statistics table offers up to 5 dot area measurements, one screen ruling column and 4 digital micrometer measurement locations with a thickness and a relief measurement each.

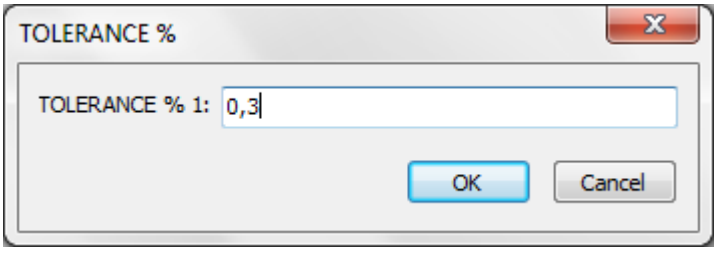
To enter a reference dot area click the with the left mouse button in the proper cell. An input window will open. Enter the reference number and click OK.



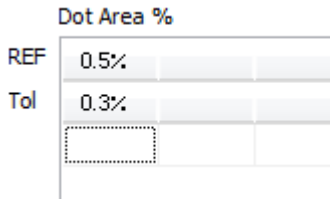
The reference will appear now in the table at the proper position.



Now click the tolerance cell below. The input Window will open again. Insert the tolerance of this measurement.

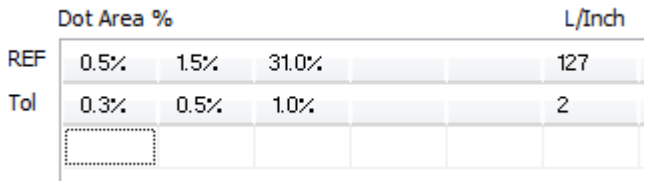


The tolerance will appear in the table after you click the OK icon.



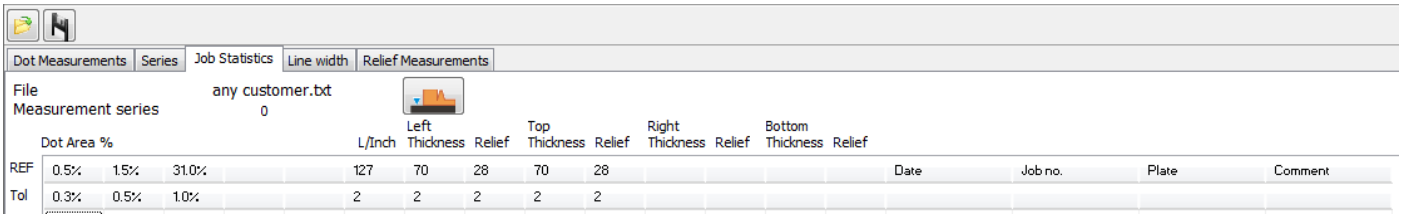
Continue to insert dot area references and tolerances up to a maxium of 5 patches.

Now insert the screen ruling in L/cm or L/Inch, depending on the setting in the settings Window of the main application.



In this example we are using a control wedge with 3 patches at 127 L/Inch. Patch 4 and Patch 5 are not defined and therefore skipped during the measurement sequence process.

Finish by entering references and tolerances for the thickness and relief measurements for a maximum of 4 locations.



References are automatically saved and will be automatically reloaded at the next software launch.

Collect job data

Every plate is measured and the data is collected in one single row of the table.

Select the main window, position the first patch below the sensor and take a measurement. Click the ADD MEASURE icon or press F6 to add the first measurement to the current cell (for example 0.5%). The first measurement will also update the Screen ruling column and insert a date and time information.

The cursor will automatically move to the next column with a reference value. Measure the next patch and press F6 to add the dot area value.

After the last dot area column the cursor will automatically jump into the first thickness measurement column.

 Make sure that the micrometer is digitally zeroed by clicking the Zero Icon before the first RELIX measurement. Zeroing typically does not need to be done before every single plate.

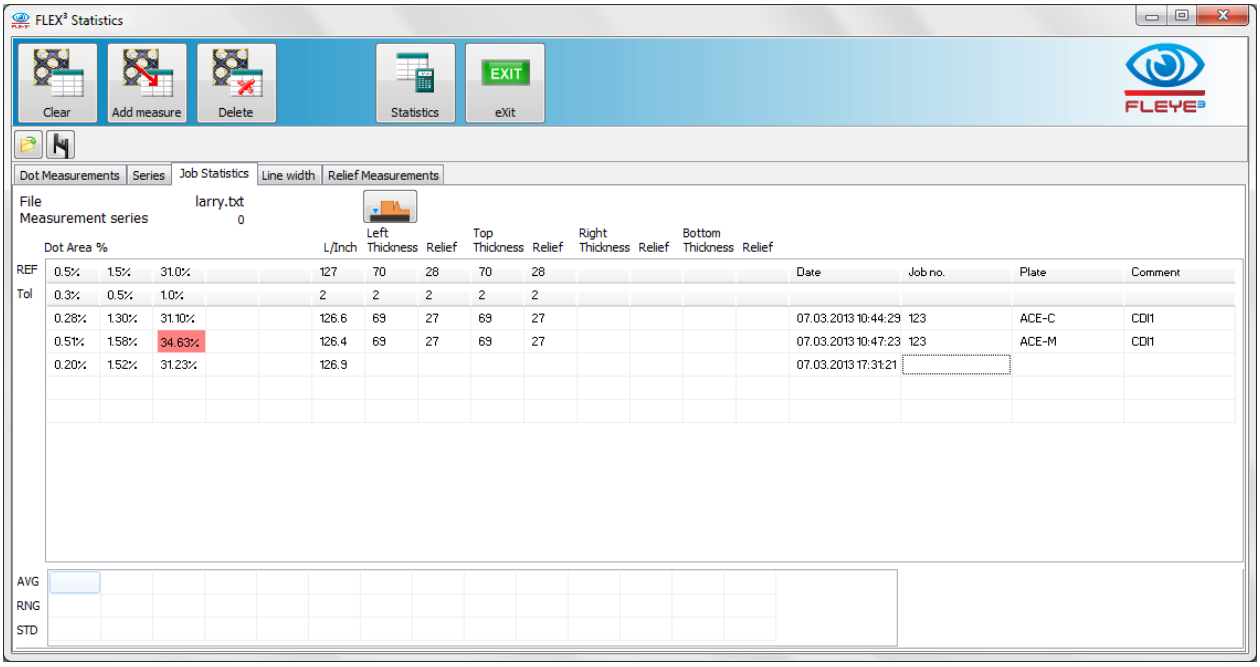
Now position a solid area of the plate below the measurement pin of the digital micrometer. Press F6 on the keyboard to measure the plate thickness and to copy the value into the proper cell of the table. Position the plate relief area below the pin of the digital micrometer and press F6 again. The relief depth will be calculated based on the previous thickness measurement and copied to the proper cell of the table.

Continue to perform RELIX measurements until all measurements are made according to the references available.

At the end of the measurement process for one single plate the cursor will automatically jump to the comment cells asking to input additional information such as:

- Plate – insert plate name, color set etc. in this field
- Job number – insert the job number in this field
- Comment – insert processor id, operator or any other information in here

The measurement procedure for one plate now is finished. Continue with the next plate.



Whenever a measurement value is out oftolerance the value will be displayed on red background. Click the save Icon to save the table. Click the load icon to reload any table.