How to – Create a New Printer Calibration for the HPZ2100

With the combination of the GMG software V4.1.19 or above and the GMG supplied starter kit for your HPZ2100, it is possible to create a new printer calibration mx3, gamut and full gamut files for non GMG media types.

The latest starter kits can be found on the GMG software CD or from our support website www.gmgcolor.com. For the HPZ2100 there are 3 different starter kits. Each starter kit has been optimized for different paper types.

CMYK Matteblack – for use with newspaper stock.

7c PhotoBlack – for use with coated papers

7c MatteBlack – for use with matte papers

Each starter kit contains examples of the following files.

HowTo – Create a New Printer Calibration for the HPZ2100.pdf

InkCoverage.tif

HP2100_V04_linear.mx3

HP2100_V04_195.mx3

HP2100_V04_210.mx3.

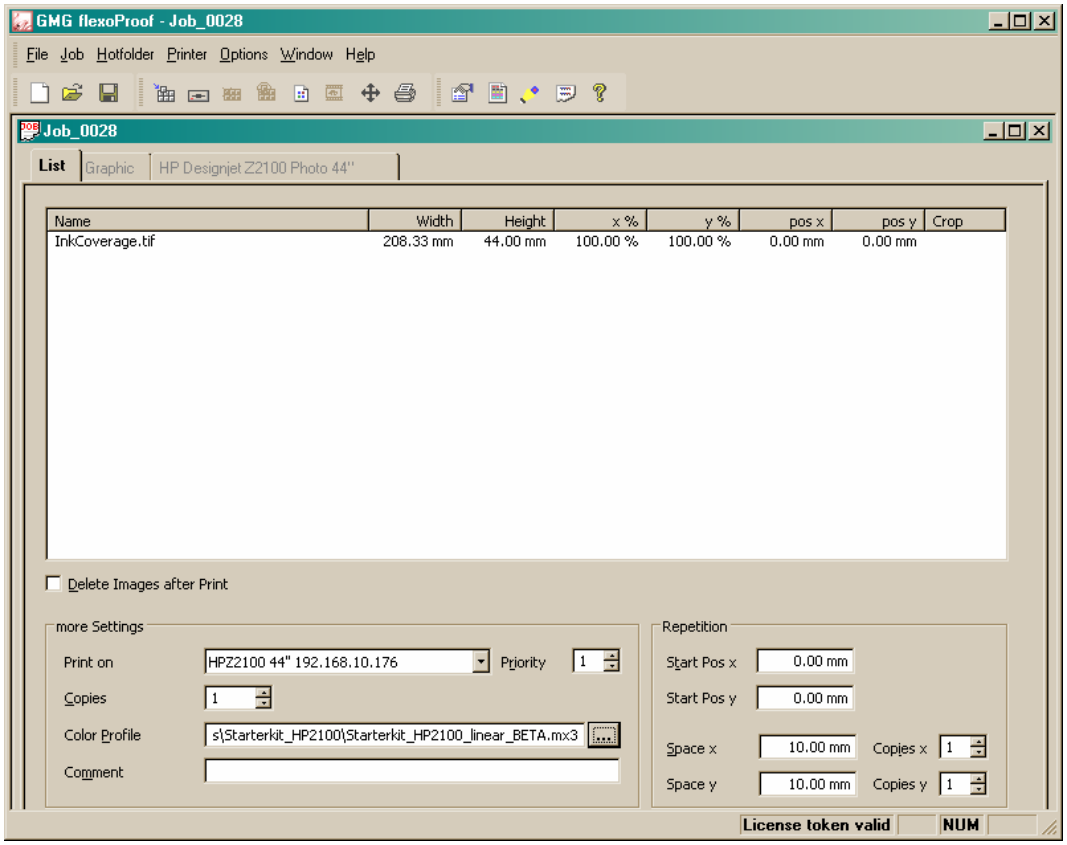
HP2100_V04_225.mx3

HP2100_V04_240.mx3

etc.

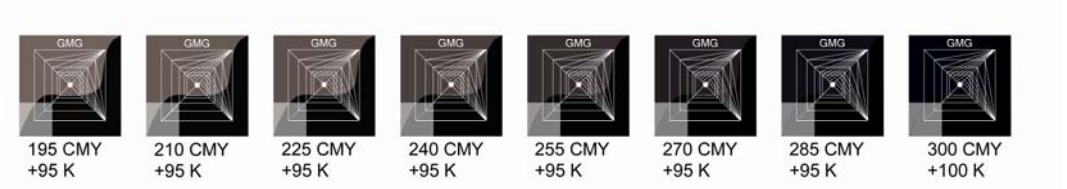
Detect the maximum ink coverage

1. In this example a new calibration file will be made for a semimatt paper. From ColorProof create a new job. Add the InkCoverage.tif found in the starter kit.



Select, from the starter kit, the mx3 file with linear e.g. HPZ2100_V04_Linear_7c-Photo.mx3 as the "Color Profile" and your printer. Print the job.

2. Check the printed InkCoverage.tif file.

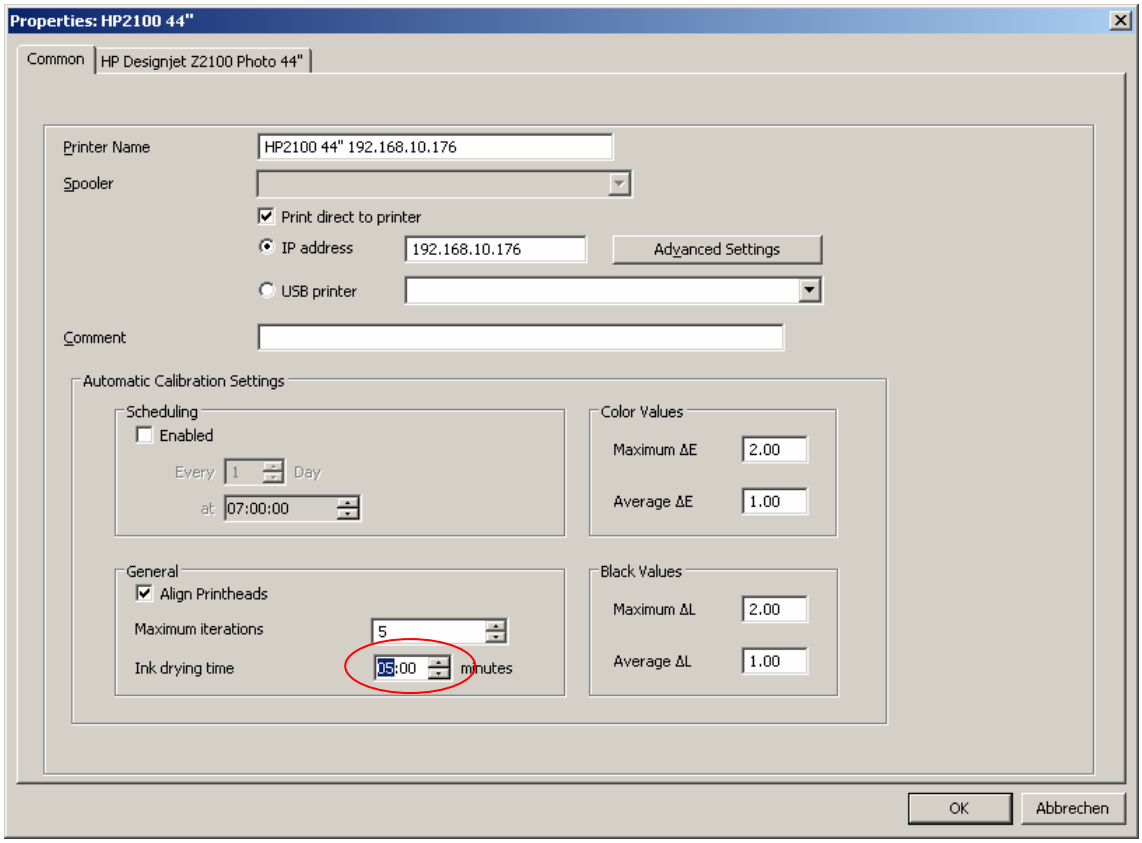


The number beside the CMY specifies the maximum ink coverage which also correlates to the same numbered mx3. Select the best result that has sharp unbroken lines with the highest saturation. In our example 255 CMY. This means we will be using the HP2100_V04_255_7c-Photo.mx3 as basis for making mx3 target values later in this how to.

Creating the full gamut

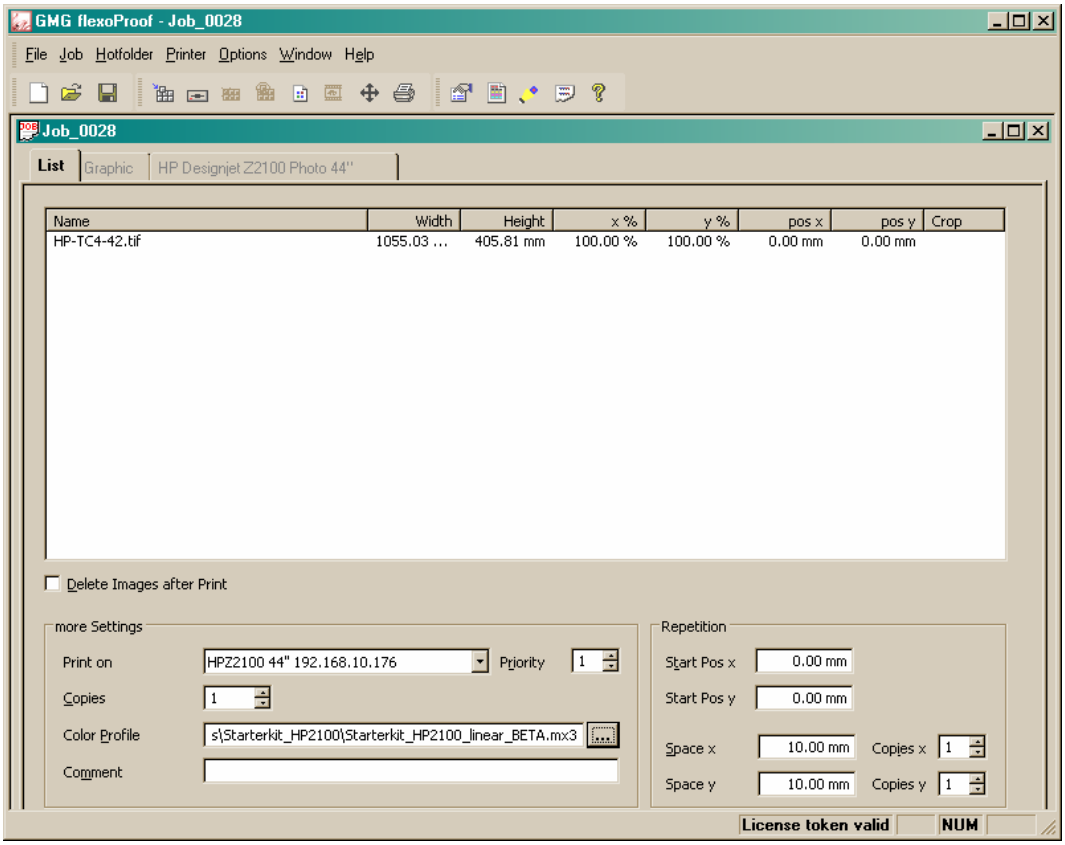
The Full Gamut is used in the printer calibration file mx3 and also for the spot color database.

Note about drying time: With the HPZ2100 printer a consistent drying time is important. For the creation of the full gamut and gamut GMG recommends a minimum drying time of 15mins. For the calibration file 5min drying time is sufficient. For the HPZ2100 you have to set the drying time before you create your job under the printer Properties.



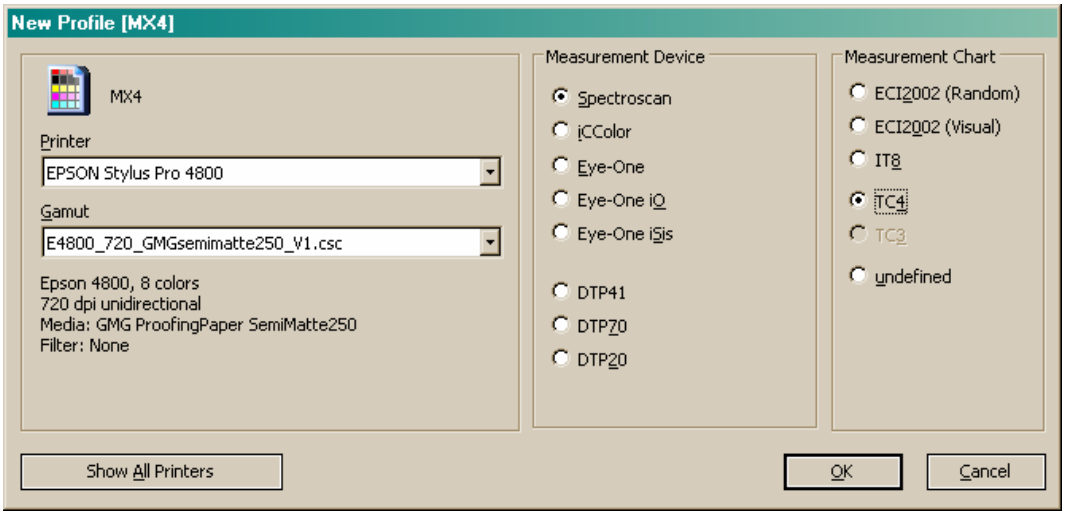
1. From ColorProof right click on your HPZ2100 printer and select "Printer Properties". Set the "Ink drying time" to **15 minutes** and click "OK". Create a new job and add the "HP-TC4-<paperwidth>.tif" (The <paperwidth> stands for the width in inches of your paper. Please use the appropriate test chart for your paper width). For this job also select your HP printer and the "HPZ2100_V04_Linear_7c-Photo.mx3" as the Color Profile.

2. Print the job. After the 15 minute drying time is finished the test chart is automatically measured and a text file will be placed in `C:\ColorProof\Measurements` called `HP-TC4-xx.txt`. If this file already exists then a "_01, _02" etc. is added to the end of the file.

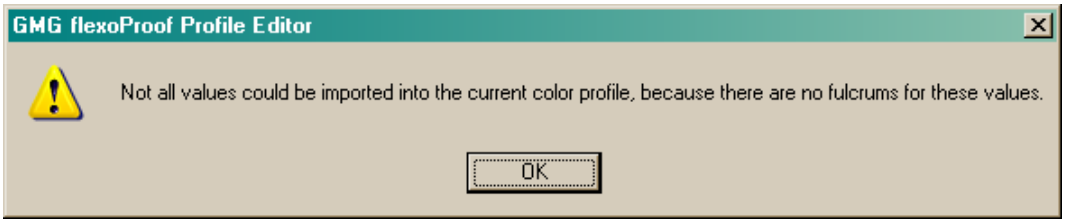


3. Open `C:\ColorProof\Measurements` in Windows explorer and rename the file `HP-TC4-xx.txt` to `HP-full-gamut.txt` to avoid confusion

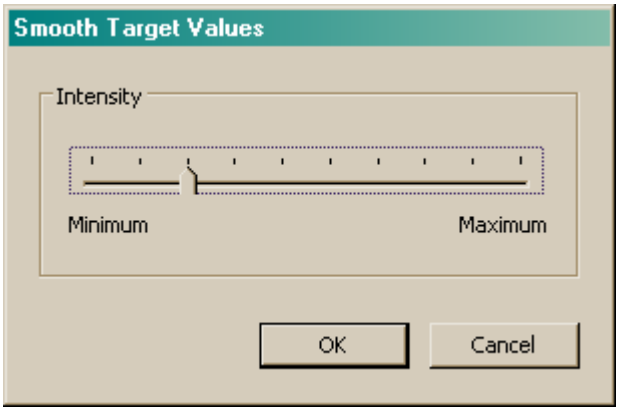
4. From ProfileEditor select "File – New CMYK mx4". The settings for "Printer", "Gamut" and "Measurement Device" will be ignored and don't have to be changed. Select "TC4" as Measurement Chart and click OK.



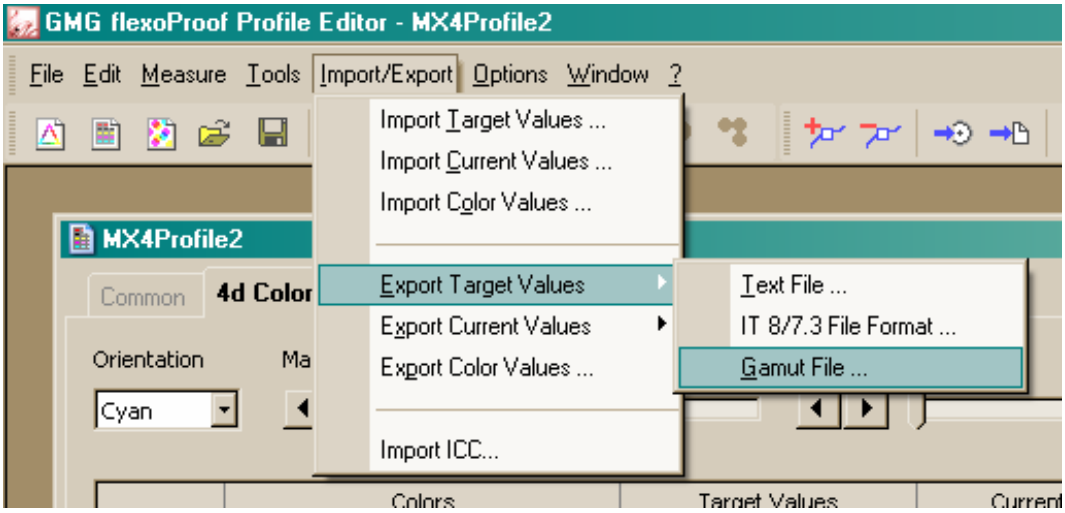
5. Select "Import/Export – Import Target Values" and choose the `HP-full-gamut.txt` file that was measured in step 1.Click ok if you receive the message below.



6. Select "Tools – Smooth Target Values". Then select the amount of smoothing that you would like to apply and click "OK". Normally two steps is enough to give a satisfactory result.



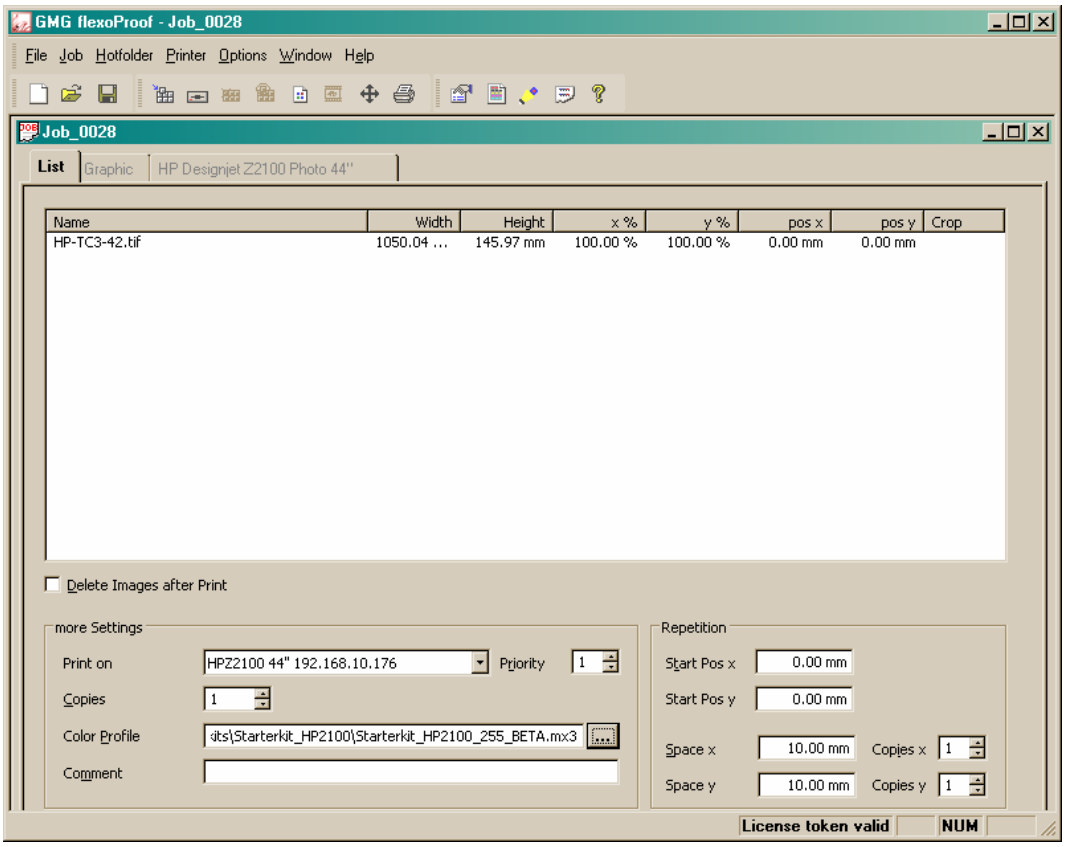
7. Select "Import/Export – Export Target Values – Gamut File" and save the file as `C:\ColorProof\Printers\HPZ2100\HPZ2100_1200_<Paper>_<inkused>_FullGamut.csc` (replace <paper> with a description for the new media type and <inkused> with type of startkit e.g. 7c-Photo). The mx4 file can now be closed without saving.



Creating the mx3

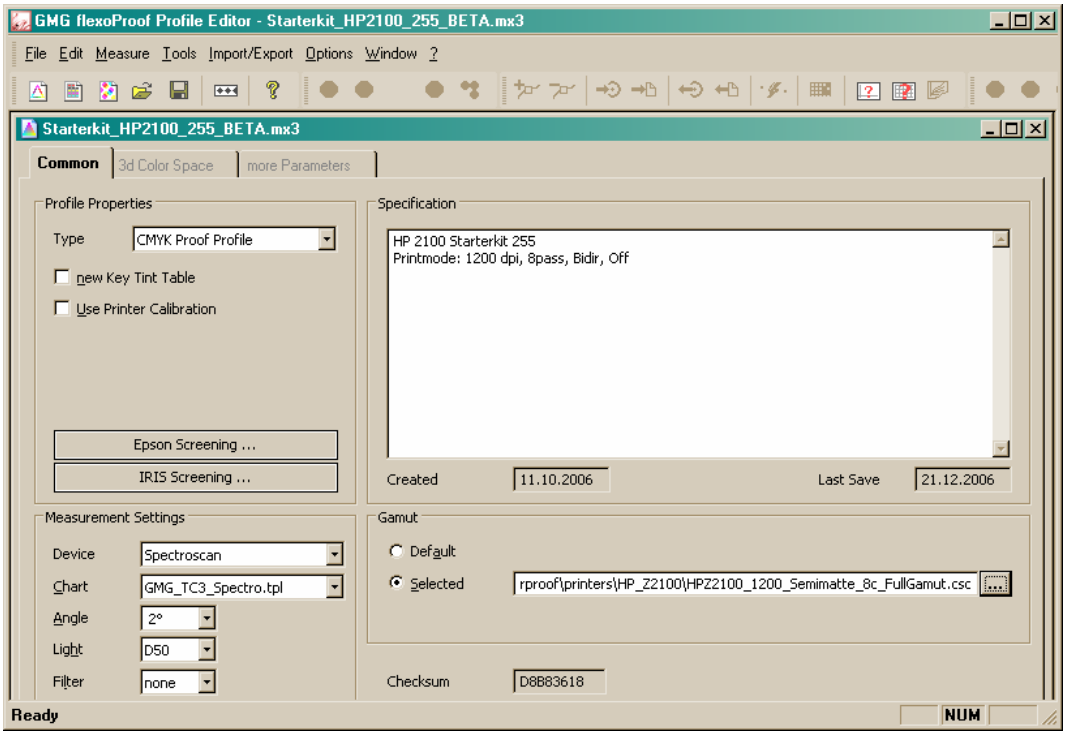
1. From ColorProof right click on your HPZ2100 printer and select "Printer Properties". Set the "Ink drying time" to **5 minutes** and click "OK". Create a new job. Add `C:\Colorproof\Testcharts\HPZx100 Testcharts\HP-TC3-`<paperwidth>.tif" (The <paperwidth> stands for the paper width in inches of the .tif file. Please use the appropriate test chart for your paper width) and, as the "Color Profile", select the mx3 that fits to the maximum ink coverage of your paper (In this example the HPZ2100_V04_255_7c-Photo.mx3).

2. Print the job. This job will also be automatically measured after the 5 minute drying time.

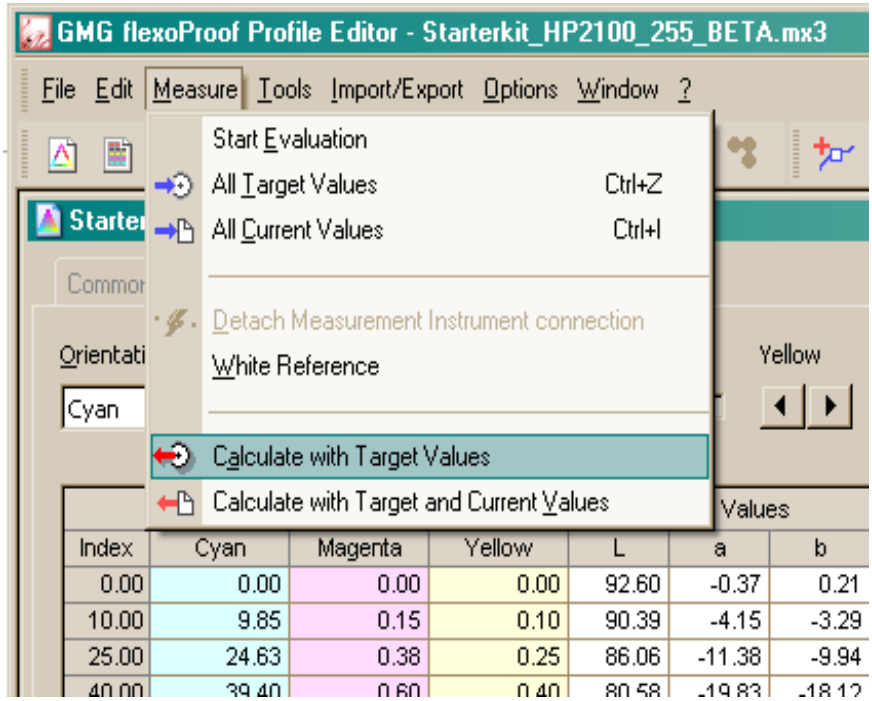


3. Open C:\ColorProof\Measurements in Windows explorer and rename the file `HP-TC3-xx.txt` to `HP-targetvalues.txt` to avoid confusion. This measurement will be used to give the "Target Values" for our mx3 printer calibration.

4. In ProfileEditor open the mx3 you have printed before (In this example HPZ2100_V04_255_7c-Photo.mx3). Select "Import/Export – Import Target Values" and select `HP-targetvalues.txt`. Click on the "Common" Tab and under "Gamut" select the full gamut `C:\ColorProof\Printers\HPZ2100\HPZ2100_1200_<Paper>_<inkused>_FullGamut.csc` that was created before.



5. Now select "Measure – Calculate with Target Values".

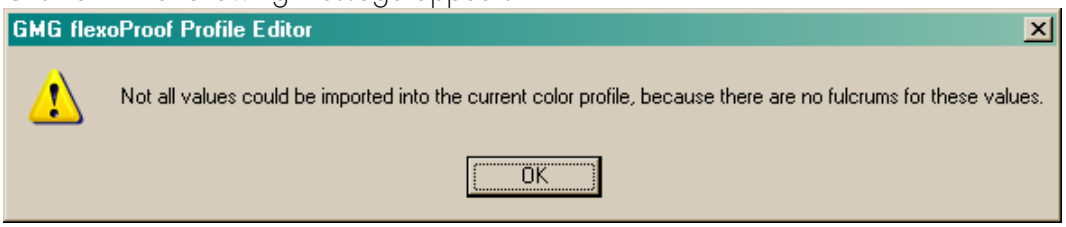


Save this mx3 file in `C:\ColorProof\Printers\HPZ2100\HPZ2100_1200_<Paper-Type>_<inkused>.mx3`. The new printer calibration file is now finished and can be used to calibrate the HPZ2100 using the new media. Please see "HowTo - Automatic calibration_v3.pdf" for more information on using the automatic calibration ability of the HPZ2100 printers.

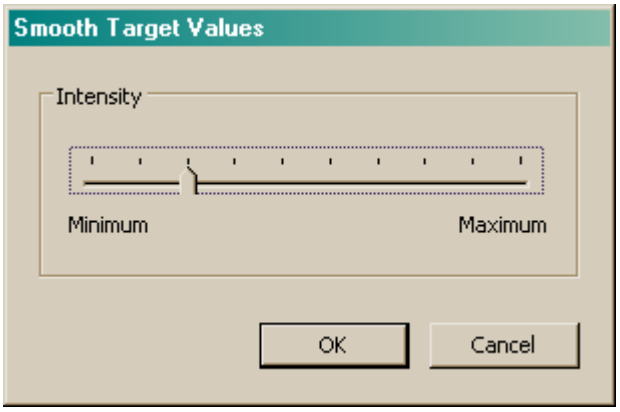
Creating the gamut for mx4 color profiles

1. Make sure that the drying time is set to 5 minutes then calibrate the printer with the new `HPZ2100_1200_<Paper-Type>_<inkused>.mx3` file for your media.
2. From ColorProof right click on your HPZ2100 printer and select "Printer Properties". Set the "Ink drying time" to 15 minutes and click "OK". Create a new job from ColorProof. This time add `C:\Colorproof\Testcharts\HPZx100 Testcharts\HP-ECI2002-XX.tif` and select the newly calibrated mx3 file for your media as the "Color Profile".
3. Print this job. It will also be automatically measured after the 15 minute drying time.
4. Open C:\ColorProof\Measurements in Windows explorer and rename the file `HP- ECI2002-xx.txt` to `HP-gamut.txt` to avoid confusion.
5. In ProfileEditor select "File – New CMYK mx4". The settings for "Printer", "Gamut" and "Measurement Device" will be ignored and don't have to be changed. Select "ECI2002 (random)" as Measurement Chart and click OK.
6. Select "Import/Export – Import Target Values" and select the `HP-gamut.txt` file

7. Click ok if the following message appears



8. Select "Tools – Smooth Target Values". Then select the amount of smoothing that you would like to apply and click "OK". Normally two steps is enough to give a satisfactory result.



9. Select "Import/Export – Export Target Vales – Gamut File" and save the file under "`C:\ColorProof\Printers\HPZ2100\HPZ2100_1200_<paper>_<inkused>.csc`" (replace <paper> with a description for the new media type and *<inkused>* for the ink type used in the startkit). This is your gamut file that will be used in the creation of color profiles for this new media type.
10. To create a MX4 profile please refer to the Tutorial2_ColorProof_new_MX4_EN.pdf