QMS for Apogee Prepress

User's Guide

Prepress

Amfortis

Asecuri

For more information about ECO3 products, visit *www.ECO3.com* or contact us at the following address:

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11.7 HEADINGS: Headings to the sections of this Agreement are for convenience only and shall not affect the interpretation or construction of this Agreement. Use of the singular includes the plural and vice versa.

11.8 ECO3'S PRIOR CONSENT. Unless expressly provided otherwise in this Agreement, any prior consent of ECO3 that is required before You may take an action may be granted or withheld in ECO3's sole and absolute discretion.

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Contents

About This User's Guide

This User's Guide offers you a complete description of the QMS interface and provides procedures and settings so you can work efficiently.

You access the User's Guide from the Help menu in the QMS menu bar and it is viewed in a new window of your standard web browser.

Navigating the User's Guide

You can view topics in the User's Guide by expanding the sections on the Contents tab and clicking a heading. You can continue to read in sequence by pressing the Next button in the navigation toolbar.

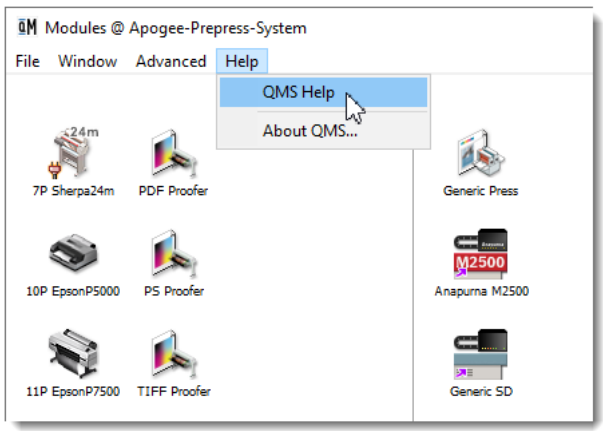
As you progress, the hierarchy of each specific topic is indicated at the top of the topic pane in the breadcrumb trail. You can click any one of these levels to go back to a higher level in the hierarchy.

You can also jump to **Related Topics**, to additional information within the documentation set and to Internet sites. All these links are highlighted in red. In these cases you navigate back and forward pressing the **Previous** and **Next** buttons on the browser tool bar.

▷ Starting the online Help

♦ In QMS, choose **Help** > **QMS Help**.

The online Help opens on the first page.



Illustrations and Animations

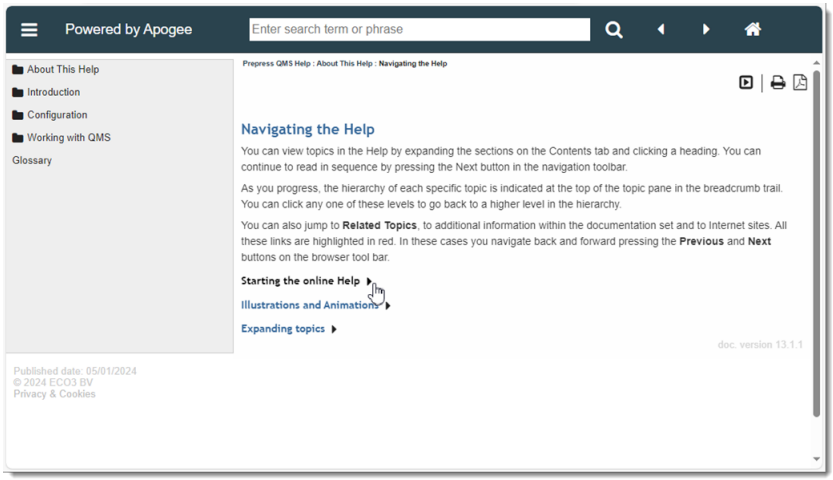
Large images have been reduced in size to display properly in the Help topics.

- Hover over an image and if the cursor changes to a *hand* you can click the image to view it full size. Click the **X** to close the image and return to the Help topic.

Expanding topics

Headings with a triangle are collapsed to provide a better overview of the information.

- Click the heading or the triangle to expand the topic.



Search

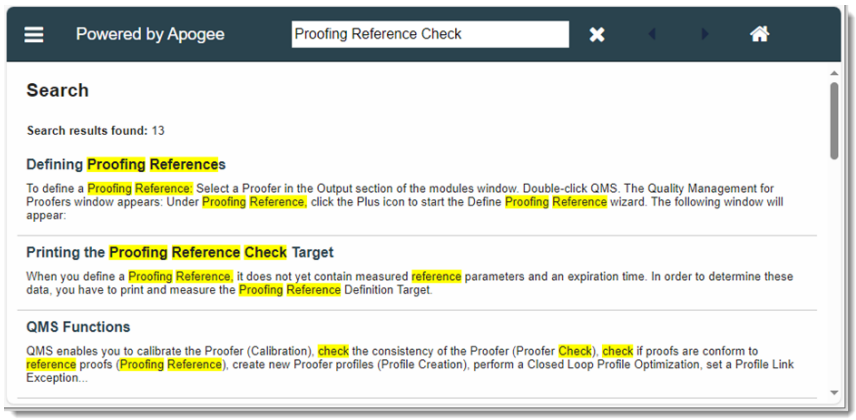
The Online Help has a search-as-you-type feature for finding information quickly in the Help topics. The following queries can be made:

- Simple search with a single word: Enter a single word for a list of all topics that contain that word.
- Advanced search for all words: For example, enter *disk space* for a list of all topics that contain *disk* AND *space* in the same topic. Try to avoid using common words such as "a", "the", etc. in your search query.
- Advanced search for an exact phrase: For example, enter "*disk space*" in quotes for a list of topics that only contain this exact phrase.

1 If the search box is not visible, for example if you are working on a small screen, click the **Search** button to go to the Search page.

2 Type a word or phrase in the Search box.

The search results appear as you type and the word or phrase are highlighted in yellow – also as you type.



3 Click a search result to jump to the topic.

You will see the search term or phrase highlighted in yellow in the topic. You may need to expand sections of the topic to see the word or phrase you queried.

Search limitations

- Do not ask questions in the search box, only enter your keywords. Enter "edit profile" and not "How can I edit my own profile".
- Search is case-insensitive.
- Search queries must be at least 3 characters. For example, searching for "QR" will not produce any results; you should search for "QR codes".

Navigation Overview


Show/hide the table of contents


Switch on Google Translate: translations are generated on the fly but may not be reliable


Show/hide the search panel


Previous topic


Next topic

Print a PDF of the whole document


Print the current topic


Display a section


Display collapsible (expandable) text or images


Go to the title topic of the online Help

Printing Help

If you want to print information from the Online Help, two options are available:

▷ Print individual topics

- Click the **Print** button in the navigation bar or choose **File > Print** from the browser menu bar.

▷ Print the whole document

All the information in the Online Help is also provided in a printer-friendly PDF document.

1. Click the **PDF** button in the navigation bar to open a PDF document.

2. Print the whole document or specific sections as required.

   This feature is only available if your browser has the Adobe Acrobat plug-in.

NOTE: You may need to set up browser functionality in Adobe Acrobat.

Keyboard Conventions

All key names are shown in capital letters. For example, the Control key is shown as CTRL.

Keys are frequently used in combinations or sequences as shortcut keys. For example, SHIFT+F3 means to hold down the SHIFT key while pressing F3.

Mouse Conventions

To...	Do this...
Click	Point to an item, and then quickly press and release the mouse button without moving the mouse.
Double-click	Point to an item, and then quickly press and release the mouse button twice.
Context-click on Windows	Click the right mouse button.
Context-click on Macintosh	Hold down the CTRL key while clicking the mouse button.
Drag	Point to an item. Press and hold down the mouse button as you move the mouse to a new location, then release the mouse button.

Related Documentation

The following documents can be referred to for more information:

- Apogee Prepress Tutorials
- Apogee Prepress Advanced Tutorials
- ColorTune Output User's Guide
- ColorTune Spot User's Guide
- ColorTune Display User's Guide
- ColorTune Measure User's Guide
- Apogee Portal User's Guide

CHAPTER 1

Introduction

This chapter provides an introduction to QMS. It describes the procedures you can perform using the software.

QMS is intended to check the quality of the ApogeeProof workflow on different Apogee proofing substrates. In the Release Notes of Apogee Prepress the list of supported proofers can be found.

QMS is a client application that cooperates with the Apogee Prepress server.

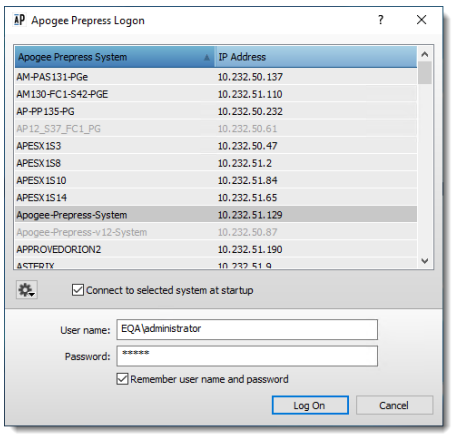
Starting QMS

Before you can use QMS you have to log in on an Apogee Prepress server.

▷ To start QMS

1 Double-click the QMS icon or select QMS from Start > All Programs > Agfa > QMS Client.

The QMS Log On screen appears:



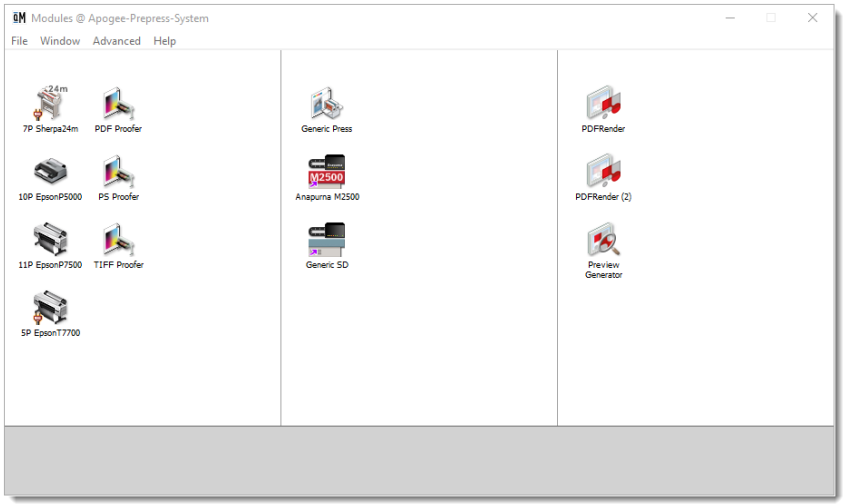
2 Select a server from the list.

3 To connect QMS to the selected system at startup, select the check-box under the list of servers.

4 Enter User name and Password and click **Log On**.

If you want QMS to remember your user name and password, select the **Remember user name and password** check box.

The QMS modules screen will appear, showing the output devices available on the server:



QMS Functions

QMS enables you to calibrate the Proofer (Calibration), check the consistency of the Proofer (Proofer Check), check if proofs are conform to reference proofs (Proofing Reference), create new Proofer profiles (Profile Creation), perform a Closed Loop Profile Optimization, set a Profile Link Exception, and consult the history of the Quality Management action done on a proofer.

- Calibration
  Calibrating a Proofer is necessary to make sure that the output conforms to the reference values. The reference values are used as the standard for required color (ink). If the calibration is successful, the current behavior will be adjusted to match the reference values.

- Proofer Check
  With the Proofer Check procedure, you check the Calibration status (changes in the tonal range of the primary colors related to the reference values defined during the Calibration) of the Proofer during production. If the test fails, you should check the Strips and/or recalibrate the Proofer.

  In order to check the condition of the Proofer (Epson), a Proofer Check Strip needs to be printed and measured. This Proofer Check Strip is printed without color management and can be printed with the Proofer Check wizard.

- Proofing Reference
  With the Proofing Reference procedure, you can check if proofs are conform to a reference proof of which you have stored all information in the QMS database.

- Profile Creation
  With QMS, you can create a new proofer profile without the need of additional tools. The only precondition is that the proofer is calibrated.

  You print and measure a Profile Creation target on the selected proofer, associate it with a Profile steering file, set the ink limits if needed and define the sharing level. When you enter a name and save these settings in QMS, the new proofer profile becomes immediately available in Apogee Prepress.

- Closed Loop Profile Optimization (CLPO)
  With QMS, it is possible to optimize your proofer profile to improve color conversions without the need of ColorTune Output. You create a new CLPO, print and measure the target with each iteration. Each iteration performed will improve the proofer profile more and converting Press CMYK to the optimized closed loop profile will result in much smaller ΔE.

- Profile Link Exceptions
  An exception on the profile link can be set between Press and Proofer (Proofer TP) and for incoming CMYK (PDFRender).

- QMS History Tracking
  You can track the history of all measurements and actions kept in the history.

CHAPTER 2

Configuration

This chapter describes how you can configure QMS to your specific situation. It provides procedures on how to enter a number of preferences.

Preferences

A number of preferences can be defined for QMS such as the language of the GUI, the default user name and password, the number of measurements requested for Calibrations, Proofer Checks, Proofing Reference Checks, Profile Creations and the frequency of the Calibration, Proofer Check and Proofing Reference Check procedures.

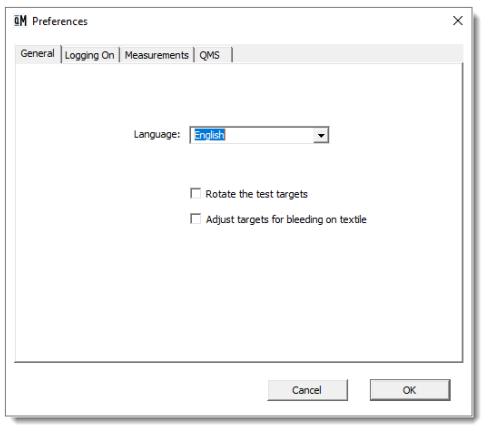
▷ To change the QMS preferences:

- Choose QMS > Preferences. You have the choice between the following four tabs:
  - The General Tab
  - The Logging On Tab
  - The Measurements Tab
  - The QMS Tab.

The General Tab

The General Tab holds the drop-down list of the available languages for the QMS GUI.

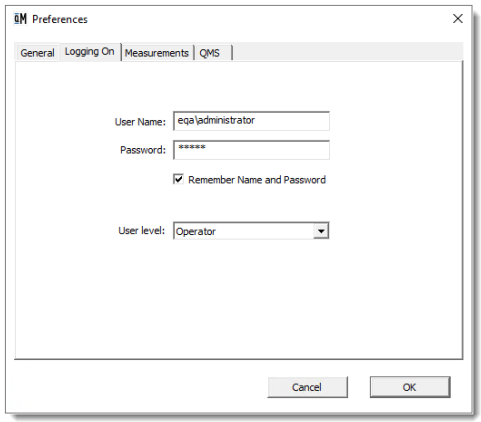
The language installed by the Apogee Prepress installer is determined by the regional settings of the Windows system. The English GUI will always be installed by default together with the extra language.



Select the check boxes to enable **Rotate the test targets** and/or **Adjust targets for bleeding on textile** (only for Generic SD).

The Logging On Tab

On this tab, enter the default user name and password. When you log in, this user name and password are automatically filled in on the QMS Log On screen.

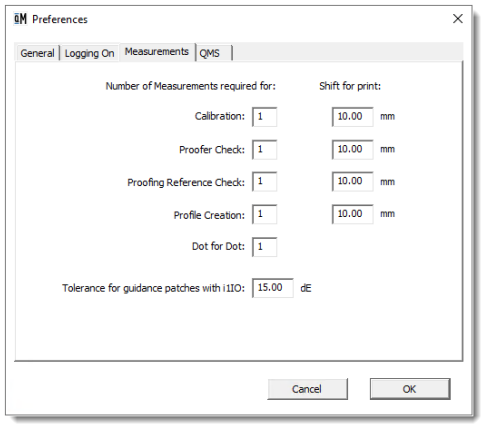


Select the **User level** from the drop-down list you want to log on with:

- Operator: use for daily operations (default level)
- Administrator: use for system administration
- Service: use for system servicing and maintenance

The Measurements Tab

In this window, you can select the number of measurements required for Calibrations, Proofer Checks, Proofing Reference Checks and Profile Creations.



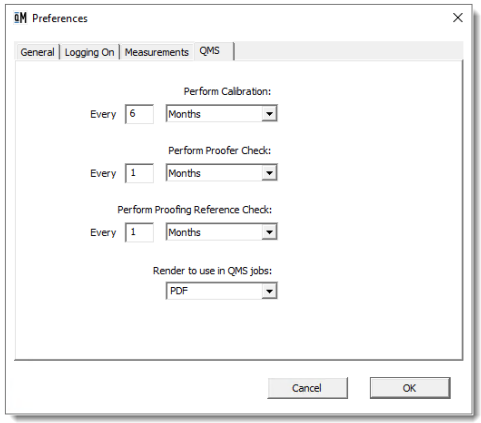
You can use the parameter **Tolerance for guidance patches with i1IO** to increase the tolerance value when measuring a target with an i1IO device in order to avoid guidance patches deviation.

The QMS Tab

In this window, you can define the expiration time for Calibrations, Proofer Checks and Proofing Reference Checks. Enter a number and select days, weeks, or months from the respective drop down lists.

It is possible to select the PDF Render or the TIFF Render to be used in the QMS created Calibration, Proofer Check, Proofing Reference, or Profile Creation jobs.

NOTE: QMS jobs created for the TIFF Render will take more time when printing the QMS job because a TIFF file must be created.



CHAPTER 3

Basic Concepts

This chapter provides information on the basic elements that must be in place, before the QMS can be fully utilized. The chapter includes also loading the right media as well as selecting and adjusting the measurement tool while using the QMS for measurement.

Measurement Devices Setup

Measurement Devices

The following measurement devices are supported by Apogee Prepress:

Measurement Device	Measurement Conditions
Barbieri Spectro LFP	M0
Barbieri Spectro LFP qb	M0, M1, M2, M3
Barbieri SpectroPad	M0, M1, M2
X-Rite i1 (UV cut)	M0 (M2)
X-Rite i1 Pro II	M0, M1, M2
X-Rite i1 IO Pro	M0
X-Rite i1 IO Pro II	M0, M1, M2
X-Rite i1 Pro III	M0, M1, M2, M3
X-Rite i1 Pro III Plus	M0, M1, M2, M3
X-Rite i1 IO Pro III	M0, M1, M2, M3
X-Rite i1 IO Pro III Plus	M0, M1, M2, M3
X-Rite i1 iSis Pro	M0, M2
X-Rite i1 iSis Pro II	M0, M1, M2
X-Rite eXact scan	M0, M1, M2
X-Rite eXact 2 scan	M0, M1, M2
SpectroProofer ILS20	M0
SpectroProofer ILS30	M0, M1, M2
Konica Minolta FD-5	M0, M1, M2
Konica Minolta FD-7/FD-5BT2	M0, M1, M2
Konica Minolta FD-9 (old model name of Myiro 9)	M0, M1, M2
Myiro 1	M0, M1, M2
Myiro 9	M0, M1, M2
Techkon SpectroDens	M0, M1, M2

Measurement Conditions

Measurement methodology defined in ISO 13655 to address fluorescence effects, makes it easier to exchange data between devices and standardize measurements. Measurement devices must apply to this standard. Controlling the measurement conditions is the only way to meet the standard. This is accomplished by implementing the XRGA standard and standardizing the measurement routines. Devices that support the XRGA (X-Rite developed) standard simplifies the exchange of color data.

The following Measurement Illuminant modes (measurement conditions) are used to classify this measurement methodology:

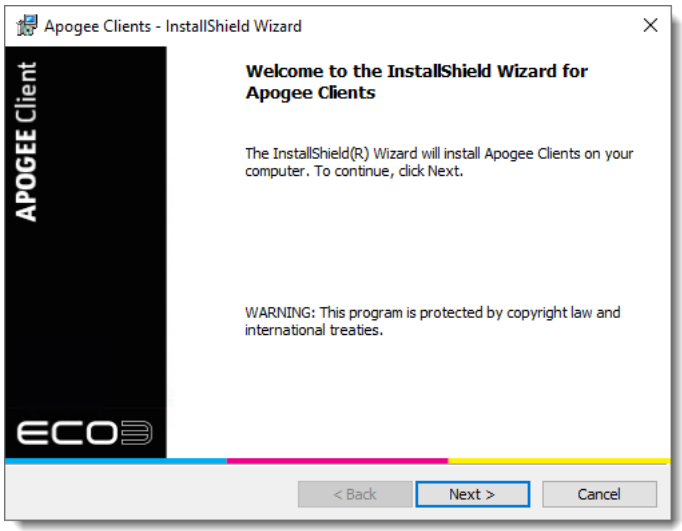
- Mode M0
  - The current measurement condition: no adaptation or unknown. The measurement mode does not change anything to the spectral data. The M0 is the most used practice today of all Apogee-supported measurement devices.
  - Only to be used in "old" applications for substrates without any OBA.
- Mode M1
  - The M1 measurement illuminant condition is defined to reduce differences in measurements between devices due to fluorescence effects (substrates or even inks). Standards will incorporate the M1 conditions in updated versions of standards.
  - The go to for all measurements.
- Mode M2
  - Measurements with the M2 factor are the measurements with a UV-cut filter. These measurements are different, since they use a standardized theoretical UV filter which influences the complete spectral range.
  - Old devices with UV-cut filter will be labeled as fixed M2.
  - Only to be used in "old" application with substrates full of OBAs.
- Mode M3
  - Measurements with the M3 factor elaborate further on the M2 factor. It incorporates a polarization factor allowing to exclude the unwanted effect of highly diffused reflections.
  - Sometimes used for "wet" measurements such as inline systems of offset presses.

Installing Measurement Devices

The Apogee Client installer installs by default the X-Rite i1 Pro II. You can add or remove additional measurement devices by running the Client installer again.

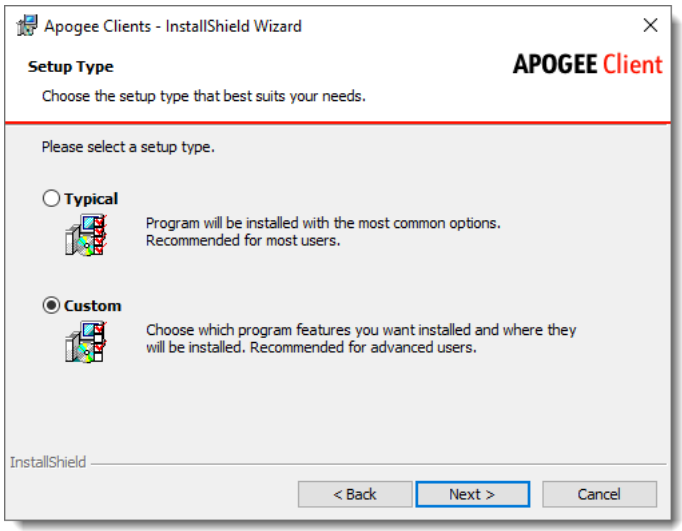
▷ To install a Measurement Device:

1 Start the Apogee Client installer, and click Next.

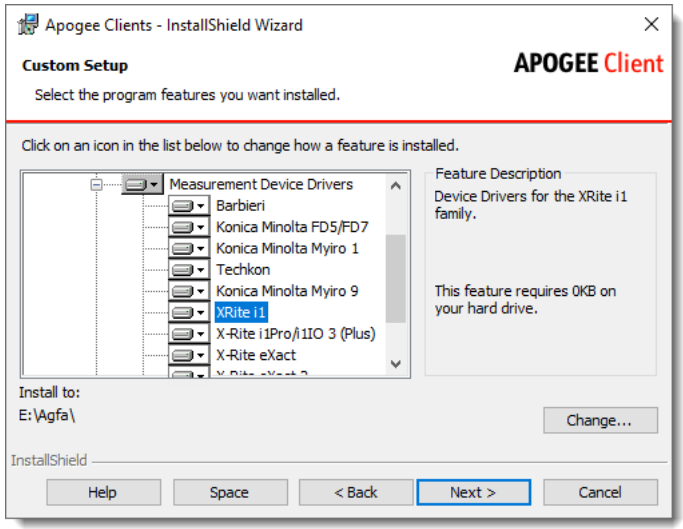


2 Select the check-box to accept the terms in the license agreement.

3 Select Custom (when installing from scratch) or Modify (when reinstalling), and click Next.



4 In the Custom Setup pane, select the measurement device(s).



NOTE: The Epson SpectroProofer (ILS30) is not a part of the installer. This device is installed by default and always available in QMS and Apogee Prepress.

5 Click **Next t**o complete the installation.

Measurement Devices

The following measurements devices are supported:

- Epson SpectroProofer
- X-Rite
- Barbieri
- Konica Minolta and MYIRO
- Techkon

Epson SpectroProofer

The Epson SpectroProofer is the optional online measurement solution from Epson. There are two generations of measurement heads:

ILS20

The ILS20 is the first generation and can only be used on compatible Epson Stylus Pro engines (4900, 7890, 7900, 9890, and 9900). It is available with or without a fixed UV cut filter.

QMS will recognize whether the ILS20 has a UV-cut filter or not. UV cut will be labeled as M2 otherwise M0.

ILS30

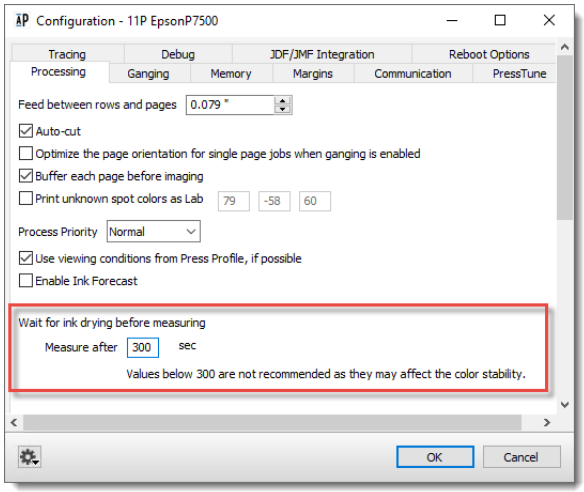
The ILS30 supports measurement conditions (M0, M1, and M3) and it is compatible with all Epson Stylus Pro (4900, 7890, 7900, 9890, 9900) and SureColor P series (5000, 6000, 7000, 8000, 9000, 7500, 9500).

NOTE: The SpectroProofer framework can be mounted on newer devices. The SureColor devices only accept ILS30 measurement heads.

Configuration

Prior to measurement, the SpectroProofer always dries the ink. This enhances measurement consistency and keeps the automatic ruler mechanism clean. Although the pigment prints seem dry, this does not imply that the color is permanent. The recommended level is 300 seconds, but it is safe to reduce it to 150 seconds. Apogee does not allow to reduce the level lower than 75 seconds.

To change the drying time, use the Apogee Client Configuration settings of the relevant Proofer TP as displayed below.



X-Rite

eXact Scan

NOTE: QMS only supports the X-Rite eXact when equipped with the scan option.

Install the most recent device driver available from the application CD (X-Rite_eXact_driver_v3.02.exe or later from the driver folder) or use the Apogee Client installer as described on “To install a Measurement Device:” on page 28.

▷ To measure a Target:

1 The X-Rite eXact can be connected either with a USB cable or with a Bluetooth network connection. Make sure the eXact is paired with the Windows Bluetooth module on the Windows system in order to establish a Bluetooth connection.

When connecting to the eXact for the first time, a pairing code must be entered. This code is “Default” and applies to all eXact devices. If you are having trouble connecting via Bluetooth, consult the user manual (found on the CD) or use the Apogee Client installer as described on “To install a Measurement Device:” on page 28.

The settings dialog is used to manage the QMS Measure connection once it has been paired.

2 Measuring can only be done with an ID strip. Measure the ID strip in the indicated direction (left to right). It is possible to measure the strips in either direction.

To start measuring, position the target window aperture **over the first patch** of the color bar, lower the instrument, hold it steady until the speed indicator appears on the display or the instrument beeps, then roll the instrument continuously over the color bar, and stop on top of the last patch.

The Measuring Modes M0, M1, and M2 are supported when using X-Rite eXact, although the device also supports M3 the ECO3 (AGFA) measurement interface does not support it.

The Measuring in M1 mode only requires one scan.

NOTE: The measurement head's little lever must be switched between positions I and 0 to go from M1 to M0. Position I is used for M1 mode measurements, and position 0 is chosen for M0 or M2 measurements.

3 The eXact controls its calibration process; before the calibration procedure is initiated, it will ask to be placed in a stable position; otherwise, it should be left untouched.

4 It is also possible to measure without an ID strip. In this case, use a color bar on the right side without any additional color encoding patches, or measure from right to left beginning with the patch that comes before the last patch (i.e., excluding the color encoding patches).

eXact 2

The eXact 2 is a “look through” device. This device uses a camera system for manual positioning. The eXact 2 can connect via Wi-Fi or USB. There is no Bluetooth interface. The measuring of wedges is based on an ID strip.

▷ To measure a Target:

1. The X-Rite eXact 2 can only be connected with a USB(C) interface. Connect the eXact2 to your PC before launching the measurements.
2. Measuring can only be done with an ID strip. Measure the ID strip in the indicated direction (left to right). It is possible to measure the strips in either direction.

   There are four Measurement conditions M0, M1(D50), M2 (UV exclude), M3 (Pol filter), and two methods: Scan or Spot.

   There are two orange buttons on the device: the larger one is the brake button, located on the left side of the body. It can be locked in the un-braked position by sliding the black slider underneath it to the right.

   The Measure button is on the right side of the body; press and hold it while scanning.

   The eXact2 display indicates the measurement head's position (white circle) as well as the guides that need to line up with the colorbar.
3. Start measuring on the first patch, move the device in line with the colorbar without pausing and stop at the last patch or just next to the last patch of the colorbar.

X-Rite i1

The X-Rite i1 drivers, including the handheld and iO table are not compatible with all generations of measurement devices. For this reason, it is important to select the right driver for the right device.

X-Rite i1 Measurement Devices	
i1 (before 2010) Driver: i1 (IO)	
i1 Pro II (from 2010) Driver: i1 (IO) 2	
i1 Pro III (from 2019 and later)) Driver: i1 (IO) 3	
i1 Pro III Plus (from 2019 and later)) Driver: i1 (IO) 3 Plus	

X-Rite i1 Pro 2

▷ To measure a Target:

1. Select new Automatic Measurement from either the file menu or using the + icon in the measurement pane. A Measure wizard window will open.
2. Select the measurement device, target, ID strip, measurement settings (like the number of measurements, etc.), Measurement mode (M0, M1 or M2), calibrate the spectrophotometer and initiate the measurement. Once all the parameters are set up, the Measurement progress view will be shown.

3 Depending on the measurement device type, the measurement data will be filled in row by row or page per page. Green buttons mean enough measurements for the row/page are done, and red indicates that the row still needs to be measured.

4 M1 Scan measurements require two measurements per row, one from left to right and one from right to left. The indicator lights on the device will turn blue to indicate the measurement direction. Right LED means measure from left to right, left LED means measure from right to left.

X-Rite i1 Pro 3 and i1 Pro 3 Plus

The i1 Pro 3 is used in a very similar manner to the i1 Pro 2 with the exception of measuring with M1, which only requires measurement in one direction.

It is possible to measure in both directions.

The i1 Pro3 Plus and standard i1 Pro 3 differ only in that the Plus model's aperture measures 8 mm, while the standard version measures 4.5 mm. This has an impact on the patch sizes that are supported, the standard version can handle patch sizes ranging from 8x10 mm to 15x15 mm, while the plus version requires 16 x 16 mm.

The 591 mm ruler that comes with the i1 Pro3 Plus model enables scanning of charts that are 515 mm wide. This version has a larger backup board (670x452 mm vs. 355x400 mm).

X-Rite i1 iO

The i1 iO table is a robot arm that can carry an X-Rite i1, i1 Pro 2 and i1 Pro 3 (Plus) allowing to scan charts in an automated way. There is a dedicated version of the iO table for each i1 generation. They are not exchangeable.

The I1 iO needs a slightly different positioning of the sheet, when M1 is enabled. Due to the specific M1 routines, an imaginary extra spot of white needs to be foreseen at the beginning of each line. This means that the best positioning of the sheet is in the lower right corner.

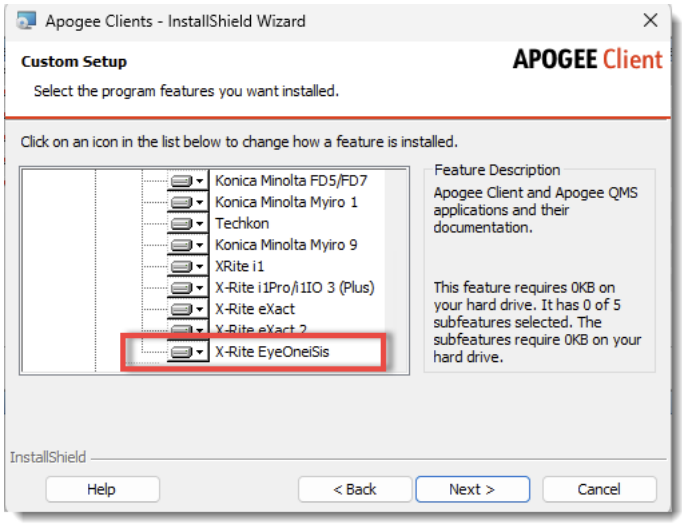
NOTE: The i1 IO Pro 3 can be combined with the i1 Pro 3 Plus, but needs specific glider rings with a larger hole.

X-Rite i1 iSis

The X-Rite i1 iSis is a scanning device that is capable to measure targets printed on thinner paper and available in two sizes; Standard and XL. QMS supports two generations:

- X-Rite i1 iSis: M0 and M2 (UV-cut) measurements (discontinued)
- X-Rite i1 iSis 2: M0, M1, M2 measurements.

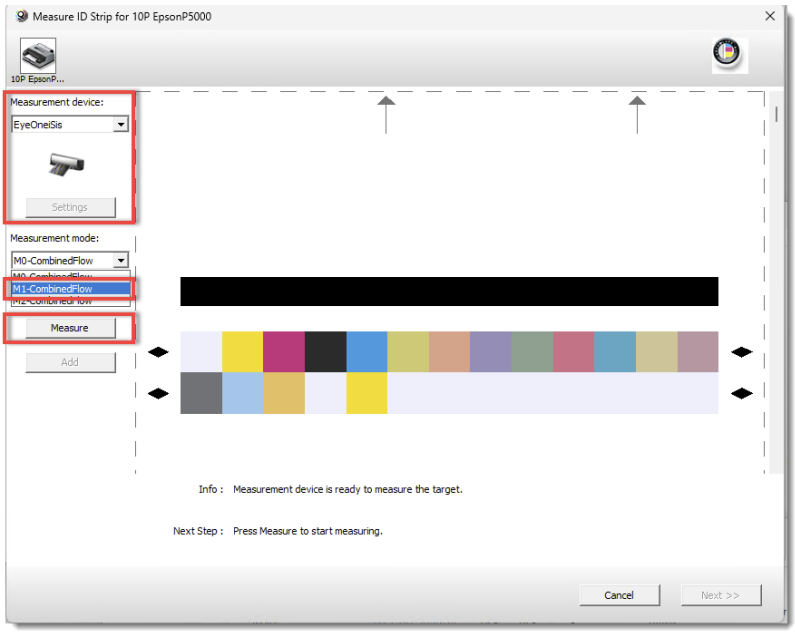
NOTE: The iSis and iSis 2 do not have their own drivers. In the Client Installer, the driver is listed as X-Rite EyeOneiSis.



To measure a Target:

1. Connect the i1 iSis with a USB cable to your computer. Verify that the Windows operating system can recognize the device.
2. Click the Measure icon to initiate a measurement.
3. Select the iSis from the Measurement device drop-down list. QMS will recognize the measurement mode capabilities from the device.

Select **M1-CombinedFlow**, and click the **Measure** button to start the measurement.



4 The device will initialize. Wait until the indicator flashes green. Align the wedge to the left edge and gently feed the wedge in the device. Release the wedge when the device picks up the chart.

5 QMS will proceed to the main measurement once the ID strip is recognized.

6 Repeat the procedure for all wedges of the job. Click Add, if there are multiple measurements, and click Next to accept the measurements.

Barbieri

Barbieri Spectro LFP and Specto LFP qb work similarly and need the same way of handling. The Specto LFP qb allows you to set a measurement mode by clicking on the settings button.

NOTE: QMS will only show the Barbieri devices as available devices if a physical device is actually connected with a working device driver. Otherwise, it will not appear in the list of available spectrophotometers.

Spectro LFP and Spectro LFP qb

Install the most recent device driver available from the application CD or use the Apogee Client installer as described on “To install a Measurement Device:” on page 28 in order to use the Spectro LFP.

Measurement Description File

The device is not able to use an ID strip. To match the measurement data with the Apogee databases, QMS will use measurement description files.

NOTE: It may take a while to retrieve measurement description files without any status update.

NOTE: QMS can connect to Barbieri LFP/LFP qb devices which use either the ECO3 encrypted protocol of Barbieri or the open protocol of Barbieri. Connecting with a device that uses another encrypted protocol from other OEM partners of Barbieri will fail.

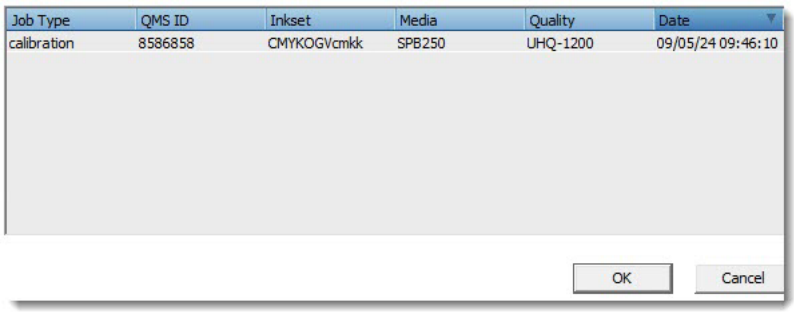
▷ To measure a Target Spectro LFP:

NOTE: QMS can export targets for both reflective and transmission measurements, but be aware that, all default resources are based on reflective measurements.

1 Double-click on the Spectro LFP icon to design the target layout, eventually for transmission measurement. If transmission measurement are required, the layout will be changed so that an area is reserved for device calibration.

2 During printing of the targets, a Barbieri job ID is created in the QMS database which is required to initiate measurement of the printed targets.

3 When initiating a measurement with the Barbieri Spectro LFP, a dialogue prompts to open the Barbieri job ID that was saved in the QMS database. Select the relevant job and click **OK**. The measurement dialogue will open.



4 Click the Settings button to set the appropriate parameters.

5 The device can automatically select the appropriate aperture size, while you can also select one of the 3 sizes (2, 6 or 8 mm).

NOTE: It is recommended to use large patch sizes, if you want to measure with a large aperture.

6 The measurement mode can be either Fast (semi scanning mode), Up/down (more accurate positioning but slower), or Contactless (for sensitive targets (e.g. scratch sensitive media/inks).

7 Per patch, multiple measurements can be enabled along with a vertical and horizontal offset between each measurement (larger patches may be required).

8 After clicking the “Measure” button, a message warns you to mount the correct page of the target on the Spectro LFP.

NOTE: You need to measure the different pages in the correct order. There is no automatic page recognition, when measuring with the Barbieri Spectro LFP.

NOTE: Position the target always inside the marked area.

NOTE: The Spectro LFP tries to find the reference position automatically based on the black sidelines. If this detection fails, a manual method is offered to define the reference positions. Use the keyboard arrows to position the white marker of the device-head on the aim marks and click + for the 3 positions.

▷ To measure a Target with Spectro LFP qb:

1. The Spectro LFP qb works similar to the normal Spectro LFP, except that this version comes with an optical camera that improves the detection position of the targets on the measurement table.
2. After each row, the measurement data are visualized in the GUI. After each page, a message is given to mount the next page on the sample-holder, until all pages are measured.

Spectropad

The Spectropad can retrieve a target's layout without the need for Color ID strips, like the Barbieri Spectro LFP.

Measurement Description File

During printing a wedge, a Barbieri job ID will be saved. To measure the wedge, click Measure to open the file and in order to send the details to the Spectropad.

CAUTION: Because the mini-USB connector on a USB cable can be easily disconnected by movements of the device, use caution when connecting it. In this case, the measurement wizard needs to be redone completely. Press the Stop Measurement button first, and then press the red cross located on the Spectropad's tough panel.

QMS does not support connections via WIFI.

Connecting to the device may take a few seconds, before prompting to load the XML file that was saved during export of the target.

As with any measurement device, the patch size can be customized by double-clicking on the Spectropad icon.

▷ To measure a Target:

1. In the measurement window, first select Barbieri Job ID of the printed target that you want to measure.
2. Measure the different strips of the target from the highest row number to the lowest row number. The direction of the scan can be both left to right or in opposite direction.
3. Position the head in front of the row number as indicated on the touch panel. A red LED position light will be projected on the target.
4. Move the measurement head gently and with a continuous speed over the row. The touch panel indicates the speed and in case of possible problems requests confirmation or rejection of the measurement before sending to QMS.
5. On the display of the Spectropad, the strip which needs to be measured is mentioned. Eventually when the measurement was not as expected, the Spectropad will ask either to confirm or decline a measured strip.

The measurements are managed and provided to QMS row by row. In case the measurement of a row (Strip) is deleted, the Spectropad will first continue with the remaining rows and afterwards request to measure the rows of which the measurements were deleted.

Konica Minolta and MYIRO

NOTE: For the graphics industry, Konica Minolta has rebranded its sensing division as MYIRO.

MYIRO-1 (Konica Minolta FD5-FD7)

Konica Minolta's FD-5 and FD-7 measurement devices are compatible with the FD-5 Interface. While the FD-7 can also measure spectrum data, the FD-5 can only measure the Lab data. The device's concept lies between Eye One and eXact. The FD-7 has a display that allows it to be used as a stand-alone tool for rapid measuring, but it also requires a ruler for scanning.

NOTE: The FD-5BT flavor can only measure in scan mode due to license restrictions. This indicates that the automatic and manual modes of the FD-5 generation cannot be used with any other flavors, as they require scanning capabilities.

▷ To measure a Target:

1. Check the ruler and notice the small translucent arrow. It is necessary to place this triangle/arrow on the left edge of the wedge.
2. The measurement device needs to be mounted with the display aligned to the left. The measuring device can only then be correctly mounted in the ruler.
3. Position the measurement device on the left just before the first patch (left edge of the ruler when aligned properly).
4. Push and hold the scan button.
5. Wait until the internal bulb lights up and an indicator sound is produced. Next, move steadily rightward until you reach the wedge's end (which is right next to the final patch).
6. Release the scan button.

NOTE: There is no need for a second scan in the case of M1 measurements.

NOTE: When measuring in spot mode, simply push down the device and the measurement will be executed instantly. Avoid pushing for too long, as this may prompt a second or even a third measurement.

MYIRO-9 (Konica Minolta FD9)

The Konica Minolta FD-9 is a page-scanning spectrophotometer that can be connected directly to a USB port or via a LAN (UTP wired) to communicate over TCP/IP. The ability to use the device with multiple instances of different software, such as ColorTune Measure next to QMS for proofing, is the primary benefit of the TCP/IP connection.

In order for the FD-9 to receive a valid IP address based on the Mac address that can be consulted on the display, the network settings must be configured in the DHCP server (and eventually the DNS server). QMS does not need to be configured once the FD-9 is recognized in the LAN.

▷ To measure a Target:

1. The FD-9 uses an XML target description that is created during the target's export phase instead of a Color ID strip.
2. Prior to measuring the target, load the target description XML; the target will then load automatically; no selection of the target is required.
3. Next, click Measure. The target description XML will be sent to the FD9 and can be loaded from the job list as soon as the measurement window opens.
4. To access the FD9's job list menu, press the OK button. Using the arrow buttons, choose your job from the list of jobs, then click the OK button.
5. Insert each page as the display indicates.
6. QMS will receive the measurement data per page (green star).

NOTE: If there is a problem with the FD9 (such as a page feeding in crooked), open the FD9 lid and take out the target. An error will be reported by QMS.

NOTE: Closing the lid and clicking the OK button in the QMS, will restart the measurement on the FD9 from the first page.

Techkon

Techkon specializes in press environment measurement equipment. The current assortment includes a handheld spectrophotometer with display (SpectroDens), color bar scanners (SpectroDrive), and plate measurement devices (SpectroPlate). The SpectroDens is comparable to the X-Rite eXact and MYIRO FD-7.

Techkon SpectroDens

The measurement device does not need a special ruler. Ensure that the measurement surface is flat and eventually make the wedge shorter (load smaller media in the Proofer TP).

There will always be an ID strip printed. It is necessary to measure the ID strip first. QMS will identify the job and wedge (dimensions) for calibration, profiling, and other purposes.

▷ **To measure a Strip:**

1. Connect measurement device via USB and select the device in QMS.
2. Position the measurement head on top of the first patch.
3. Push and hold the green button.
4. Wait till the Speedometer appears and move slowly across the wedge to the end (last patch).
5. Release the green button and wait for the measured results.

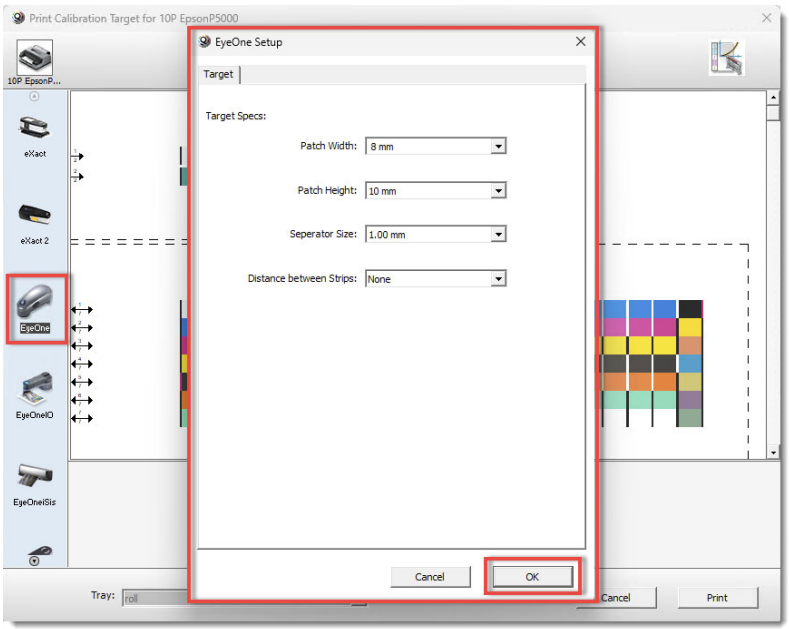
QMS Measurement Environment

By measuring targets, you keep your proofer (Epson) in form and you check whether the proofing system is still working in a good condition. It is a way to check whether you need to take action to improve the proofing quality.

Layout of the Target

QMS always adapts the layout to meet the requirements of the measurement devices. Most of the time, these are fine. However, in some conditions, the layout might be changed (larger patches, separators, etc.) to improve measuring.

To access the settings, double-click the measurement device before printing. A window will open to display and update the target specifications.



Measuring a Strip

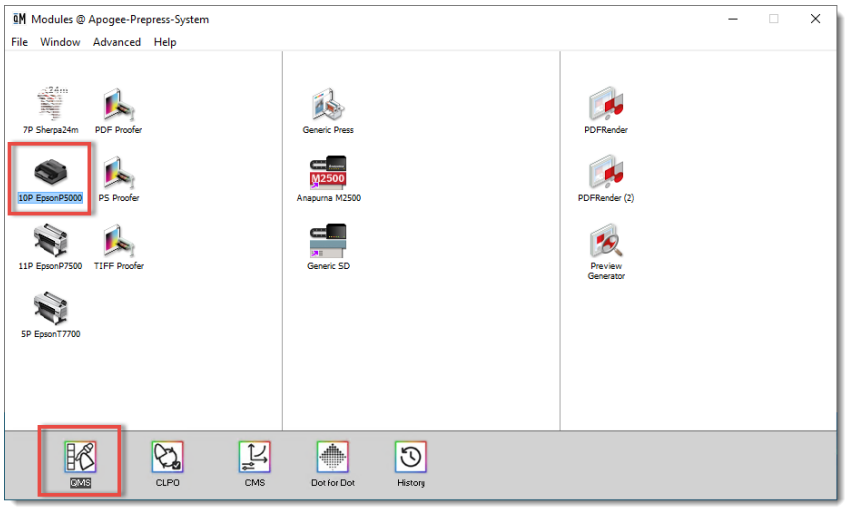
Measuring a wedge in QMS depends on the selected measurement device. Each device has a slightly different way of working.

▷ **Epson SpectroProofer:**

QMS jobs with automatic measurement device will automatically measure and store the measurements (depending on the job type) for user interaction or just proceed.

- Calibration: measures and automatically updates the calibration (no user interaction).
- Proofer Check: waits for operator to apply the measurement and deletes afterwards.
- Profiling: measures and stores the measurement. The measurement will be kept after using to allow creating multiple variants of a proofer profile from the same measurement file.
- Profile Optimization: waits for operator to apply the measurement and deletes the file afterwards.
- Proofing Reference Check: measures and automatically applies the measurement. The result is stored in the QMS History database, while the measurement file is removed.

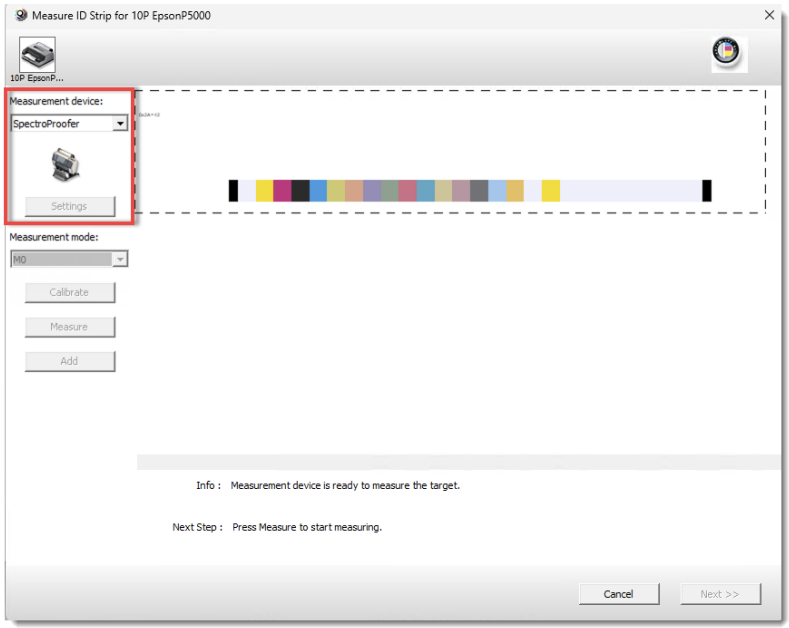
1 Select a Proofer (e.g. Epson P5000) in the Output section of the modules window.



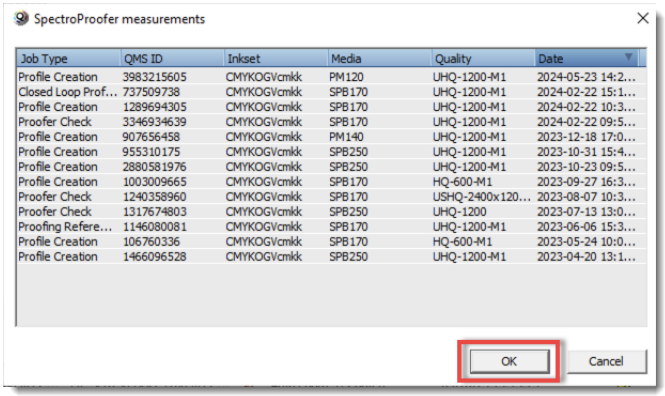
2 Double-click QMS. The Quality Management for Proofer window appears.

3 Click the **Measure** button and select the SpectroProofer from the drop-down list.

NOTE: The SpectroProofer will not be listed, if the Apogee is not able to reach the device. Check if the device is connected correctly, and there are no network issues.



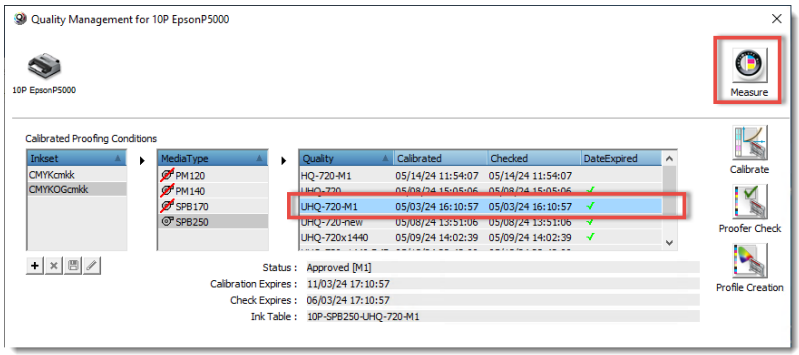
4 The SpectroProofer measurements pane will be displayed. Select the right measurement file (job type) and click **OK** to apply the measurements and proceed with the next step of the wizard.



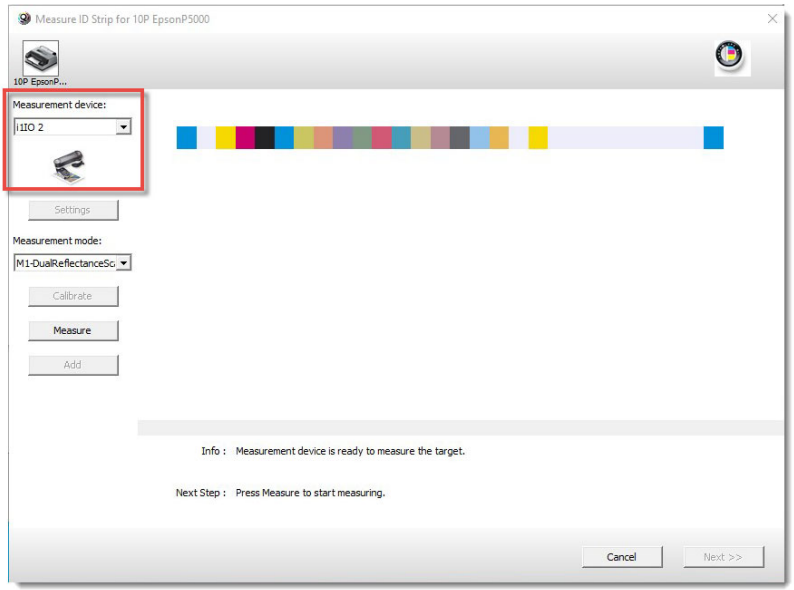
▷ X-Rite, Barbieri, Konica Minolta (Myiro), and Techkon Devices:

1 Select a Proofer (e.g. Epson P5000) in the Output section of the modules window and double-click QMS. The Quality Management for Proofer window appears.

2 Select an ink set (e.g. CMYKOGcmkk), a media type (e.g. SPB250), and a quality mode (e.g. UHQ-720-M1). Click the **Measure** button.



3 Select the measurement device (e.g. i1IO2). Measure ID Strip window will appear. Press **Measure** to start the measuring.

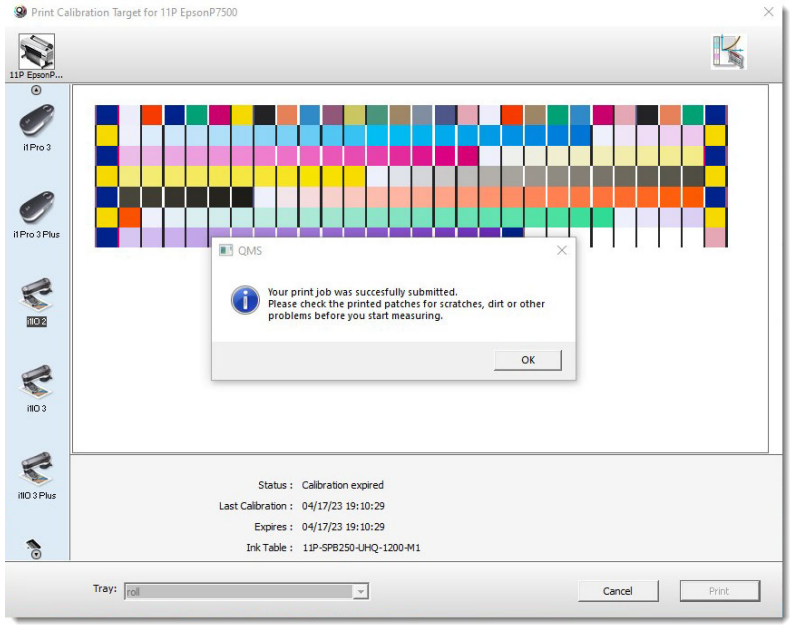


4 The following actions will be automatically adapted to the type of task and the specifications of the measurement device:

- **X-Rite, MYIRO, and Techkon**: Measure the ID strip, the QMS will identify the target and type of work.
- **Barbieri and Konica Minolta**: To continue, select the measurement file.

NOTE: The internal ID of the strip is always printed in the border of the QMS printed wedges. Check the ID with the measurement files.

5 Click **OK**.



▷ To open the measurement device setup settings:

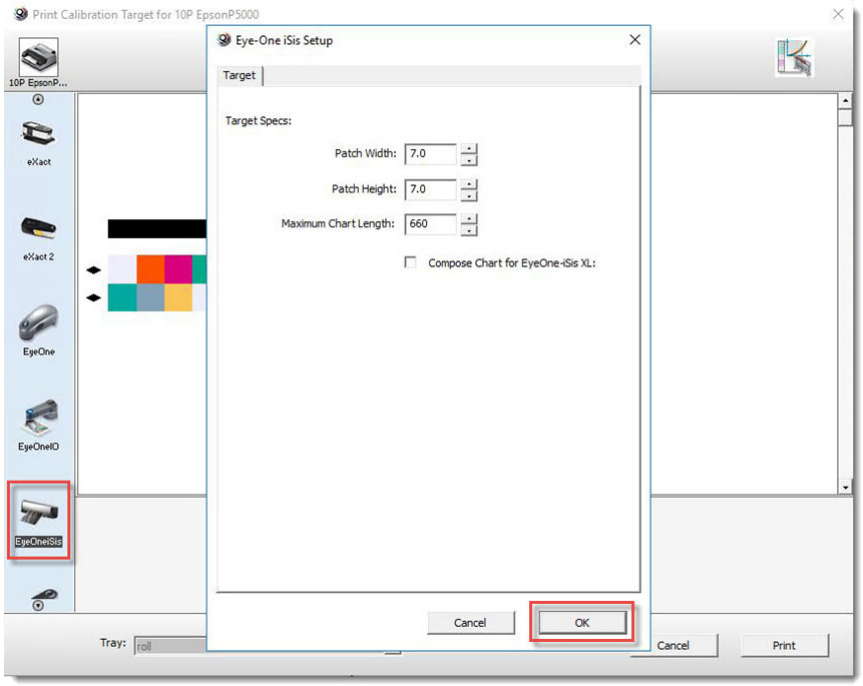
Before you start measuring the strip/target, you can display the measurement device setup settings. The Setup settings show information about the connected measurement device and the settings are measurement device dependent.

For example:
The i1 measurement devices require a manual calibration before the strip/target can be measured. Follow the instructions on screen.

The i1 iO and i1 iSis will automatically calibrate the measurement device.

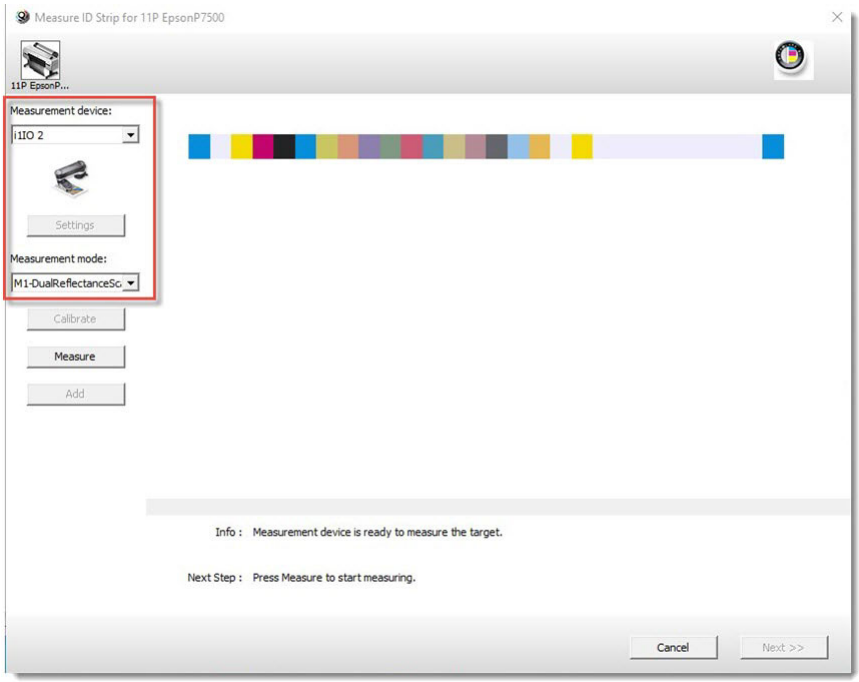
1 Double-click the measurement device at the left of the window.

The following window will appear:



The EyeOne iSis Setup window will show information about the connected measurement device.

It is possible to enable or disable the usage of the UV-Cut filter when the connected device (e.g. EyeOne iSis) supports it. To accomplish this, you can select the relevant option from the Measurement Modes. See “Measurement Conditions” on page 26, for more information.



NOTE: Disabling the UV-filter will measure each strip two times. One time with UV-filter and one time without UV-filter but only the measurements without UV-filter are sent to QMS.

2 Click the OK button to apply the new settings.

Entering the Strip

▷ **To enter the ID Strip in the measurement device:**

♦ Entering the Strip in the EyeOne iSis measurement device will automatically start the measurements of the inserted Strip.

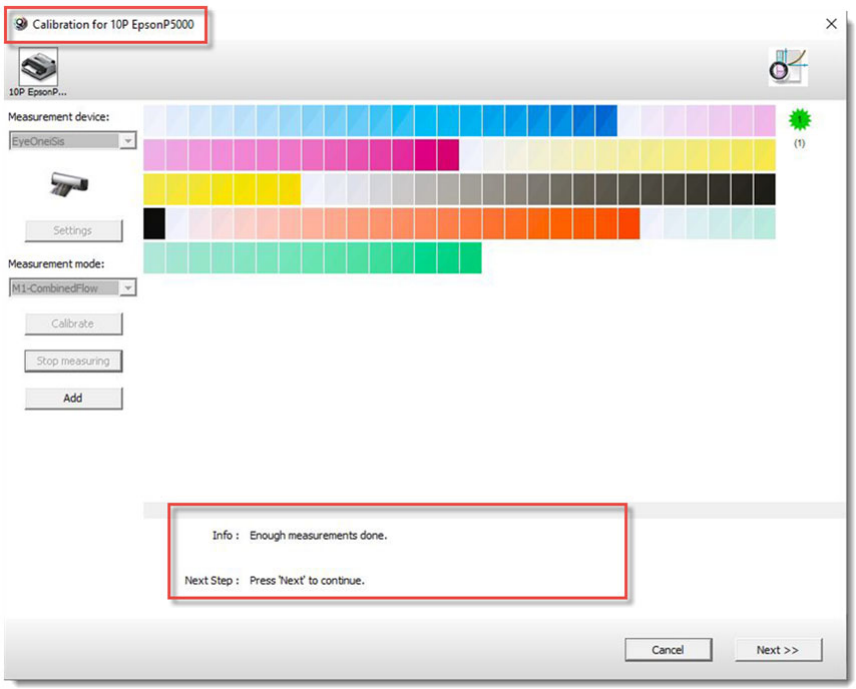
When the ID Strip is measured the application decodes the database key. With this key the application can determine which type of Target has to be measured.

This can be a:

- Calibration
- Proofer Check

- Proofing Reference Definition
- Proofing Reference Check
- Profile Creation.

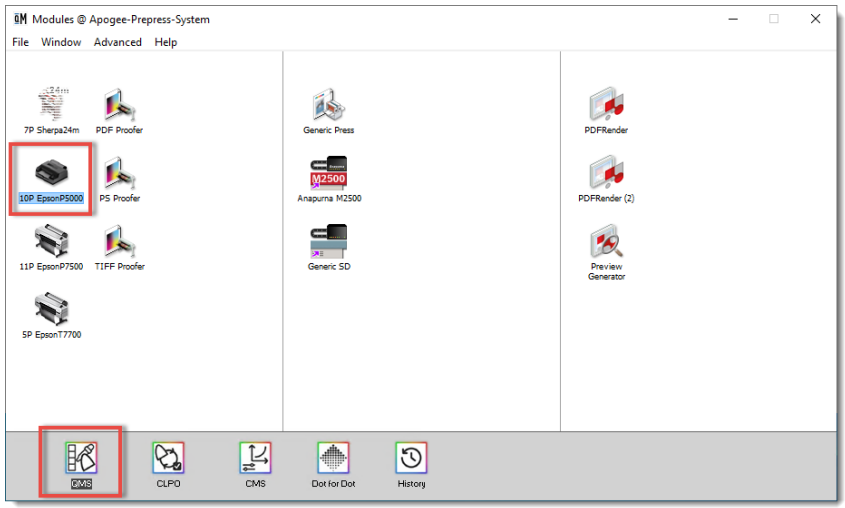
This type is shown in the information field at the top and bottom of the screen after the measurement is completed. For example:



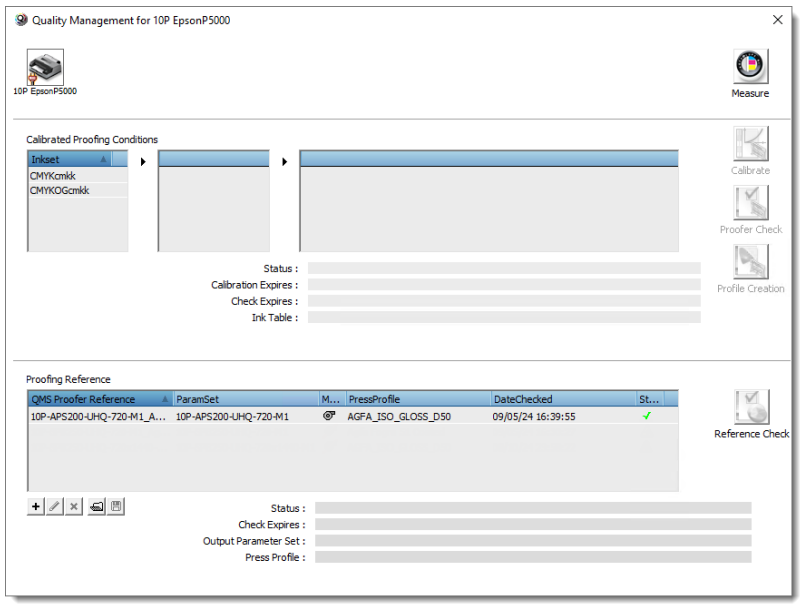
Consulting the Proofing Conditions for an Output Device

▷ **To consult proofing conditions of an output device:**

1 Select a Proofer (e.g. Epson P5000) in the Output section of the modules window.

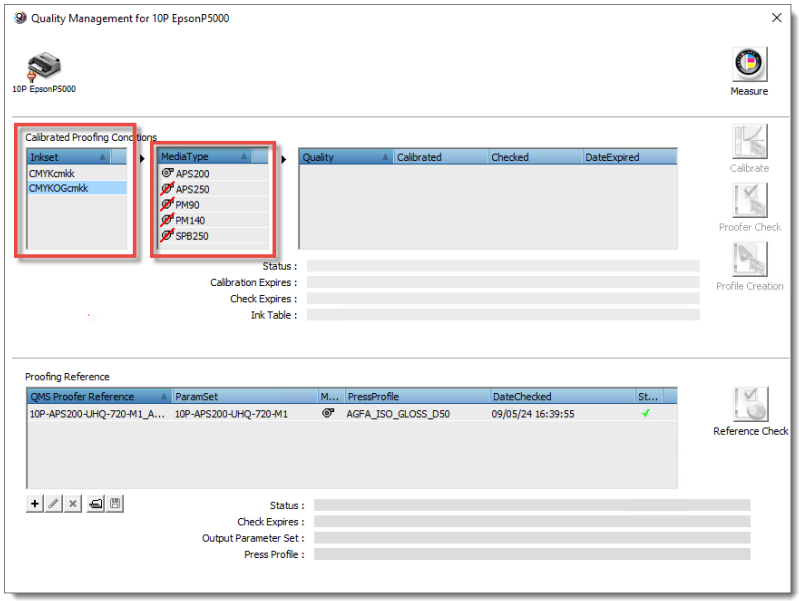


2 Double-click **QMS**. The Quality Management for Proofer window appears.



3 Select the ink set.

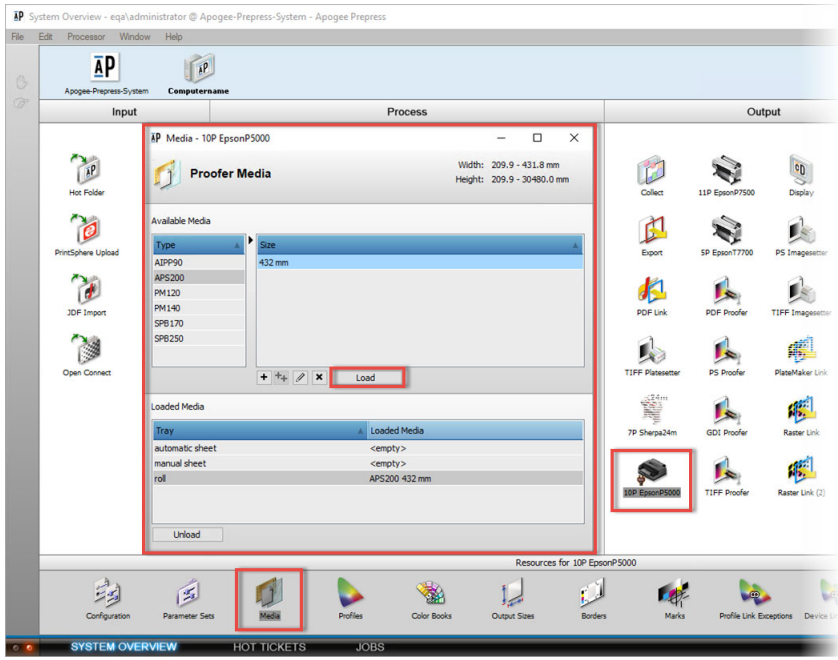
The list of media types will now appear. An icon in front of the media type shows if the media type is loaded or not.



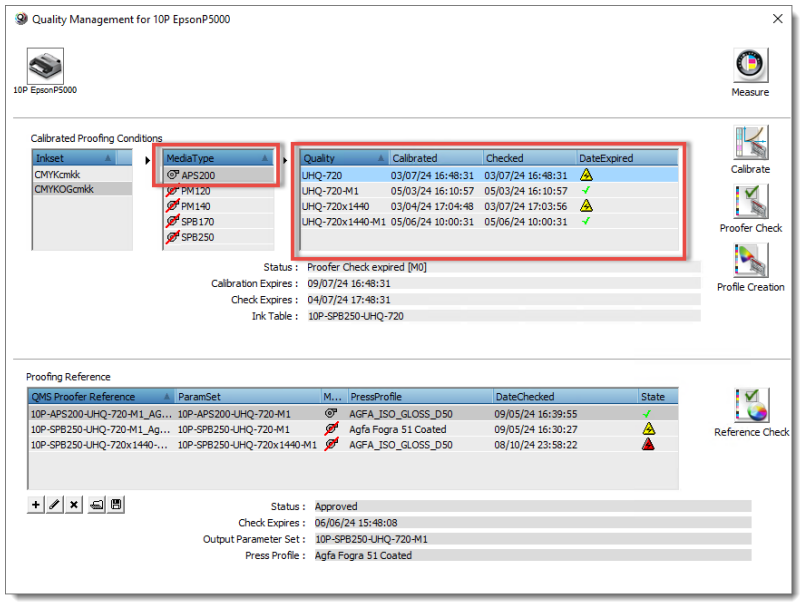
Loading Media

If the media you want to calibrate is not loaded, use the Apogee Client to load the media in the System Overview.

From the System Overview, select the proofer and double-click the Media Task Processor to open the **Proofer Media** window and load the media.



4 Select a media type (e.g. APS200). The quality modes for this media type, the dates of the last Calibration (Calibrated), Proofer Check (Checked), and the status of the ink table (DateExpired) will appear.



The calibration (ink table) will be updated automatically, based on the measurements, to compensate and match the reference values again. Always check the status of the quality in QMS. It will be updated with a new expiration date for calibration and proofer check. To control the expiration dates, use the Preference Pane of “The QMS Tab” on page 24. Refer to “Calibration Status” on page 56 for the description of the icons.

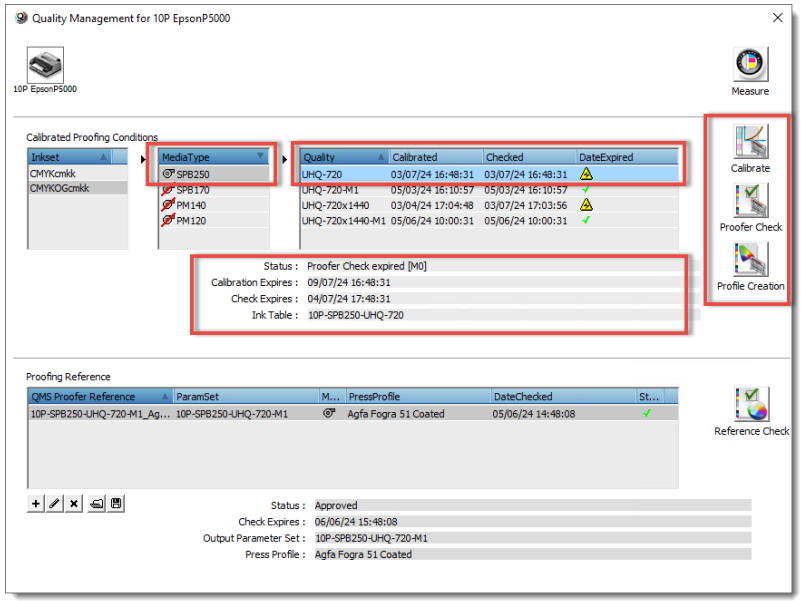
Calibration Status

A calibration (and proofer check) is only valid for a limited time frame. Calibration can expire or become invalid when a proof validation fails.

Icon	Status	Description
	Approved	The calibration and proofer check are valid. No failed proofer validations.
	Proofer check expired	The calibration is still valid but the proofer check is expired. It is recommended to do a proofer check.
	Calibration expired or Validation failed	• The calibration has been expired (beyond the expiration date). This quality needs to be calibrated again. • The validation of a contract proof has failed. Check calibration and profile to fix this. Eventually, reset the calibration status (context-click) when the failed validation was caused by a wrong job setup.
	Not supported	It is not possible to calibrate or do any proofer check on this quality. Not supported resources can be of a too low quality (imposition) or custom media resources without the proper Color Quality Manager license.

5 Select a quality mode (e.g. UHQ-720).

You will now view details about the selected quality mode under the Calibrated Proofing Conditions table. Also the Calibration button will be enabled. If the Proofer has already been calibrated in the past for the selected quality mode, the Proofer Check button and Profile Creation button will also be enabled.

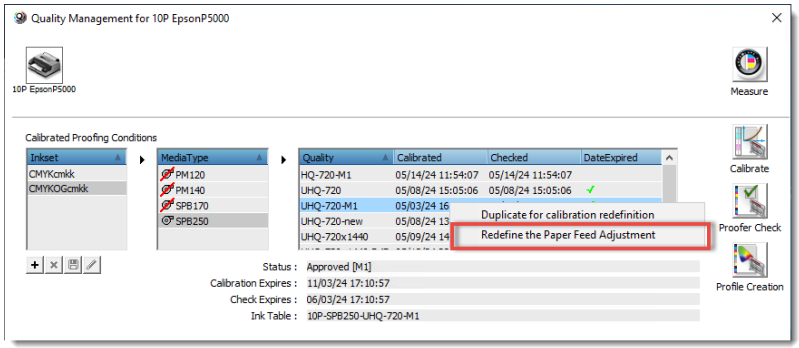


▷ To redefine the Paper Feed Adjustment:

This option allows you to fine-tune the media paper feed to ensure that the length of a print (slow-scan printer direction) is accurately printed (i.e., a 1 m document will print exactly as 1 m).

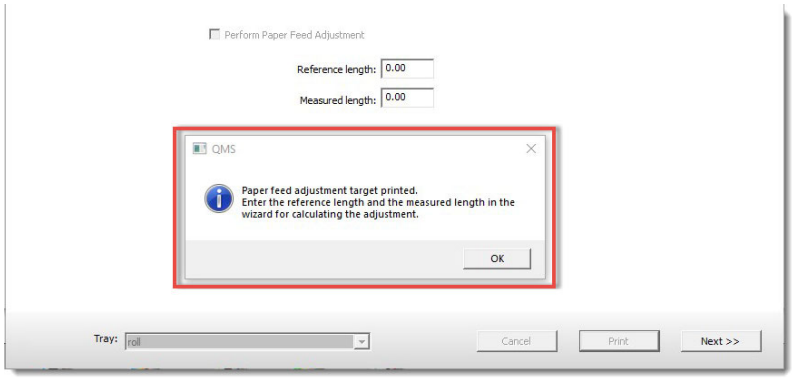
NOTE: The paper feed adjustment can be used for any type of paper and quality mode.

1 Select an ink set (e.g. CMYKOGcmkk), a media type (e.g. SPB250), and a quality mode (e.g. UHQ-720-M1). Context-click on the quality mode and select **Redefine the Paper Feed Adjustment.**

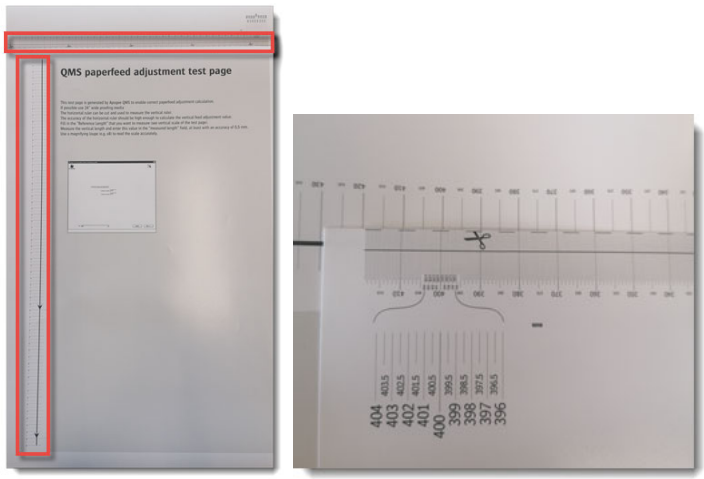


2 Click the **Print** button.

The test chart for the Paper Feed Adjustment is printed.



3 The chart has two rulers: a vertical and a horizontal one.

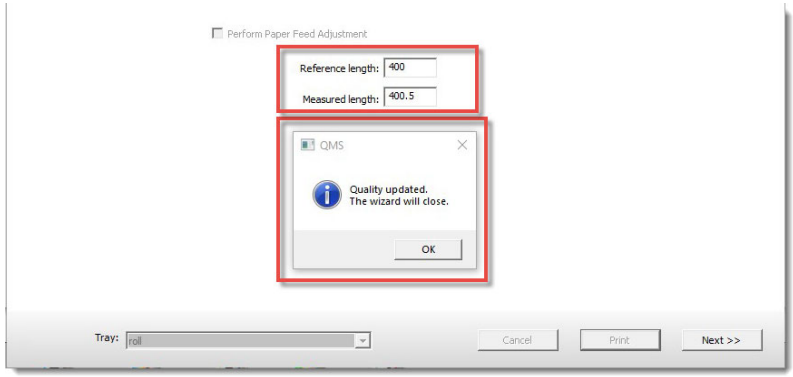


The lengths of the two rulers should match. Cut the horizontal one and position it precisely next to the vertical one. Make sure that the zero points are placed on top of the other. Look for a significant distance (400 mm), and check the distance from the horizontal guideline. In this example, the reference value is 400,00 mm with a measured length of 400,50 mm.

NOTE: It is recommended to use a magnifying glass (x8) when measuring the lengths.

4 Fill in the Reference length and Measured length and click **Next.**

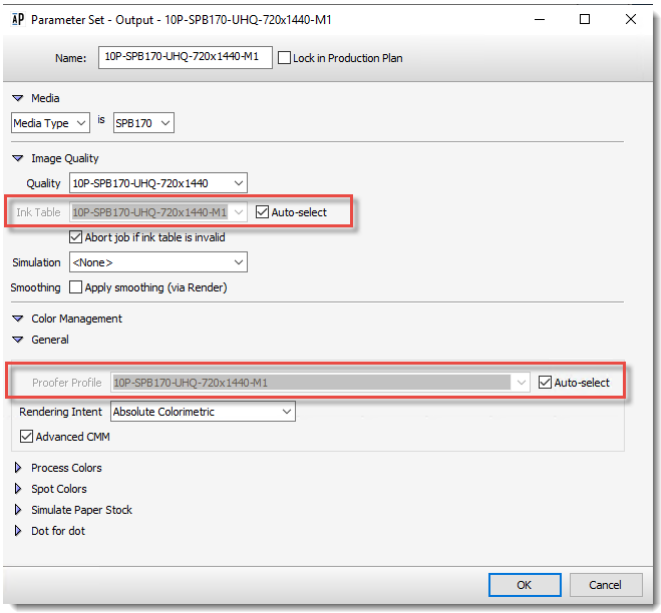
5 The quality will be updated. Click **OK** to complete.



Adding a Proofer Profile to Profile Selection Map

The Proofer Profile can be selected automatically if the Proofer's output parameters Auto-select are enabled. This selection is based on the paper type, Ink set, and the Quality.

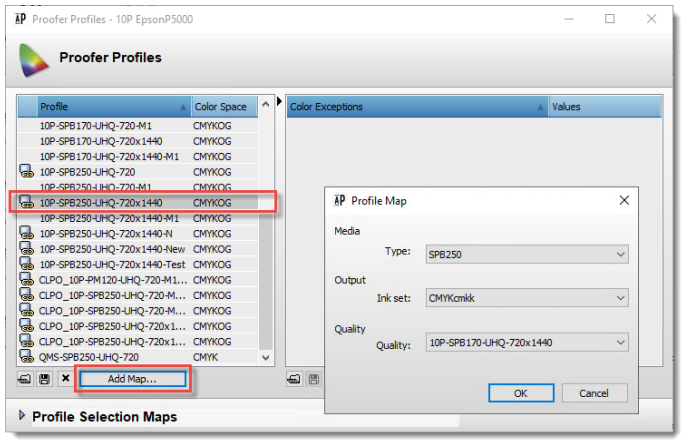
NOTE: Use the Apogee Prepress Client System Overview Resource editors to work on the Output Parameter Sets and Proofer Profiles.



▷ To create an auto-select map

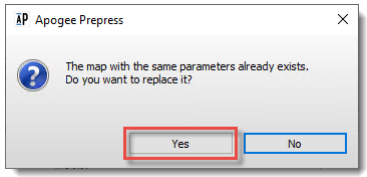
1 In the System Overview, select the Proofer and double-click the Profiles resource.

2 Select the Proofer Profile you want to add to the Profile Selection Maps, and click Add Map.



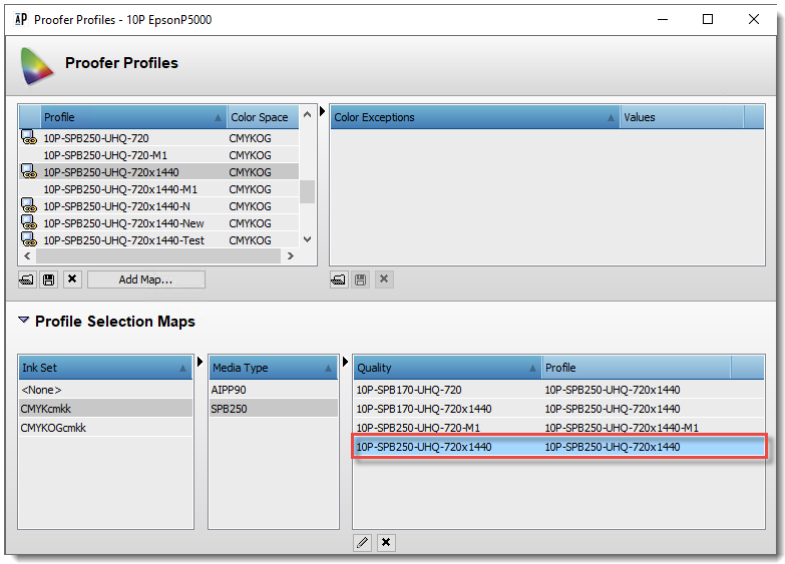
3 The Profile Map dialog box appears. Select the paper type, Ink set, and the Quality from the drop-down boxes. Click OK.

Click Yes to confirm if you want to replace an existing mapping with the same parameters.



4 The Proofer Profile will be added to the Profile Selection Maps.

Open the Profile Selection Maps, select Ink set, and Media Type to display the Profile of each Quality.



CHAPTER 4

Working with QMS

This chapter provides an overview of the functions you can perform with QMS. These are QMS functions such as consulting proofing conditions for an output device, printing Calibration, Proofer Check, Proofing Reference Check, Proofer Profile, measuring Strips and tracking the history of all measurements and actions kept in the history database.

You can also define Profile Link Exceptions for Proofers and set Profile Link exceptions for the PDFRender.

Calibration

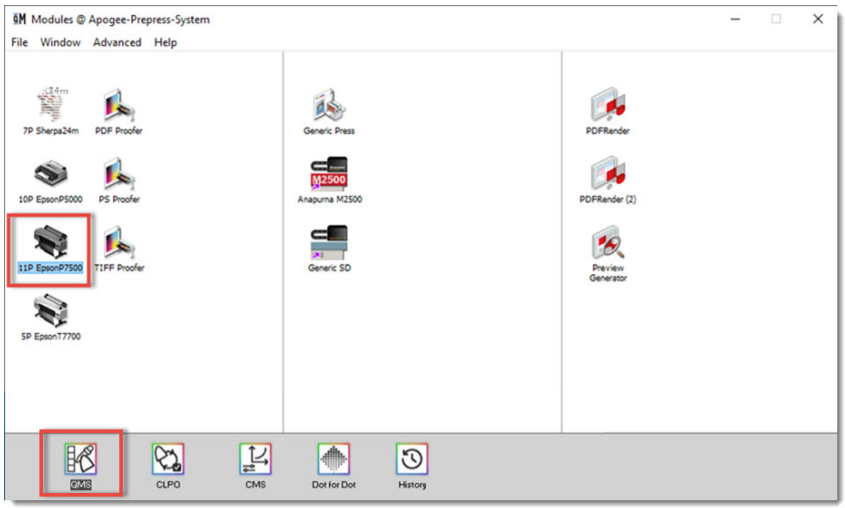
Apogee Prepress is equipped with default resources. These resources ensure that outstanding quality can be attained with the printer, quality, and paper since they are created from scratch in the ECO3 labs. Unfortunately, printers that will print at the same quality instantly are not present. Calibration is therefore required. The current printer and its hardware, paper, and ink will be adjusted through calibration, so that they are closer to the reference.

Printing the Calibration Target

Calibrating a Proofer is necessary to make sure that the output conforms to the ECO3 reference values. If you calibrate several output devices, Calibration brings every device of the same type to the same tonal behavior.

▷ To print the Calibration Target:

1 Select a Proofer (e.g. Epson P7500) in the Output section of the modules window.



2 Double-click QMS. The Quality Management for Proofer window appears.

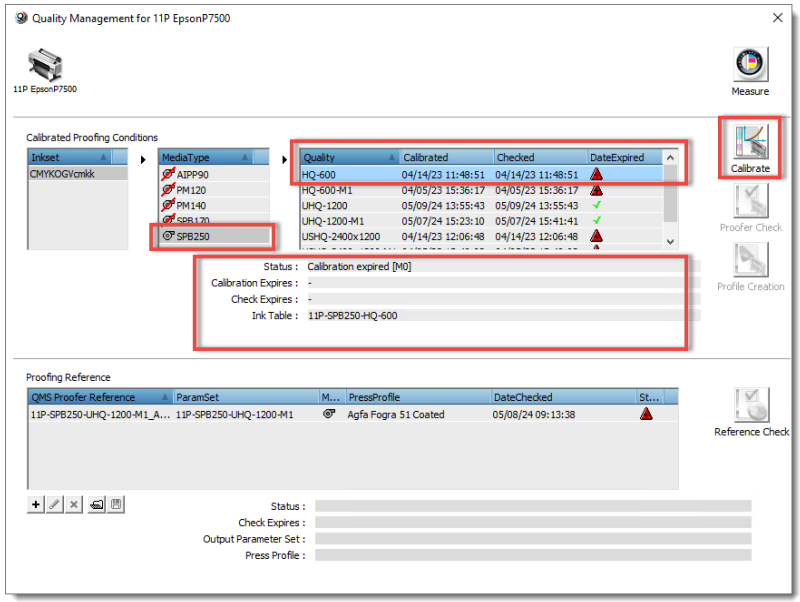
3 Select the ink set.

If the media you want to calibrate is not loaded, use the Apogee Client to load the media in the System Overview. Refer to “Loading Media” on page 54.

4 Select a media type (e.g. SPB250) and a quality mode (e.g. HQ-600).

You will view details about the selected quality mode under the Calibrated Proofing Conditions table. Refer to “Calibration Status” on page 56 for the description of the icons.

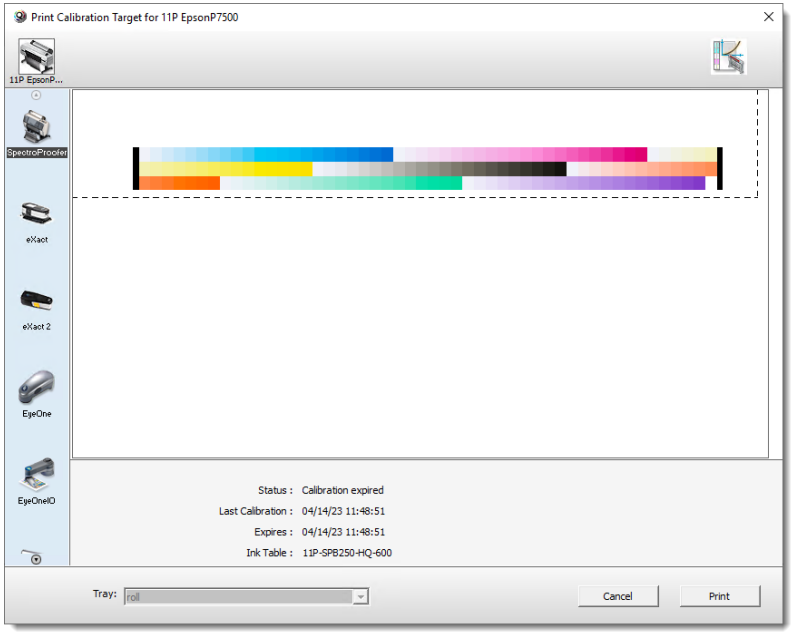
Calibration button will be also enabled.



5 Click the **Calibration** button to print the Target.

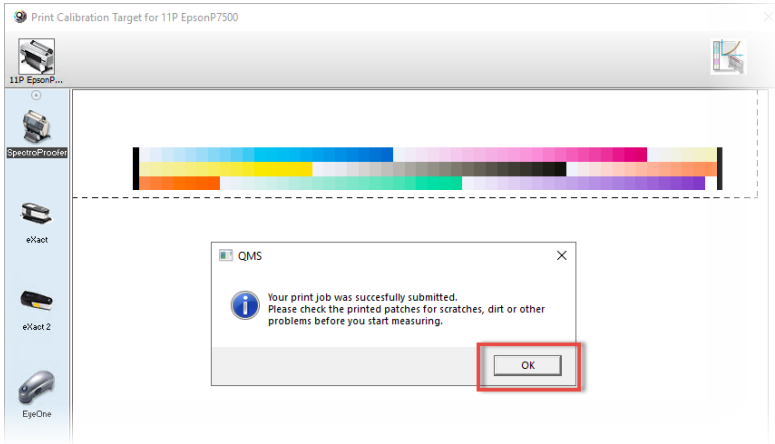
NOTE: This is only available when the selected paper type is loaded.

The following window will appear, showing a preview of the Calibration Target.



6 Select your measurement device (e.g. Spectroproofer). Eventually, double-click the measurement device, if you want to adjust the format settings of the Calibration Target.

7 Click **Print** to print the Calibration Target. After a few seconds, the following message will appear:



8 Click **OK** to complete the wizard.

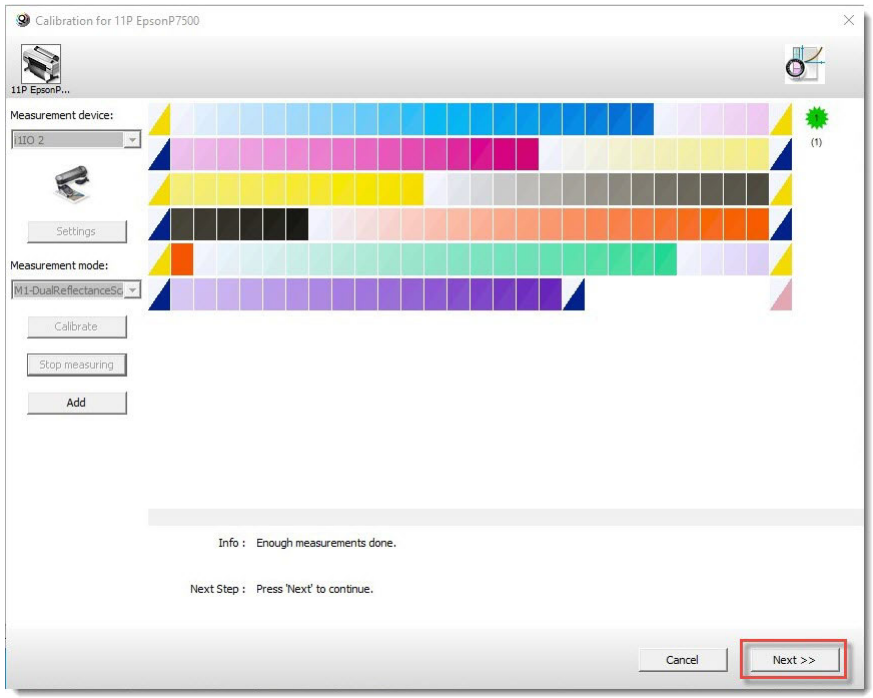
NOTE: Using the Epson printers with inline spectrophotometers (Spectroproofer) will automatically measure the Calibration target after printing. In this case, also the calculation of the calibration table will be initiated automatically (no user interaction required).

Measuring and Interpreting the Result

▷ **Proceed as follows when measuring and interpreting the result:**

1 Measure the printed wedges as used for the measurement device.

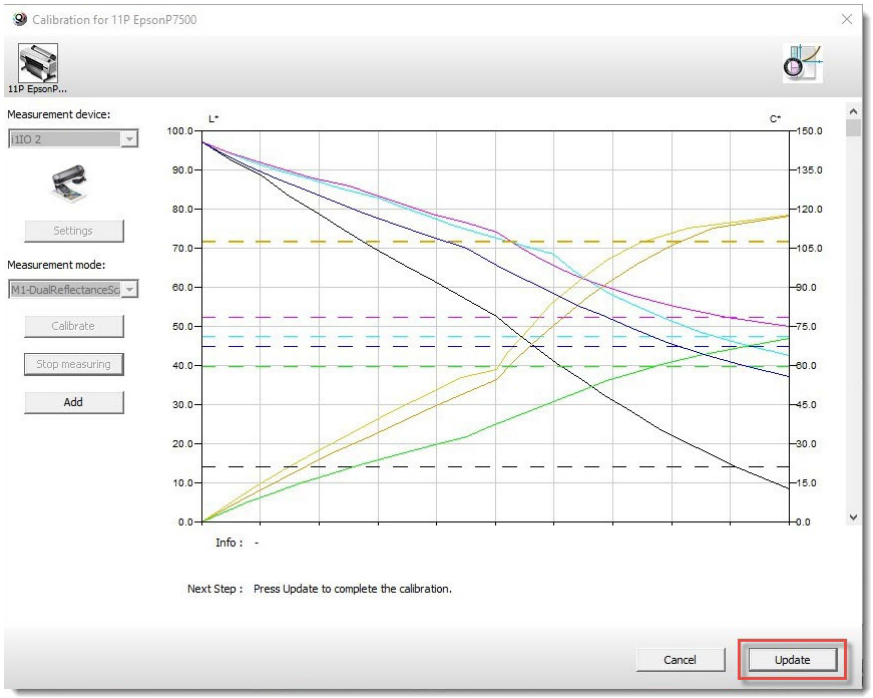
2 After measuring the required number of measurements, the Next button becomes available:



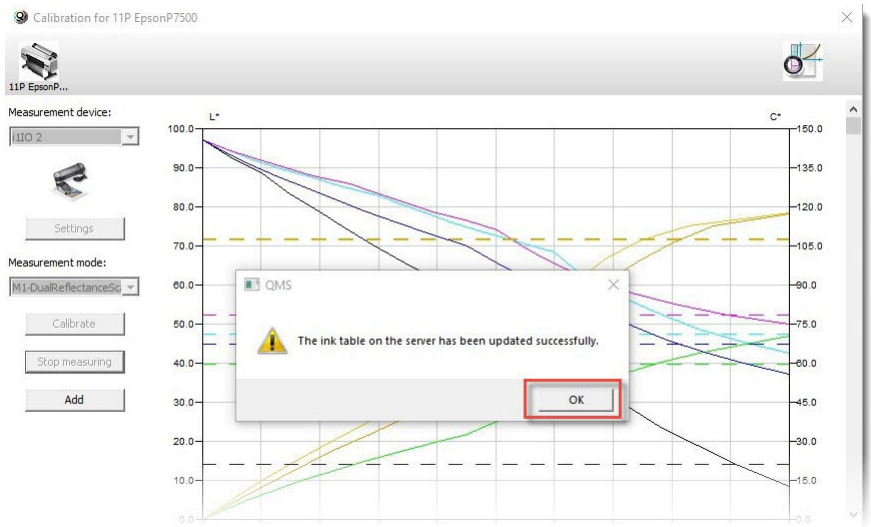
3 Click **Next**.

4 The measurements are shown as graphs per ink, with dashed horizontal lines indicating the aim values for each ink. The (possible) bumps in the curves are caused by the mixing of the light and heavy (multi density) inks and are normal. If the measurement curves do not reach the dashed aim curve, possible problems may have occurred on the prints, or measurements. Check the printout (e.g. the missing nozzles).

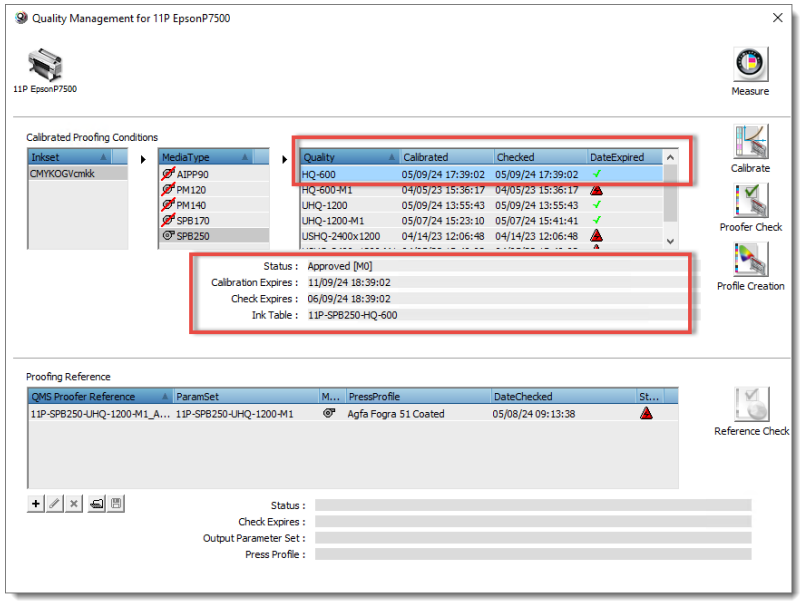
Click **Update** to apply the measurement to the calibration table.



5 Click **OK** to close the wizard.

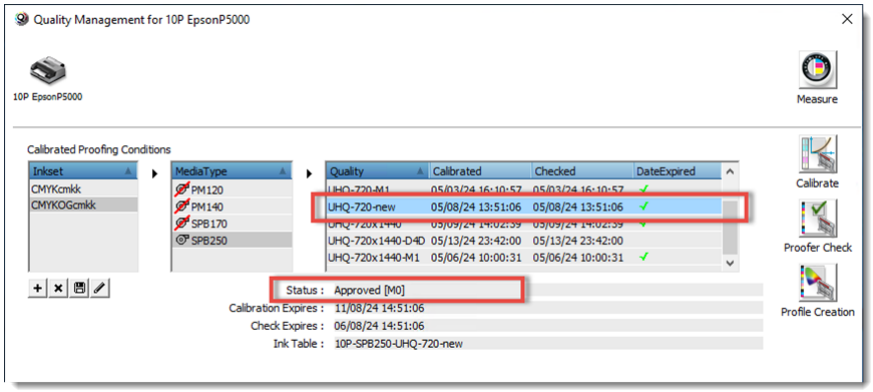


6 The result of Calibration will be shown in the Quality Management window directly after the measurements. An accepted calibration will show the green check mark icon and an unaccepted calibration will show an error-message notifying the user. Refer to “Calibration Status” on page 56 for the description of the icons.



Calibrating with Epson SpectroProofer

A calibration with an inline SpectroProofer will automatically be applied without any user intervention. The calibration status will reflect the updated time stamp, if successful. Refer to the “Consulting the QMS History” on page 119, to see the calibration curves.



Proofer Check

The Proofer Check examines the calibration accuracy of the proofer. A restricted wedge is used to evaluate the complete range of ink densities for each color. The measurements obtained from the wedge are then compared to the existing calibration to identify any inconsistencies. A report is generated to display the calibration status and identify any areas that may require adjustment. The Proofer Check procedure makes it possible to quickly evaluate the calibration status.

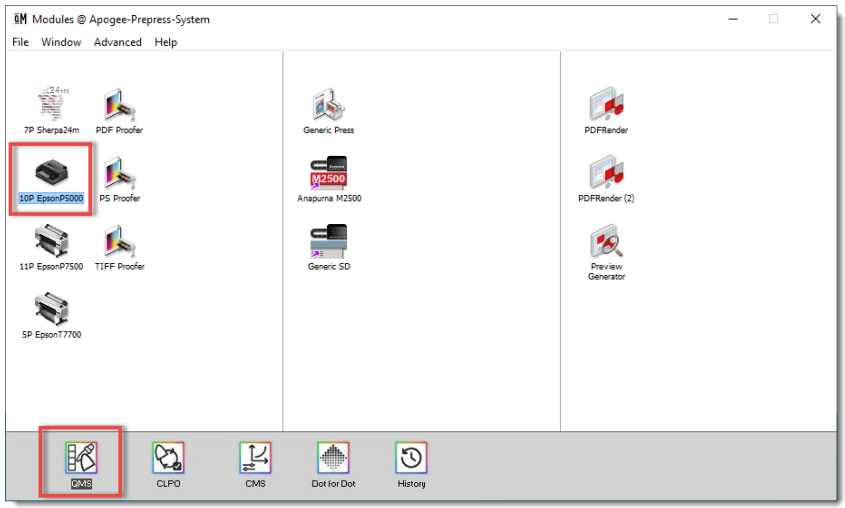
NOTE: A proofer check is available only after calibration.

Printing the Proofer Check Target

When measuring a Proofer Check Strip, the Calibration status of the Proofer is checked. The Proofer Check Report will tell whether the Proofer is still calibrated correctly.

▷ To print the Proofer Check Target:

1 Select a Proofer (e.g. Epson P5000) in the Output section of the modules window.



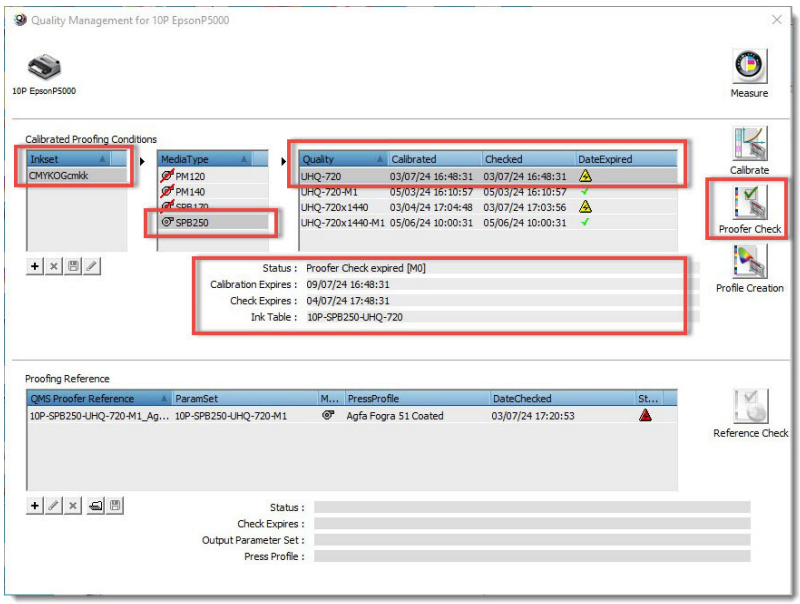
2 Double-click QMS. The Quality Management for Proofer window appears.

3 Select the ink set. The list of media types will now appear.

If the media you want to calibrate is not loaded, use the Apogee Client to load the media in the System Overview. Refer to “Loading Media” on page 54.

4 Select a media type (e.g. SPB250) and a quality mode (e.g. UHQ-720).

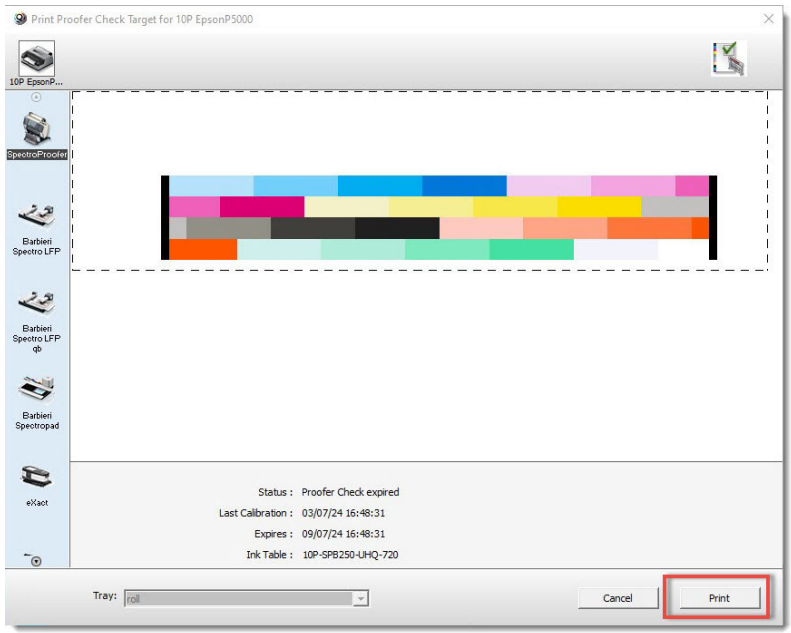
You will view details about the selected quality mode under the Calibrated Proofing Conditions table. If the Proofer has already been calibrated in the past for the selected quality mode, the Proofer Check button and Profile Creation button will also be enabled next to Calibration button.



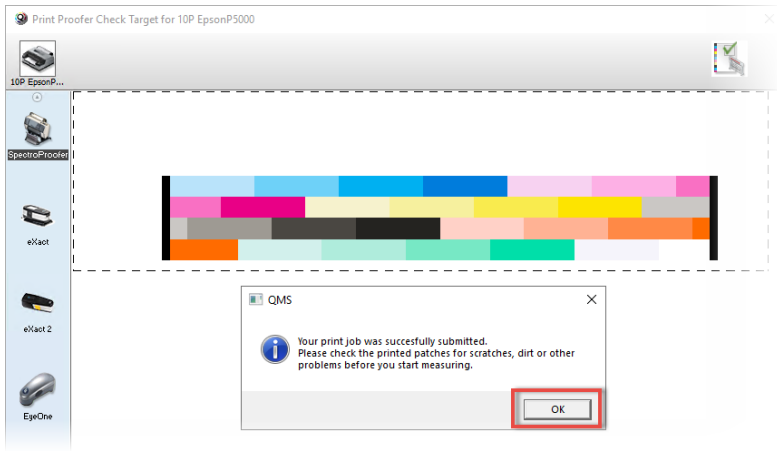
5 Click the **Proofer Check** button to print the Target.

NOTE: This is only available when the selected paper type is loaded, and when the quality is either calibrated or the proofer check expired.

The following window will appear, showing a preview of the Proofer Check Target.



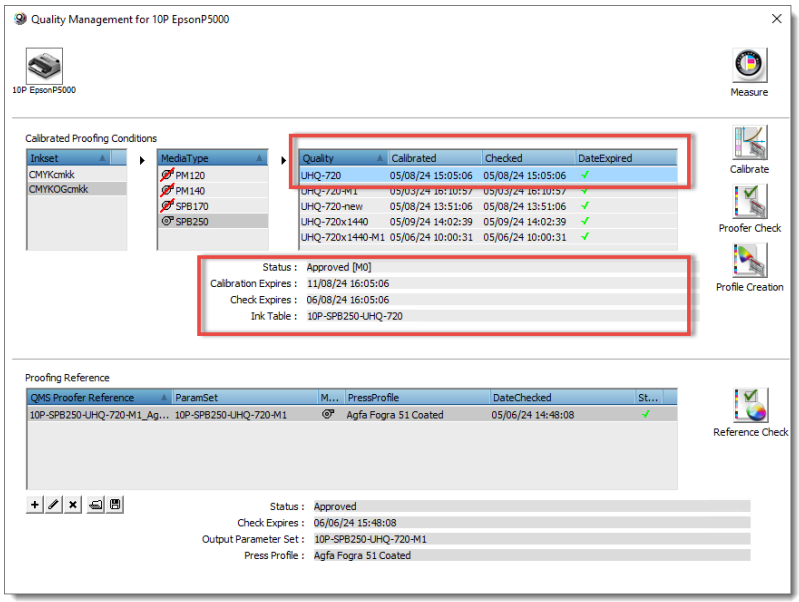
6 Click **Print** to print the Target. After a few seconds, the following message will appear:



7 Click **OK** to complete the wizard.

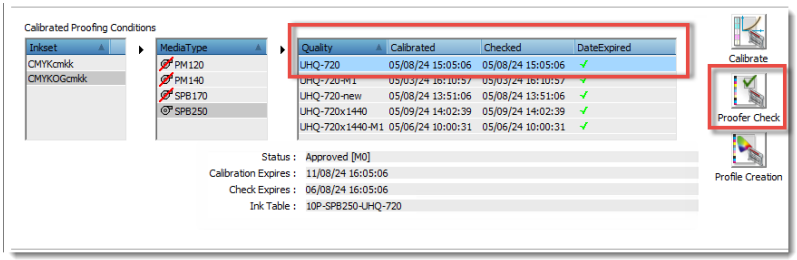
NOTE: Using the Epson printers with inline spectrophotometers (Spectroproofer) will automatically measure the Calibration target after printing. In this case, also the calculation of the calibration table will be initiated automatically (no user interaction required).

8 Consult “Proofer Check” on page 71, for details on measuring and interpreting the Proofer Check targets. The result of Proofer Check will be shown in the Quality Management window directly after the measurements. An accepted Proofer Check will show the green check mark icon and an unaccepted Proofer Check will show an error-message notifying the user. Refer to “Calibration Status” on page 56 for the description of the icons.

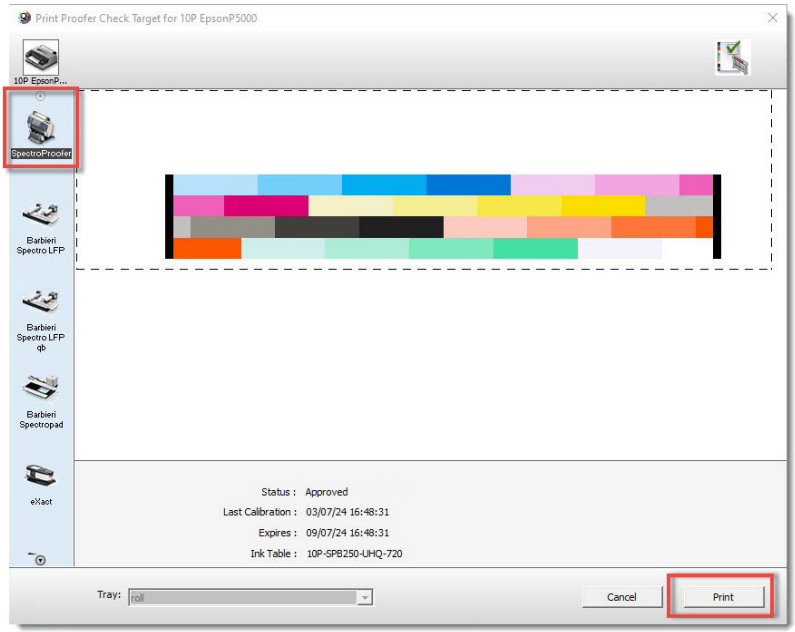


9 Select your recently calibrated quality and click the **Proofer Check** button.

NOTE: The Proofer Check button is only available when the calibration is valid. It is not possible to check expired or invalid calibrations.



10 Select the measurement device and click **Print** to start the proofer check.



11 QMS adapts the Proofer Check wedge to the measurement device and it will start printing automatically.

Proofer Check Report

▷ **Proceed as follows to generate a Proofer Check Report:**

1 Measure the wedge. A proofer check report is generated, once the measuring is finished.

2 The measurements of each ink are compared with the reference values.

- □ Excellent score: Calibration is valid, no action is needed.
- □ Poor score: Calibration is needed. Check if the correct media is loaded and all nozzles are printing.

3 Click **Update** to accept the result. This will update the expiration date of the calibration check. The report can also be printed.

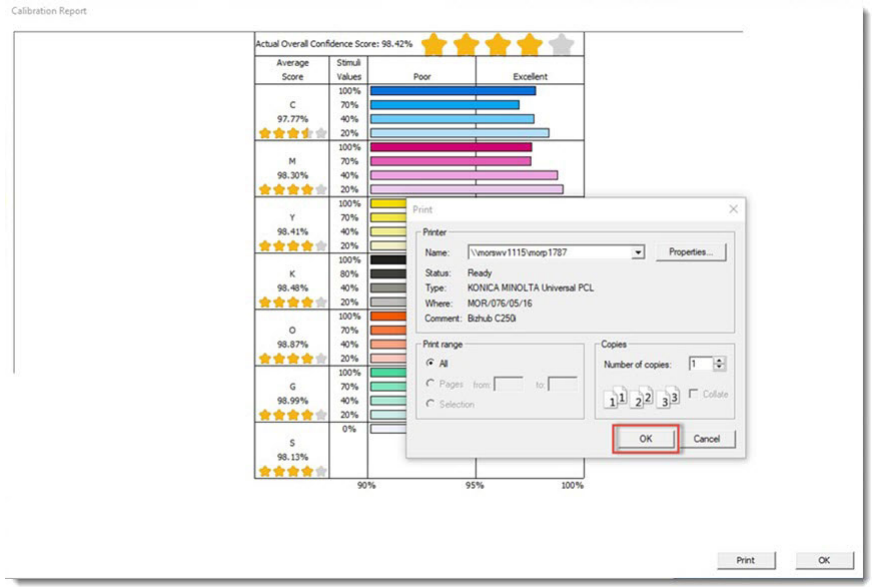
The report displays an overall confidence score, as well as per ink and for the media. The values (and numbers of stars) express how good the output of the printer matches the reference values used as aim values during calibration. Confidence scores below 95% indicate poor calibration status, and should be avoided by recalibrating the proofer.

Proofer check reports are added to the QMS History of the printer.

Printing the Proofer Check Report

1 Click Print in the Report window if you want to print the Report.

The Page setup window will appear:

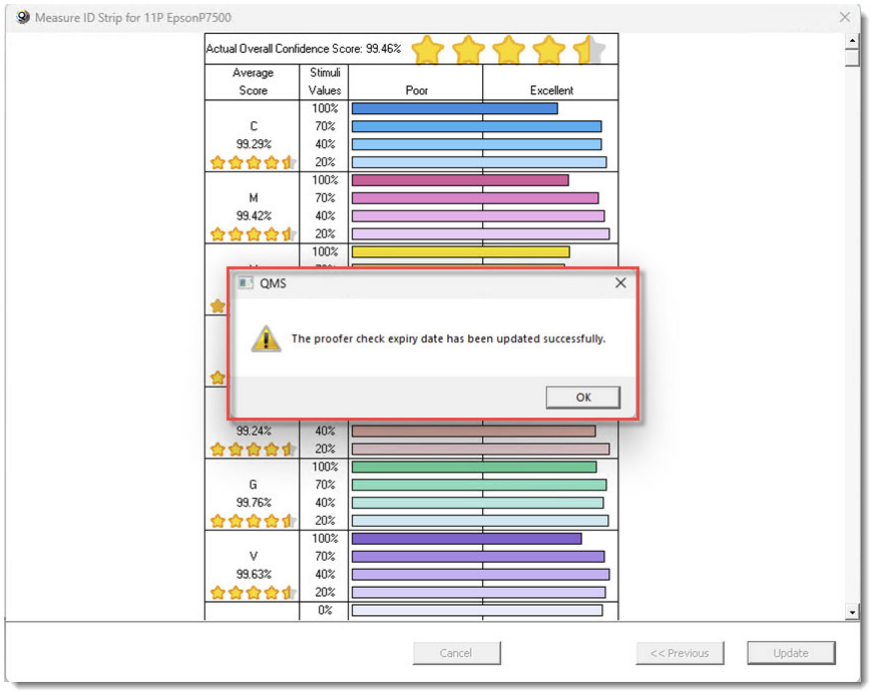


2 If necessary, change settings, format, paper size, orientation and scale and click **OK**.

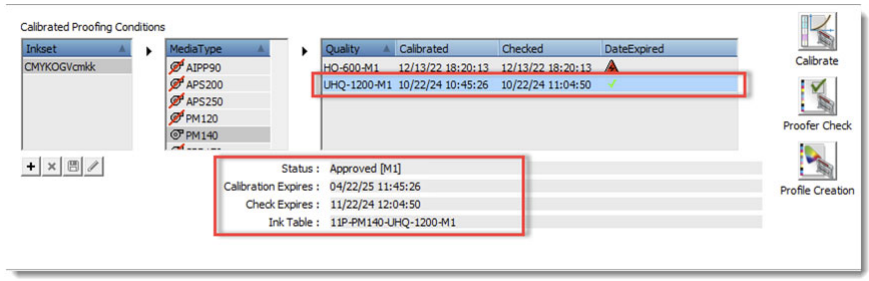
3 Check the preset parameters and click **Print**.

Saving the Proofer Check Information in the Database

1 Click **Update** if you decide to store the information in the database.



2 The modules window will be shown. Notice that **Check Expires** date has been updated.



NOTE: Proofer check results can always be re-consulted using the History button. See “Consulting the QMS History” on page 119 and further.

Reference Check

The reference check is a QMS routine, where the current condition of the proofer is compared with a reference. The reference can be a store measurement of a proofer condition at a certain moment in time (the golden benchmark) or a press condition. The reference check compares the measurements with the reference. The result is a validation report similar to a proof validation.

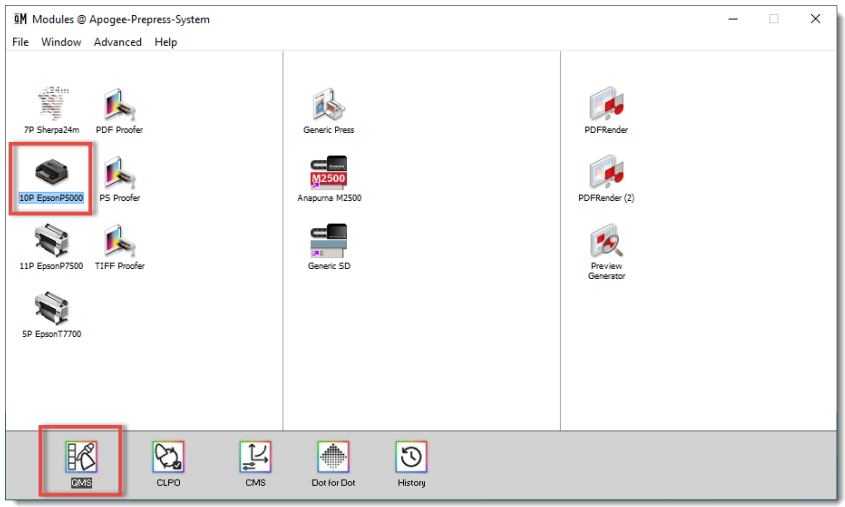
Reference to a Proofer Benchmark

A reference is necessary for a benchmark to be compared to. This is the proofer at a specific point in time, in the case of a proofer benchmark (proofer reference check). Usually, this occurs when the proofer is in an almost perfect state (e.g. recently installed, updated profiles, saving a very satisfying status, etc.).

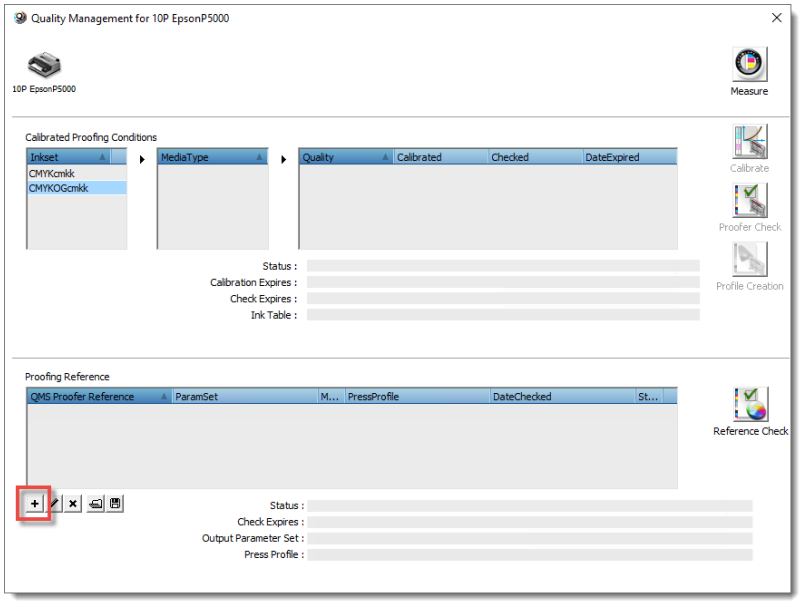
Defining Proofing References

To define a Proofing Reference:

1 Select a Proofer (e.g. Epson P5000) in the Output section of the modules window.



2 Double-click QMS. The Quality Management for Proofer window appears.



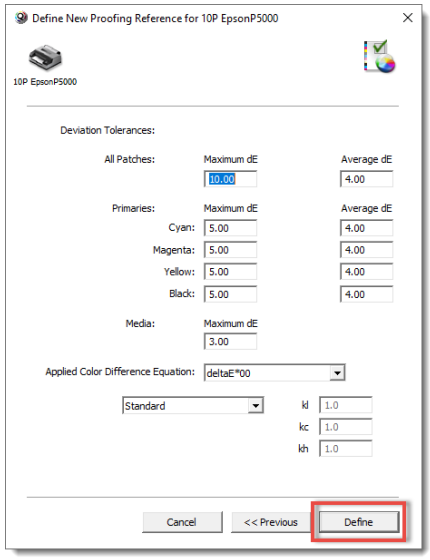
3 Under Proofing Reference, click the Plus icon  to start the Define Proofing Reference wizard. The Define New Proofing Reference window will appear.

4 Select the Output Parameter Set, the Press Profile, the Strip, and the Print Standard to be used for the Proofing Reference from the drop-down lists.

NOTE: It is recommended to use the latest ISO standard ISO12647-7:2016, rather than to use a custom standard.

5 Specify a name for the Proofing Reference and click **Next**.

6 You can now modify the deviation tolerances and the applied color difference equation, and custom parameters.



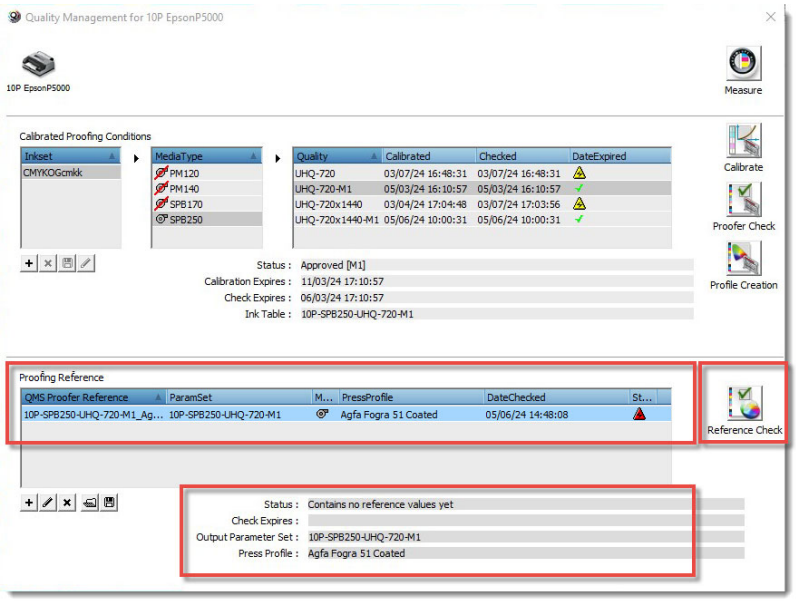
NOTE: By default, the ISO values will be filled in. This screen is only applicable when **Custom** is selected for Print Standard.

7 Click **Define**. The Proofing Reference will be added to the server.

8 Click **OK** to return to the Quality Management for Proofer window.

The Proofing Reference has been added to the Proofing Reference section of the window. A red alert triangle indicates that the Proofing Reference Check Strip has to be measured.

9 Select the Proofing Reference as shown below. You will now see details about the selected Proofing Reference under the Proofing Reference table. Also the Reference Check button will be enabled.



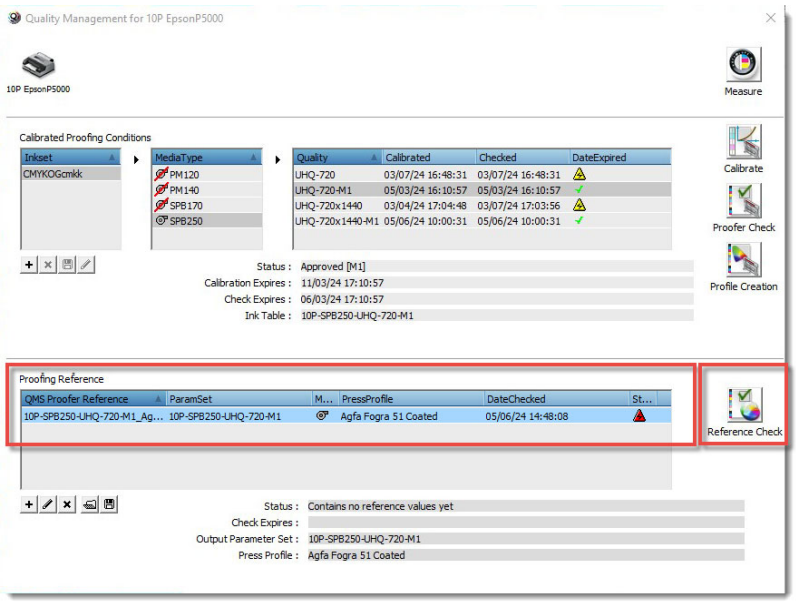
Proofer Reference Check

When you define a Proofing Reference, it does not yet contain measured reference parameters and an expiration time. To determine these data, you have to print and measure the Proofing Reference Definition Target.

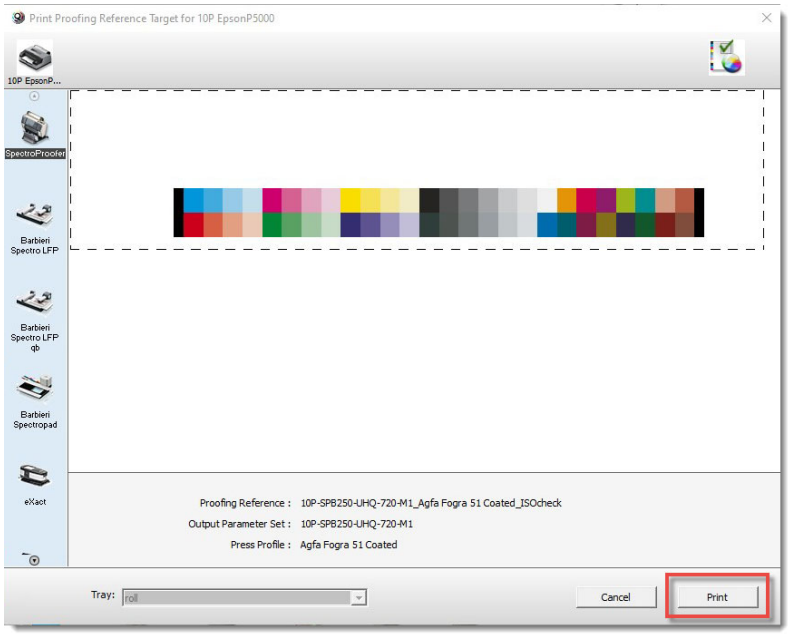
Also, you can print a Proofing Reference Check Target, to measure if the output of the Proofer still matches the quality requirements stored in the Proofing Reference Definition.

Printing the Proof to Reference Strip

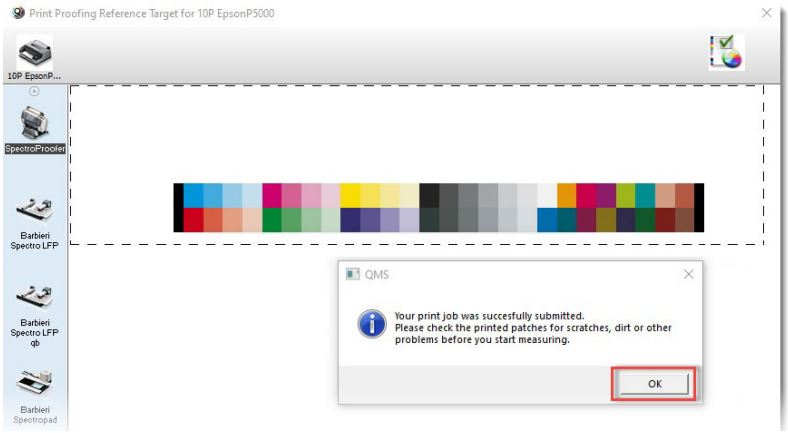
1 In the Quality Management for Proofer window, select the Proofing Reference. Click **Reference Check**.



2 Print the target in accordance with the available measurement device. Select the device, eventually change patch size by double clicking on the device and click **Print**.



3 Click **OK** to return to the Quality Management window once the print job has been successfully submitted. See “Measuring and Interpreting the Proof to Reference Prints” on page 85 on how to measure and interpret a Proofing Reference Check Report.

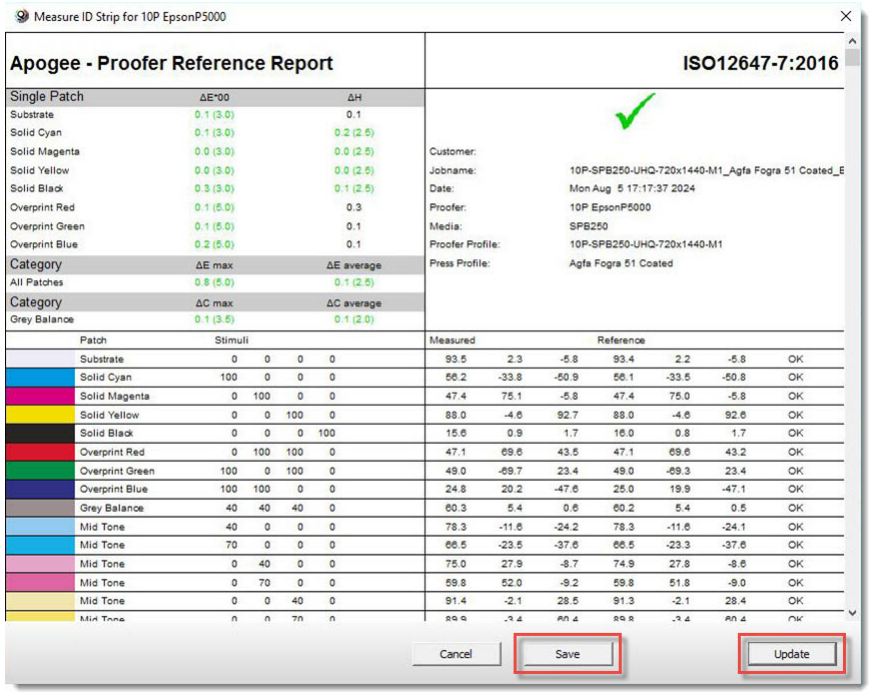


Measuring and Interpreting the Proof to Reference Prints

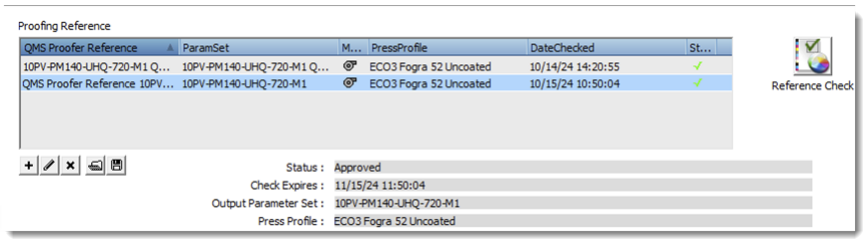
1 In the Quality Management window, click **Measure**.

2 Measure the printed wedges with the available measurement device. The number of steps may vary depending on the measurement device.

3 At the end, a Proofing Reference Report is represented containing a summary of all the measured patches as well as all individual patches compared the stored reference measurements of the proofing reference set:



4 Click **Save** to store as PDF or **Print** to print the report. Click **Update** to finish and close the wizard. The time stamps in the Quality Management window will be updated. The proof to reference check is also added to the QMS history for future consultation.



Working with Proofer References

A Proofing Reference is a set of reference measurements stored in the QMS database reflecting the desired quality required for later proofs.

This section explains:

- Editing a Proofing Reference
- Deleting a Proofing Reference
- Importing a Proofing Reference
- Exporting a Proofing Reference

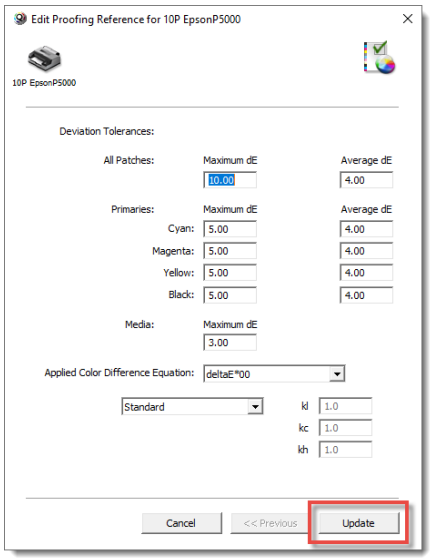
Editing a Proofing Reference

You can update the deviation tolerances of the Proofing Reference, if necessary.

> **NOTE:** This screen is only applicable when **Custom** is selected for Print Standard.

1 Select the Proofing Reference and click the Pencil icon button  below Proofing Reference table in the Quality Management for Proofer window.

2 The Edit Proofing Reference window will appear. Adapt the values for which a modification is needed and click **Update** to save the adaptations.

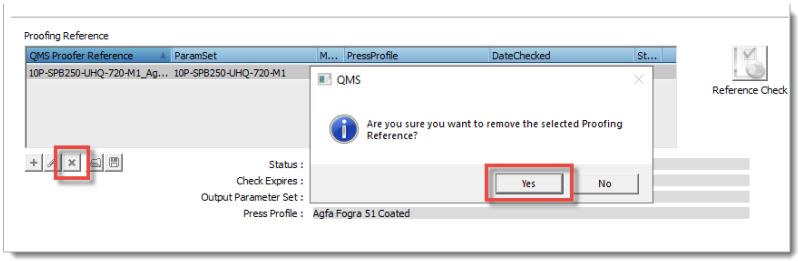


Deleting a Proofing Reference

You can delete a Proofing Reference from the QMS database.

1 Select a Proofing Reference and click the **Delete** icon if you want to delete the Proofing Reference.

The following screen will appear:



2 Click **Yes** to delete the Proofing Reference.

Importing a Proofing Reference

You can import a Proofing Reference from a database.

1 Click the **Import** icon below Proofing Reference table in the Quality Management for Proofer window.

2 Select a file and click **Open**. The new Proofing Reference will be added into the list.

Exporting a Proofing Reference

You can export a Proofing Reference that can later be loaded into similar Proofer Task Processor's media type / quality mode.

1 Click the **Export** icon below Proofing Reference table in the Quality Management for Proofer window.

2 In the Save As dialog, choose the location where you want to export the Proofing Reference and click **Save**.

Proofing Reference will be exported in XML file format (*.xml).

Creating a Basic Profile

Proceed with the following steps, while creating a basic Proofer Profile:

- Printing the Profile Target
- Measuring the Profile Target
- Create the Profile from the measurements.

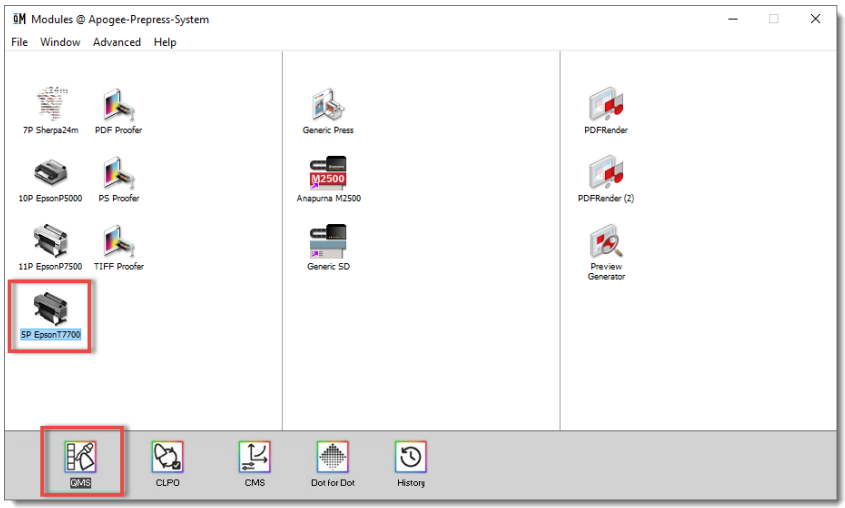
Printing the Profile Target

With QMS, you can create a new proofer profile without the need of additional tools. The only precondition is that the proofer is calibrated.

You print and measure a Profile Creation target on the selected proofer, associate it with a Profile steering file, set the ink limits if needed and define the sharing level. When you enter a name and save these settings in QMS, the new proofer profile becomes immediately available in Apogee Prepress.

▷ To Print the Standard Profile Creation Target:

1 Select a Proofer (e.g. Epson T7700) in the Output section of the modules window.



2 Double-click QMS. The Quality Management for Proofer window appears.

3 Select the ink set. The list of media types will appear.

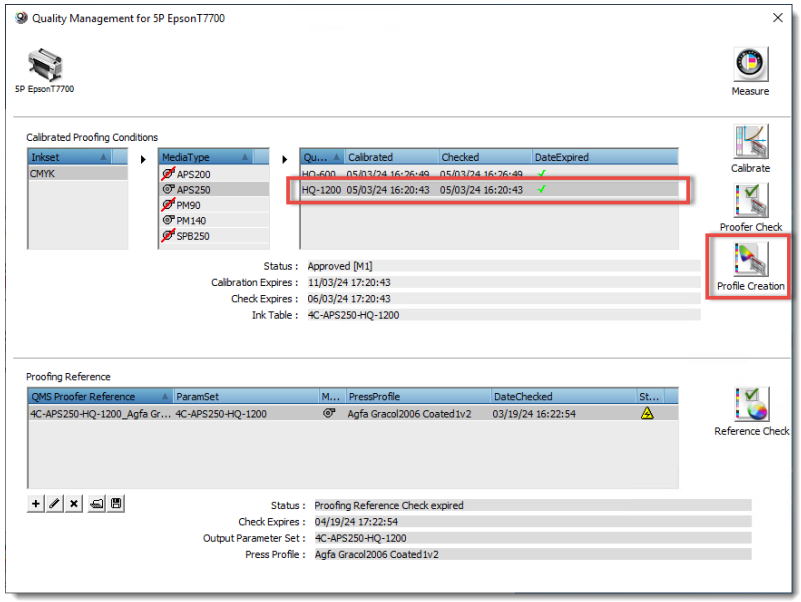
If the media you want to calibrate is not loaded, use the Apogee Client to load the media in the System Overview. Refer to “Loading Media” on page 54.

4 Select a media type (e.g. APS250) and a quality mode (e.g. HQ-1200).

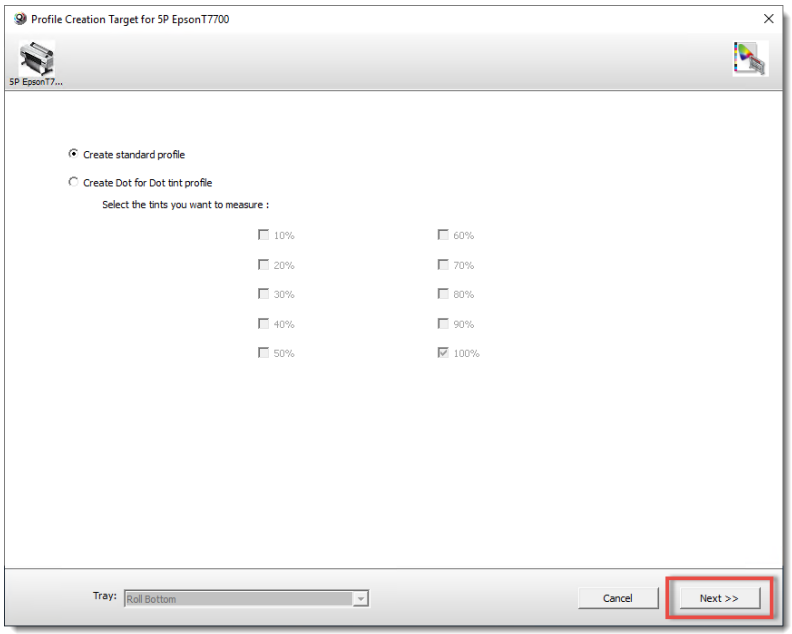
The quality modes for this media type, the dates of the last Calibration (Calibrated), Proofer Check (Checked), and the status of the ink table (DateExpired) will appear. Refer to “Calibration Status” on page 56 for the description of the icons.

You will also view details about the selected quality mode in the Calibrated Proofing Conditions table.

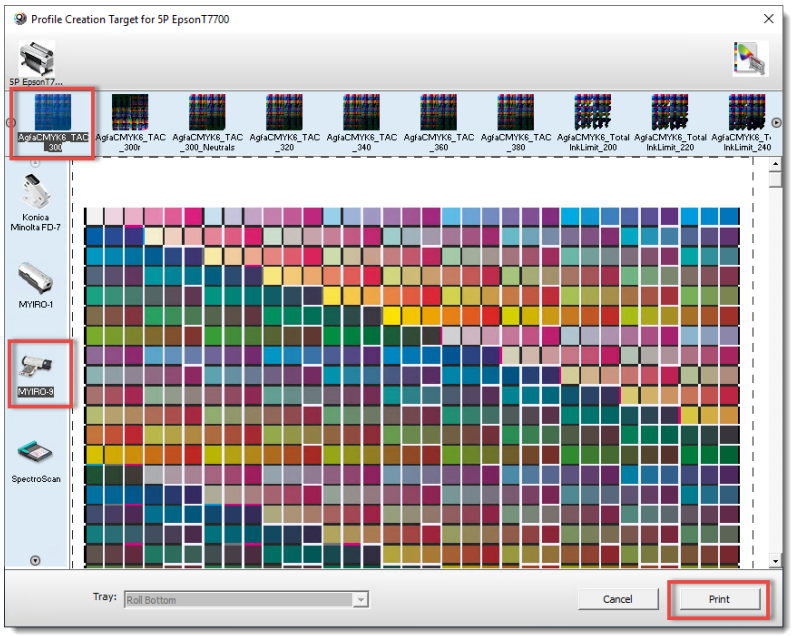
Click the **Profile Creation** button.



5 The Profile Creation Target window will appear. Select the **Create standard profile** option to create a new proofer profile and click **Next**.



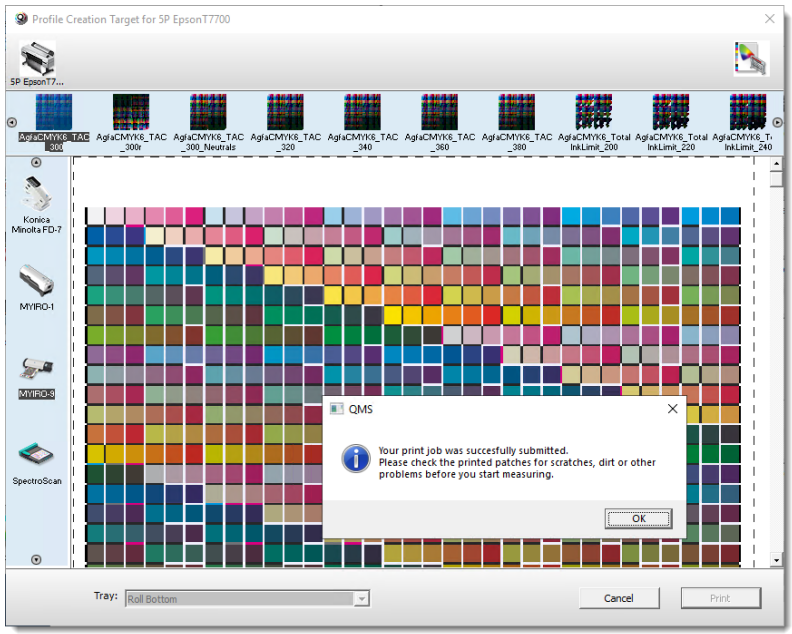
6 You will see an overview of the measurement devices on the left side and a list of all available targets at the top of the Profile Creation Target window.



Select a measurement device (e.g. MYIRO-9), and a target. Click **Print** to print the Profile Creation target.

NOTE: It is recommended to use the preselected target. The selection takes into account the specificities of print quality, printer and paper. This assures great results and excludes print artifacts such as over inking (or not enough ink).

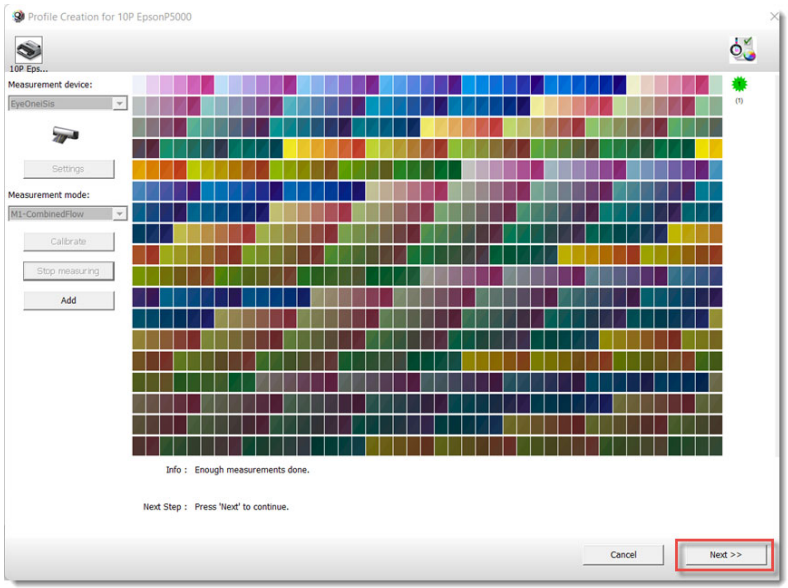
7 Click **OK** to return to the Quality Management for Proofer window once the print job has been successfully submitted.



Measuring the Profile Target

▷ **Proceed as follows when measuring the Profile Target:**

1. Click the **Measurement** button in the Quality Management window.
2. Measure the target in accordance with the connected measurement device:
   - Measure the ID strip
   - Select the measurement description file or the measurement file (in case of the SpectroProofer).
3. Change the measurement parameters (like measurement mode, scanning, etc.), if needed.
4. After the measuring is completed, and the system has enough information, the Next button becomes available.

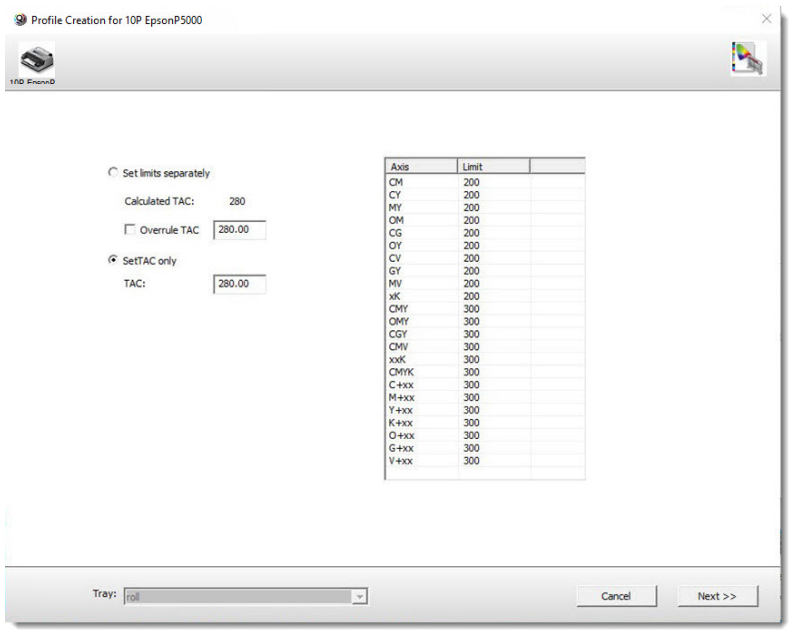


5 Click the **Next** button. The ink-limited target values are shown including almost all possible; two, three, and more ink overprints that go up to the maximum.

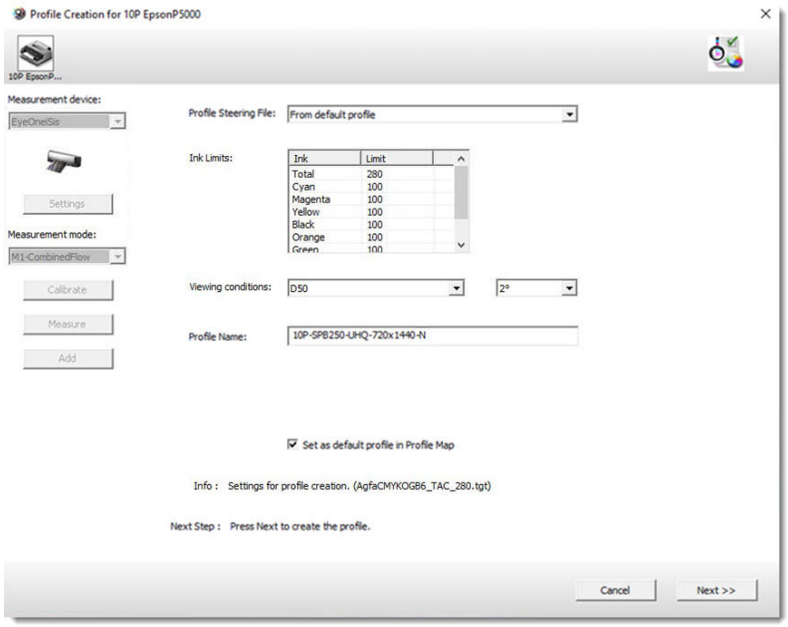
Use this ink-limited target if drying problems are observed. These problems point to a problematic ink limitation when combined with the loaded paper.

NOTE: The ink-limited target is not needed for the ECO3 branded substrates (all quality resources are optimized for these papers).

6 Keep the ink limitations at their maximum and click the **Next** button.



7 QMS will continue on to the instructions for creating a profile.



Apogee selects the Profile Steering file. Use this preselected profile steering file (From default profile).

NOTE: It is not recommended to use other targets since these specific targets can be developed for outdated technology (CMYK6_all) or other printing techniques (lithography, industrial inkjet, etc.).

8 Adapt the ink limits, if necessary.

NOTE: Patches that are prone to inversion are excluded from targets that are designed with TAC (Total Area Coverage) or ink-limiting in mind. As a result, there will be no inverted data in the measurement file that is obtained from these targets. This eliminates the need to later remove any zones from the profile in order to prevent inversions and enables the creation of a profile based on the entire set of measurements. On the other hand, if inversions are still visible on the target, a new target with a lower ink limit needs to be printed. These ink-limited goals are designed to comply with the particular ink limitation configurations that were set during the ink limits procedure.

9 The viewing conditions are needed to match the viewing conditions of the press profile. A mismatch of these settings will cause bad color reproduction. (D50, 2 degrees observer).

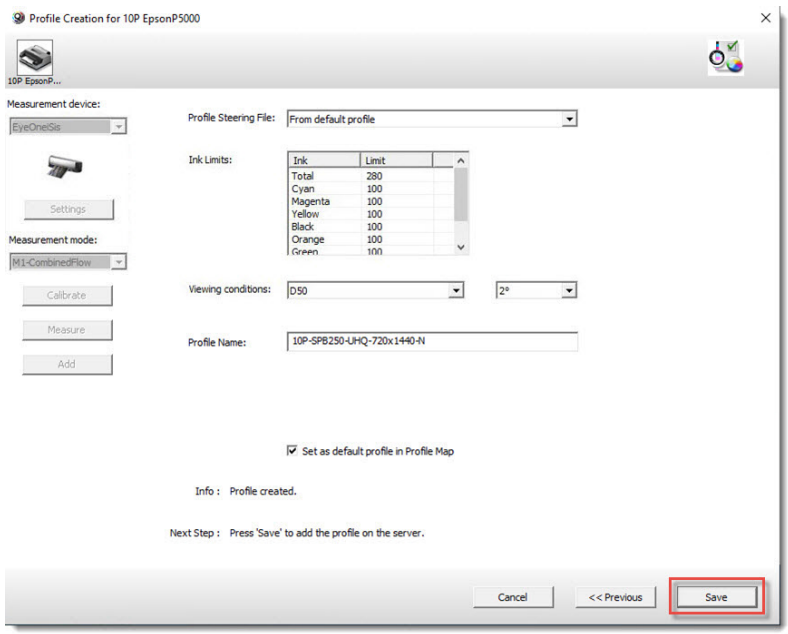
Using the AdvancedCMM functionality, Apogee Prepress can convert between profiles with various viewing conditions. The calculation between profiles under varying viewing conditions will require a little more CPU time.

10 Enter a Profile Name for the proofer profile.

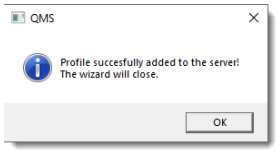
11 Enable the option **Set as default profile in Profile Map** to automatically select the profile, when a job uses the same quality and ink table. See “Adding a Proofer Profile to Profile Selection Map” on page 60.

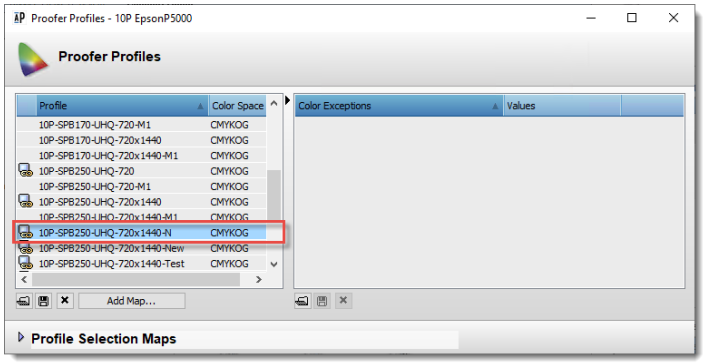
12 Click the **Next** button.

13 The Proofer Profile is created. An overview of the parameters entered will appear. Click the **Save** button to add the profile server’s Proofer Profiles.



14 The Proofer Profile is added to the server. Proofer profiles can then be managed via the Apogee Prepress Client's System Overview window.





Closed Loop Profile Optimization

A Closed Loop Profile Optimization is needed to improve the color conversions.

The closed loop profile optimization is done by adding extra measurement data to the proofer profile with each iteration. The extra measurement points are defined in an iterative process, so that a more accurate color conversion can be done. The more iterations are done the more accurate the color conversion will be when using the closed loop optimized proofer profile.

Converting press CMYK to the optimized closed loop profile will result in much smaller ΔE.

The closed loop optimized proofer profile can be refined:

- for all color points in the gamut of the proofer profile, or
- only for the color points in the gamut of the proofer profile restricted to the gamut of a press profile.

This is only applicable for ECO3 proofer profiles (created in QMS or ColorTune Output).

NOTE: Closed loop profile optimization requires a lot of measurements (about 5000 to 10000 patches) so it is highly recommended to use a modern scanning spectrophotometer. Although it is possible with a strip reading spectrophotometer (i1 Pro Handheld), the chances of reading errors are so high that a successful optimization is difficult.

NOTE: It is recommended to use exactly the same measurement device for the Calibration, Proofer Check, Profile Creation and Closed Loop Profile Optimization to avoid too many deviations caused by the use of different measurement devices.

Setting up the Closed Loop File Optimization

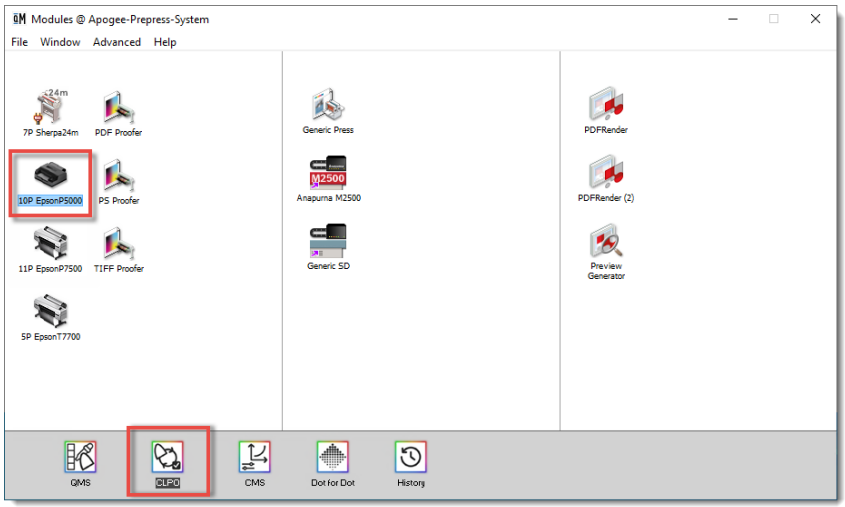
A Closed Loop Profile Optimization is done on an existing proofer profile created in QMS or ColorTune Output. The proofer should be in perfect working conditions and with an up-to-date calibration. It is also recommended that the original proofer profile is custom made in the same working conditions.

NOTE: A closed loop iteration includes the printing, measuring and creation of the closed loop profile.

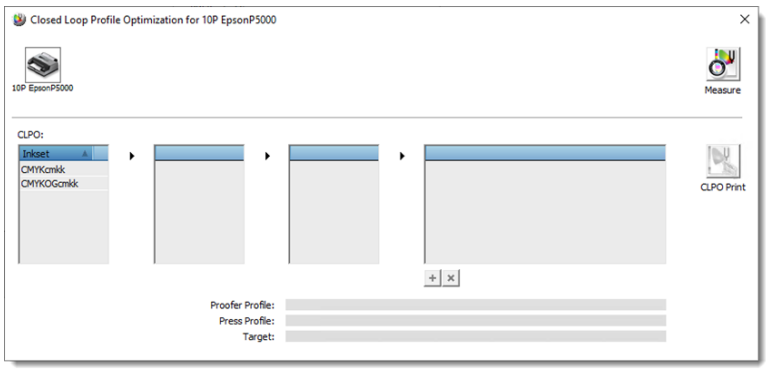
Creating a Closed Loop Profile Optimization consists of the following steps:

▷ To start the closed loop profile optimization

1 Select a Proofer (e.g. Epson P5000) in the Output section of the modules window.

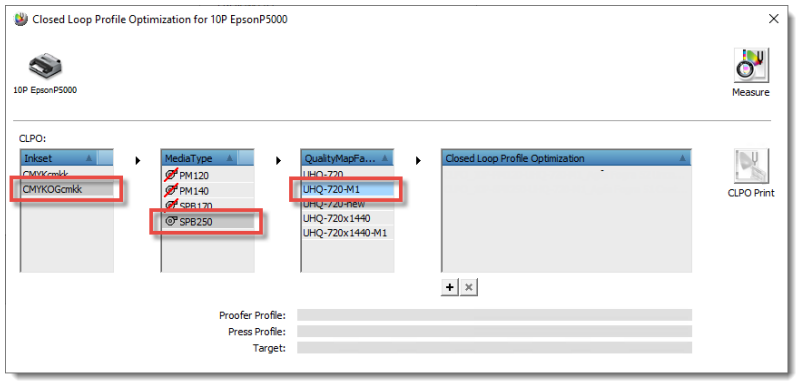


2 Double-click the **CLPO** (Closed Loop Profile Optimization) function button. The following window appears.



3 Select an ink set (e.g. CMYKOGcmkk).The list of media types will appear.

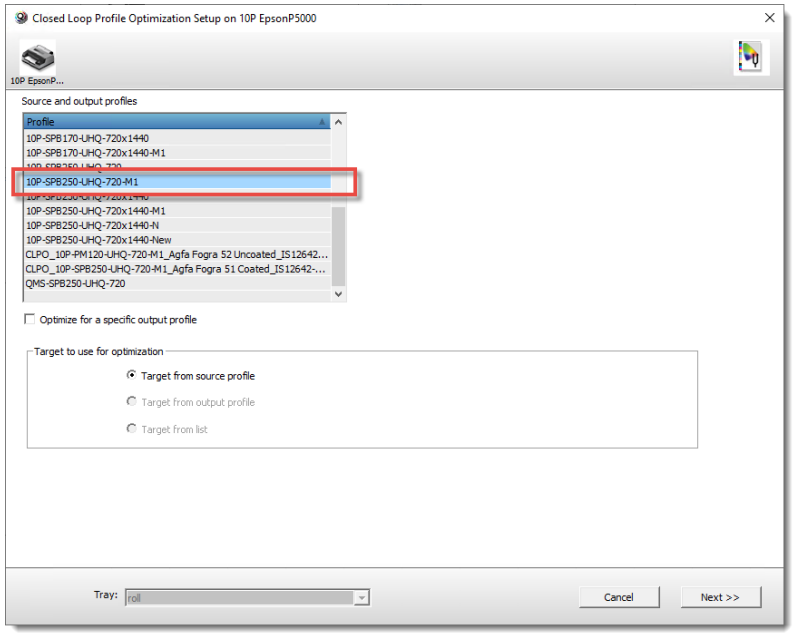
4 Select a media type (e.g. SPB250) and a quality mode (e.g. UHQ-720-M1).



NOTE: Each Closed Loop Profile Optimization is depended on the selected Ink Set, Media Type and Quality Mode.

5 Click the + button to start a new Closed Loop Profile Optimization.

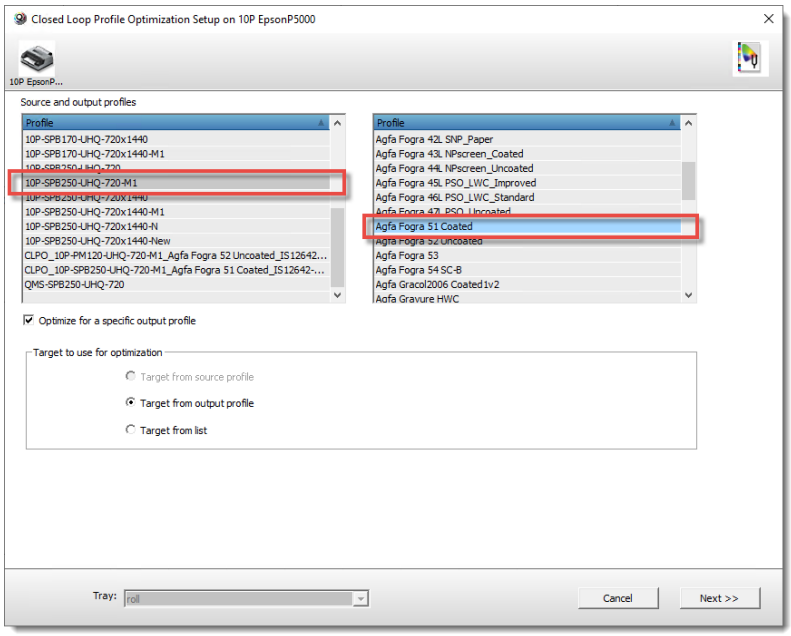
6 Select the original proofer profile from the list:



The user can choose between two flows:

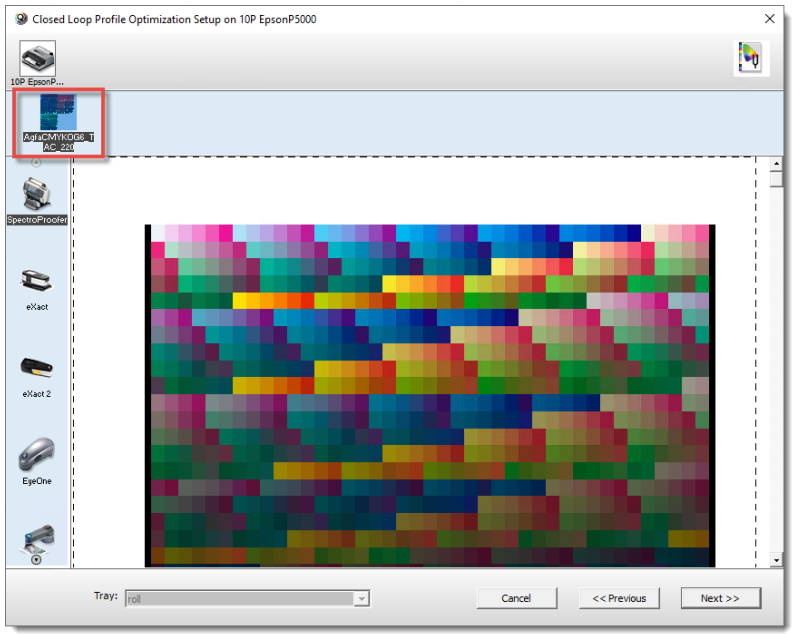
- A closed loop profile optimization is generally performed against itself, if the option **Target from source profile** is chosen.
  The optimization is done for all color points in the gamut of the proofer profile. More iterations will have to be done because the complete gamut is optimized.

- Alternatively, a closed loop profile optimization can be done for a specific press profile. The user must enable the option **Optimize for a specific output profile** to select the press profile. The optimization will only be done for the color points in the gamut of the proofer profile restricted to the gamut of the press profile.



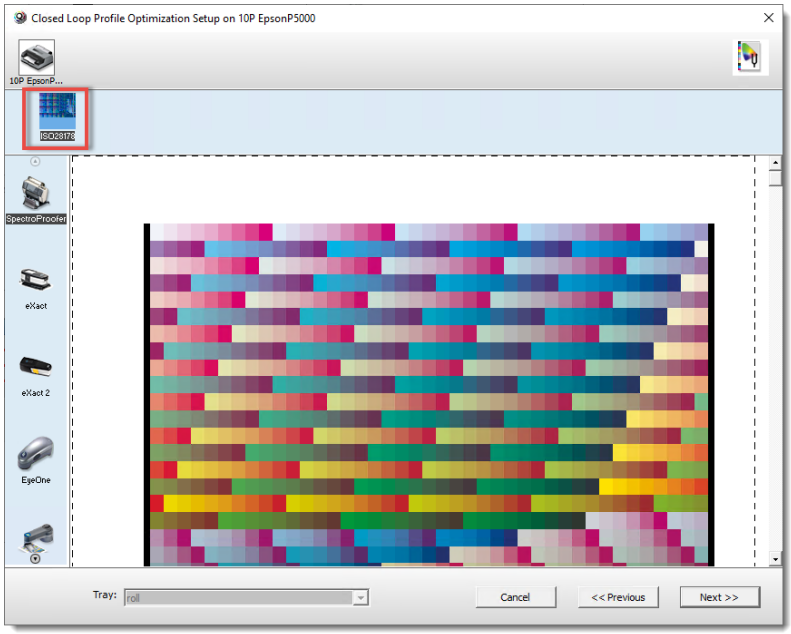
7 Select the target to be used for the optimization from one of the following options and click the **Next** button.

- Target from source profile: the profile creation target of the original proofer profile will be used.



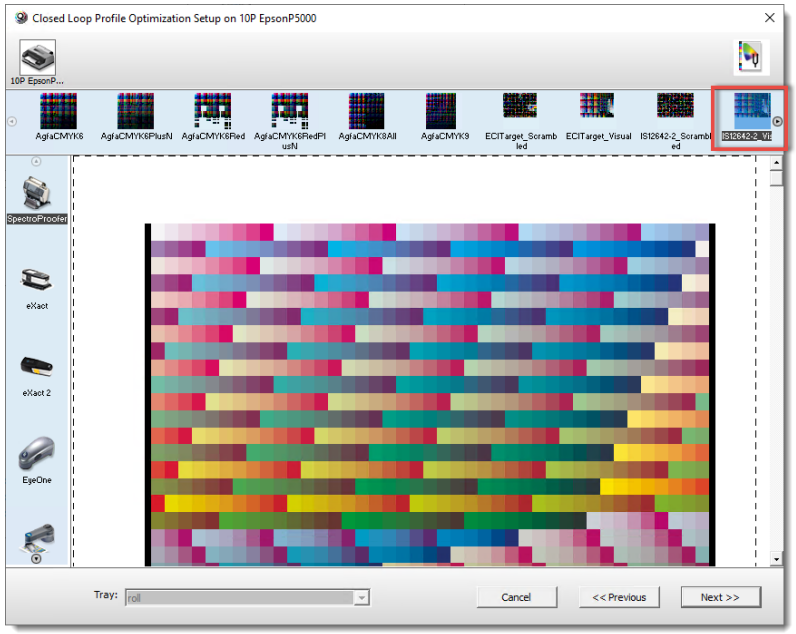
NOTE: The complete list of available profile creation targets will be shown when the target of the original proofer profile cannot be retrieved.

- Target from output profile: the profile creation target of the selected press profile will be used.



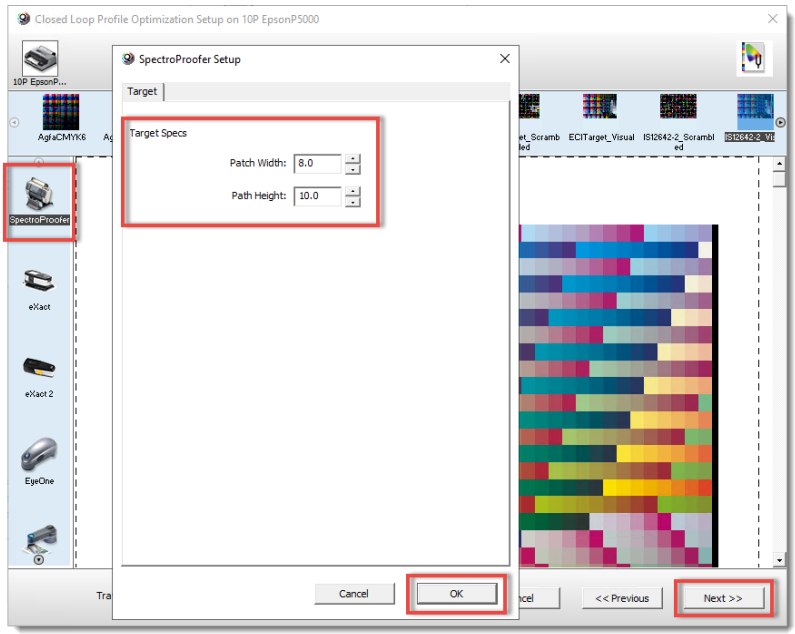
NOTE: The complete list of available profile creation targets will be shown when the target of the output profile cannot be retrieved.

- Target from list: the target can be selected from a list of available profile creation targets.



The selected target remains valid for each iteration and cannot be changed during the successive iterations.

8 Select the measurement device (e.g. SpectroProofer), and double-click to change the target specs:



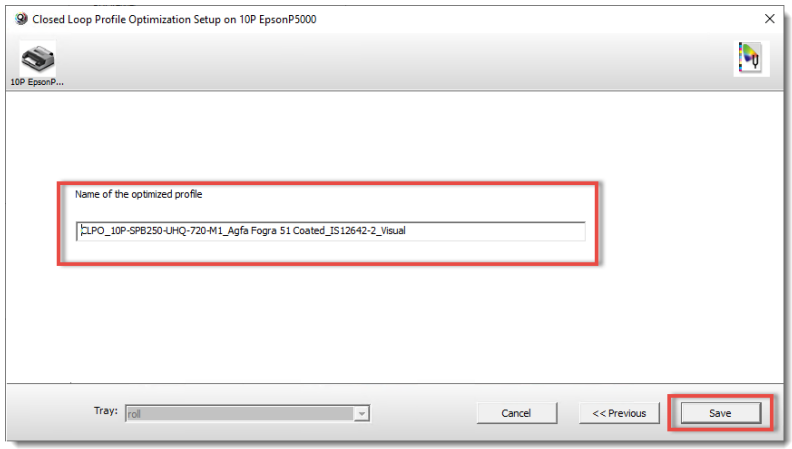
NOTE: Closed loop profile optimization requires a lot of measurements (about 5000 to 10000 patches) so it is highly recommended to use a modern scanning spectrophotometer. Although it is possible with a strip reading spectrophotometer (i1 Pro Handheld), the chances of reading errors are so high that a successful optimization is difficult.

NOTE: The available target parameters depend on the selected measurement device.

9 Click the **OK** button.

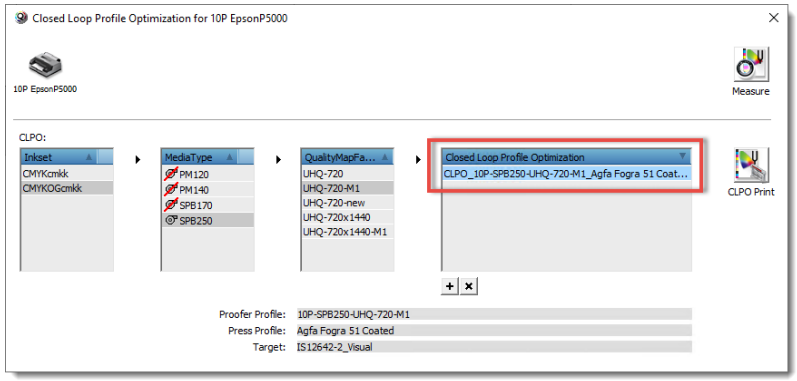
10 Click the **Next** button. The name of the closed loop optimized profile appears.

NOTE: You can customize the profile name, but be sure that it is a clear and understandable name.



11 Click the **Save** button to save the Closed Loop Profile Optimization.

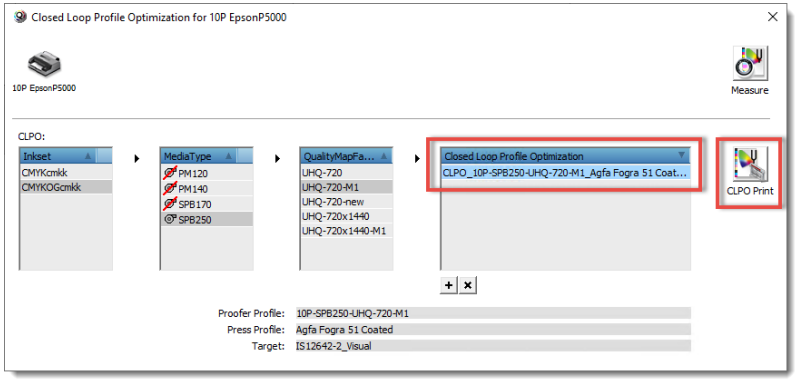
The Closed Loop Profile Optimization is now available in the list:



NOTE: A message appears when the Closed Loop Profile Optimization name already exists. You need to assign a new profile name in order to continue.

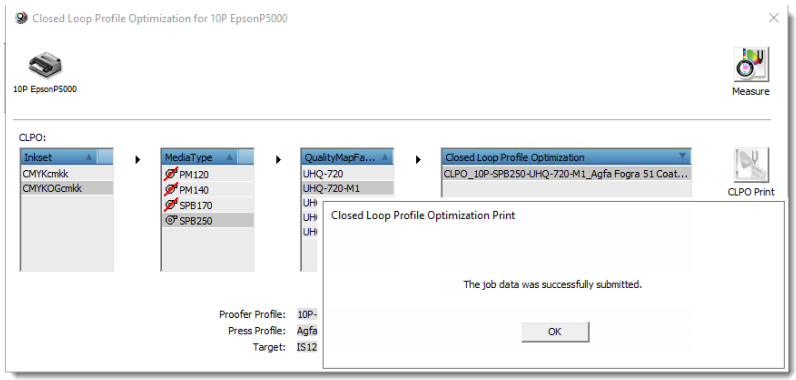
Printing the Closed Loop Target

1 Select the Closed Loop Profile Optimization to activate the CLPO Print button.



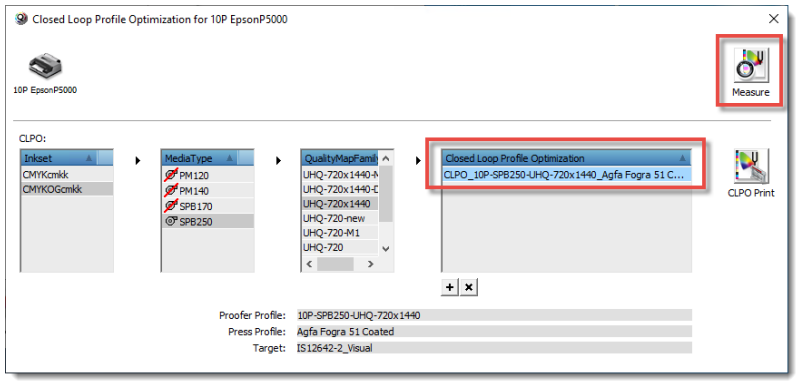
2 Click the **CLPO Print** button to print the target of the first iteration.

The first message indicates the beginning of the first iteration. After successful completion of the task, you will receive the following message.



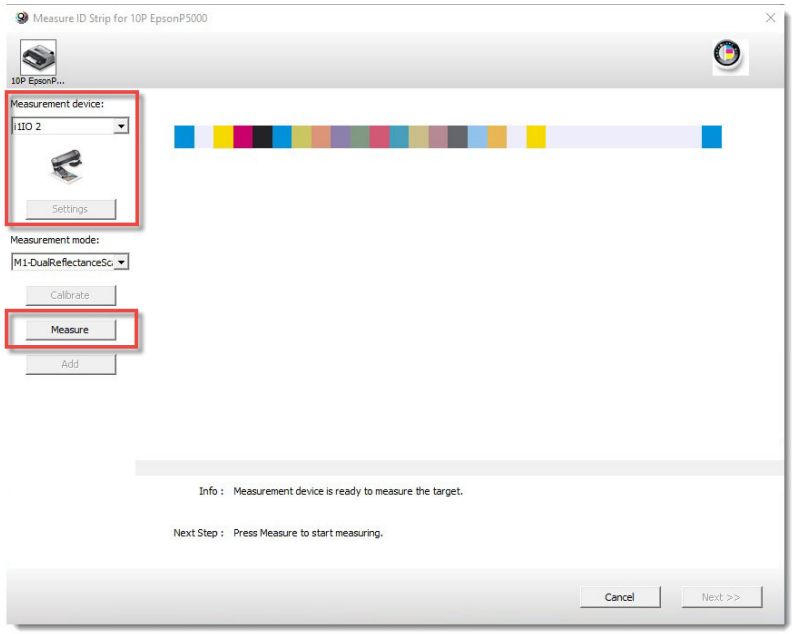
Measuring the Closed Loop Target

1 Select the Closed Loop Profile Optimization to start measuring the closed loop target and click the **Measure** button.

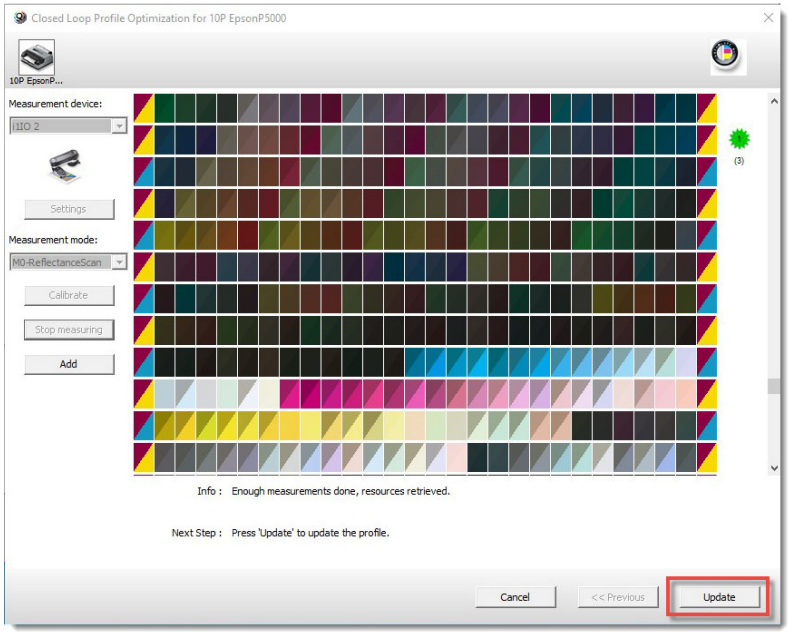


2 Measure the wedge(s) in accordance with the connected measure device.

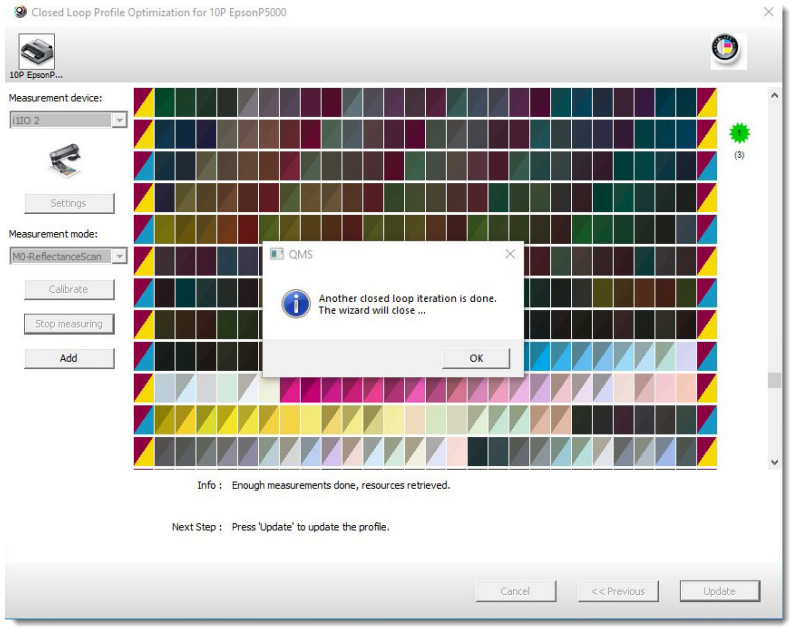
NOTE: Double-click the measurement device if you want to adjust the target specifications. This is measurement device dependent.



3 Once the measurements are completed, click **Update** to update the profile.



4 After the successful completion of the iterations, click **OK** to close the wizard.



NOTE: The number of measurements for the complete target is defined in the Measurements tab of the Preferences by changing the Profile Creation value field.

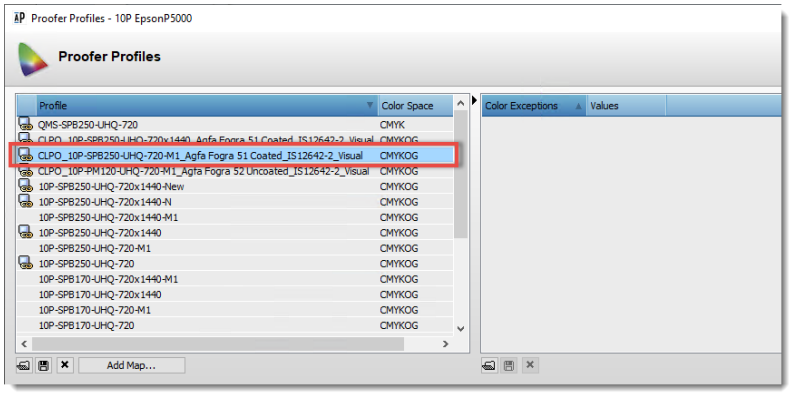
NOTE: You can only use a Closed Loop measurement once. Once applied, the wedge becomes invalid (or when a new print is already completed).The measurement will no longer be available in the SpectroProofer measurements database.

Closed Loop Profile in the Apogee Database

Clicking the **Update** button will update the Closed Loop Profile Optimization.

The first iteration of optimizing the closed loop profile is finished.

The closed loop optimized profile is available in the Profiles resource of the Proofer TP in the System Overview window.



Performing more Closed Loop Iterations

Repeat the Printing, Measuring and Creating sections for each extra iteration cycle.

- Closed Loop Profile Optimization without press profile optimization: It is recommended to perform maximum 3 iterations to obtain a good optimized proofer profile.
- Closed Loop Profile Optimization with press profile optimization: It is recommended to perform maximum 2 iterations to obtain a good optimized proofer profile.

Usage of the Final Closed Loop Profile

Use the optimized proofer profile instead of the original proofer profile in the Apogee Job Tickets and Hot Tickets to obtain a minimum ΔE.

NOTE: If the proofer profile is optimized for a certain press profile than the optimized proofer profile is only valid for color conversions done from the same press profile to the optimized proofer profile. Unless the selected press profile contains a large gamut when based on a Commercial Coated press paper (PSOCoatedv3 or CRPC6) than the optimized proofer profile is also valid for press profiles with much smaller gamuts like press profiles based on Uncoated or Newspaper paper.

NOTE: The optimized proofer profile is valid for color conversions to every press profile when the complete color gamut was optimized (no press profile was selected).

Defining Profile Link Exceptions

Using QMS you can redefine the default Profile Link Exception conditions installed on the Apogee Prepress server for the selected Proofer.

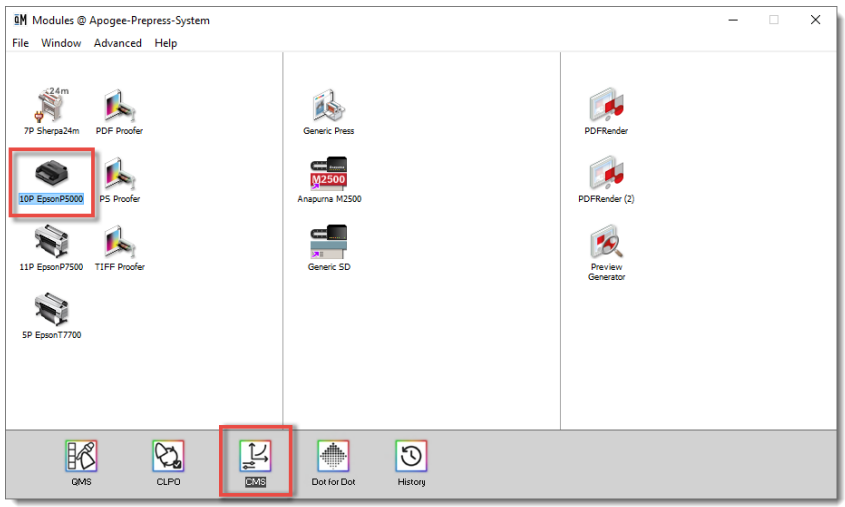
You can create exceptions for:

- 400% CMYK
- Black only (0, 0, 0, x)
- Keep white

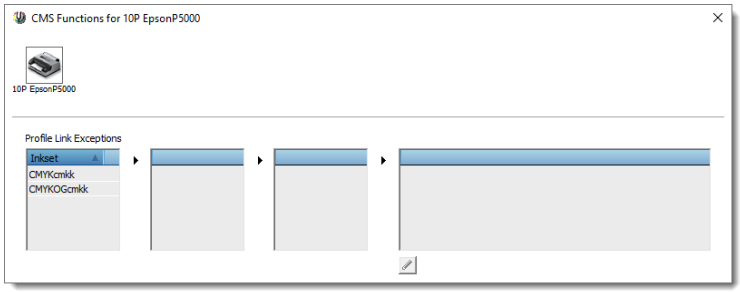
▷ **To define Profile Link Exceptions:**

NOTE: Adding Profile Link Exceptions on Proofers will affect the color accuracy of the color conversions. Therefore, the proof validation will fail in many occasions when using Profile Link Exceptions. Proceed with caution, when carrying out this task.

1 Select a Proofer (e.g. Epson P5000) in the Output section of the modules window.



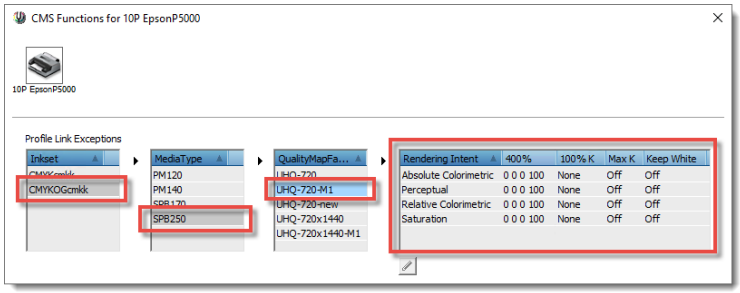
2 Double-click **CMS**. The CMS Functions for Proofer window appears.



3 Select an ink set (e.g. CMYKOGcmkk).The list of media types will appear.

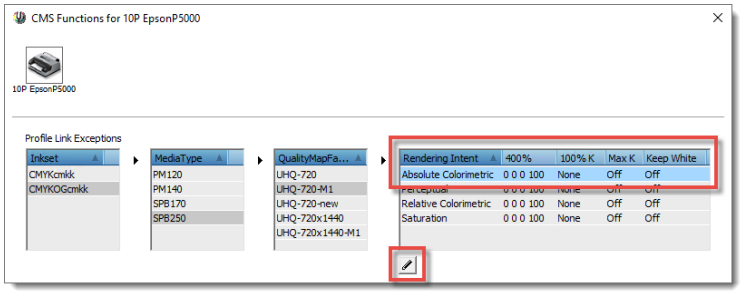
4 Select a media type (e.g. SPB250) and a quality mode (e.g. UHQ-720-M1).

You will now view the render intents available for this quality mode and the exceptions defined for the render intents.



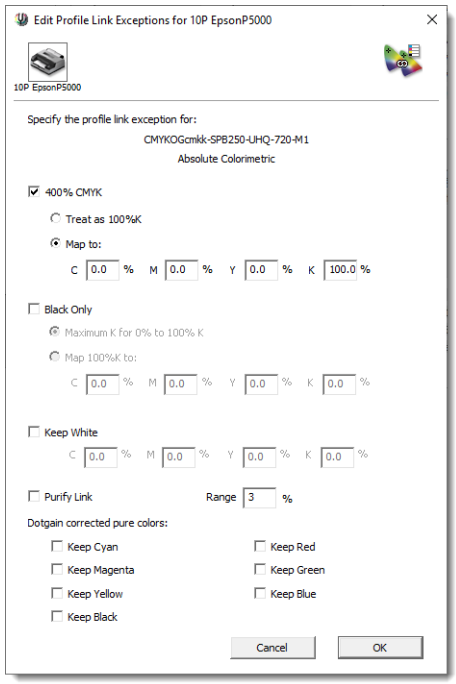
5 Select a Rendering Intent (e.g. Absolute Colorimetric).

The Profile Link Exceptions will be highlighted.



The Pencil icon button  will now be activated.

6 Click the **Pencil icon** button to modify the Profile Link Exceptions. The Profile Link Exceptions window will appear.



The parameters that are filled in are the currently active parameters for the selected Proofer.

7 To define a new value to replace the currently active value for 400% CMYK, select the 400% CMYK check box and choose one of the two options:

- Treat as 100%K.
- Map 400% CMYK to an exception for C, M, Y and K.

8 To define an exception for Black Only, select the Black Only check box and choose one of the two options:

- Maximum K for 0% to 100% K.

  This means that for black and white images as much black ink is used as the color matching allows. So, some CMY can still be used but it will be a minimum.

- Map 100%K to an exception for C,M,Y and K.

9 Select the Keep White check box to send white as CMYK (0,0,0,0) to the Press for the areas which are defined as (0, 0, 0, 0). This to avoid background color simulation of the source profile when the absolute rendering intent is selected. If this option is not selected, dots might be printed in the background.

10 Select the Purify Link check box to keep the colors clean from contamination (0% to the defined radius in %).

11 Select a Pure Color in order to keep these colors clean from contamination throughout the whole range (from 0% to 100%) during the Press-Proofer color conversion. A cyan will only contain cyan after the conversion when the check box is checked here. When unchecked dots of other colors may appear in a Pure Cyan. This is actually normal in a Proofer conversion because a conversion always happens over the device independent color space Lab.

12 Click **OK**. You will now return to the screen where you can see your modifications.

Defining Profile Link Exceptions for PDFRender

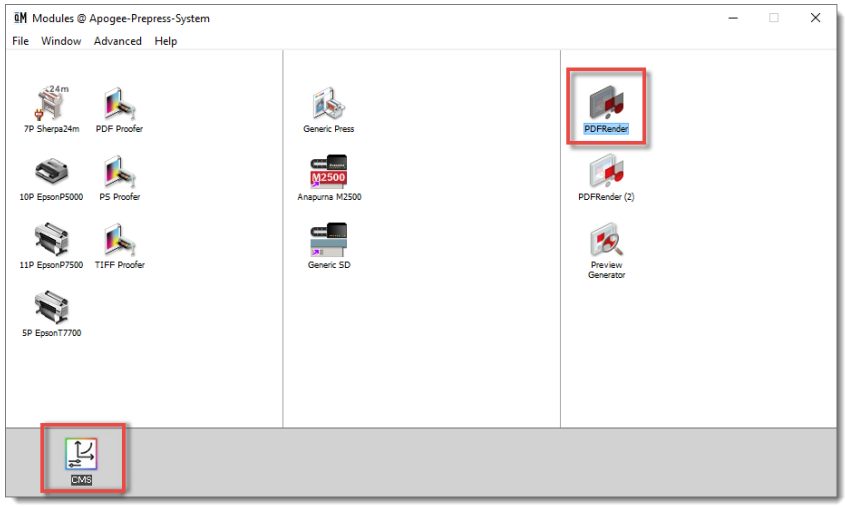
The Profile Link Exceptions of the PDFRender will be used to overrule the behavior of a basic set of CMYK color values during input color management in Apogee Prepress; when the PDFRender converts the CMYK colors from source to Press color space. The source color space can be an embedded profile or a selected profile in the PDFRender color management parameter set. The Press Color Space is defined by the selected Press Profile in the Press Task Processor. The Profile Link Exceptions are Rendering Intent dependent.

The following CMYK colors can be selected in the profile link exception:

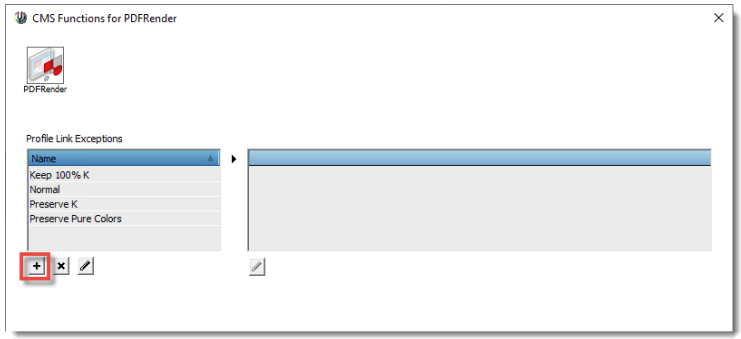
- 400% CMYK (Registration color) can be treated as 100%K or can be overruled with any CMYK combination.
- Black Only (0 0 0 x) can be converted using the max amount K possible, or can be overruled with any CMYK.
- Keep white, means no background will be printed for absolute colorimetric Rendering Intent.

▷ To define Profile Link Exceptions for the PDFRender:

1 In the Processing Column of the QMS Modules screen, click the PDFRender icon.



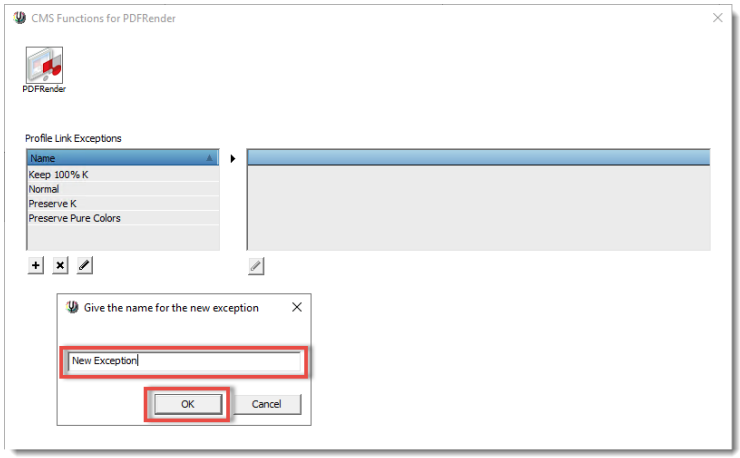
2 Double click **CMS**. The following window appears:



3 Click the + button to enter a new Profile Link Exception File.

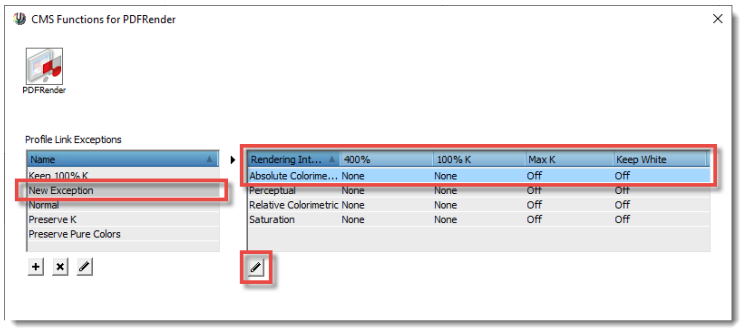
You will be prompted to enter a name for the new Profile Link Exception for the PDFRender Task Processor.

Enter a name for the new exception (e.g. New Exception) and click **OK**.



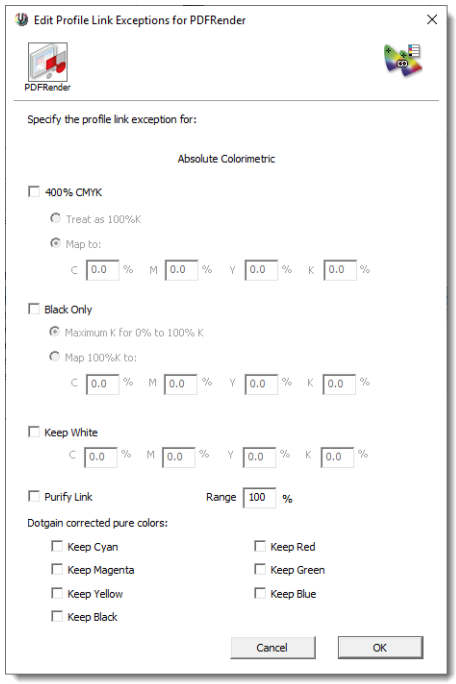
4 The CMS Functions for PDFRender window appears, showing an overview of the exceptions.

Select the newly created Profile Link Exception and a Rendering Intent (e.g. Absolute Colorimetric).



The Pencil icon button  will now be activated.

5 Click the **Pencil icon** button. The Profile Link Exception window for PDFRender appears.



6 To define a new value to replace the currently active value for 400% CMYK, select the 400% CMYK check box and choose one of the two options:

- Treat as 100%K.
- Map 400% CMYK to an exception for C, M, Y and K.

7 To define an exception for Black Only, select the Black Only check box and choose one of the two options:

- Maximum K for 0% to 100% K.

  This means that for black and white images as much black ink is used as the color matching allows. So, some CMY can still be used but it will be a minimum.

- Map 100%K to an exception for C,M,Y and K.

8 Select the Keep White check box to send white as CMYK (0,0,0,0) to the Press for the areas which are defined as (0, 0, 0, 0). This to avoid background color simulation of the source profile when the absolute rendering intent is selected (if this option is not selected, dots might be printed in the background).

9 Select the Purify Link check box to keep the colors clean from contamination (0% to the defined radius in %).

10 Select a Pure Color when the Pure Colors should not be converted via the Profile Link, but need to stay clean from contamination with other colors throughout the whole range (from 0% to 100%). Dot Gain from the profiles are still included in the conversion, so the tint percentages can be different from input, for instance 100C100M can become 98C98M.

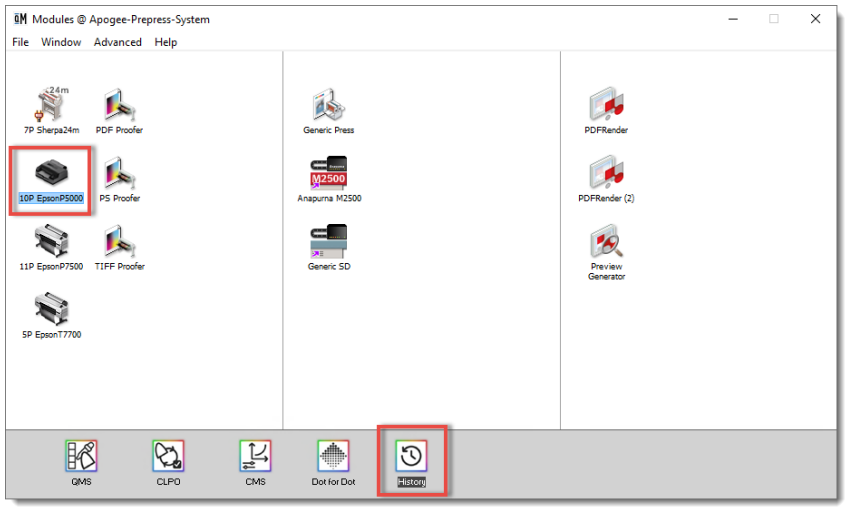
11 Click **OK**. You will now return to the screen where you can see your modifications.

Consulting the QMS History

QMS keeps all measurements, actions, and calibrations in the history database. Next to the proofing validation, this database also includes calibrations, proofer checks, proof to reference, and profiling.

▷ To consult the QMS History

1 Select a Proofer (e.g. Epson P5000)in the Output section of the modules window and double-click **History**.



2 The History window appears.

The left-hand pane displays all measurements in chronological order. The measurements can be filtered on Inkset, Media Types, and Quality.

You can enable and/or disable following actions. Hold the Alt key while clicking one of the buttons to only enable the requested option.

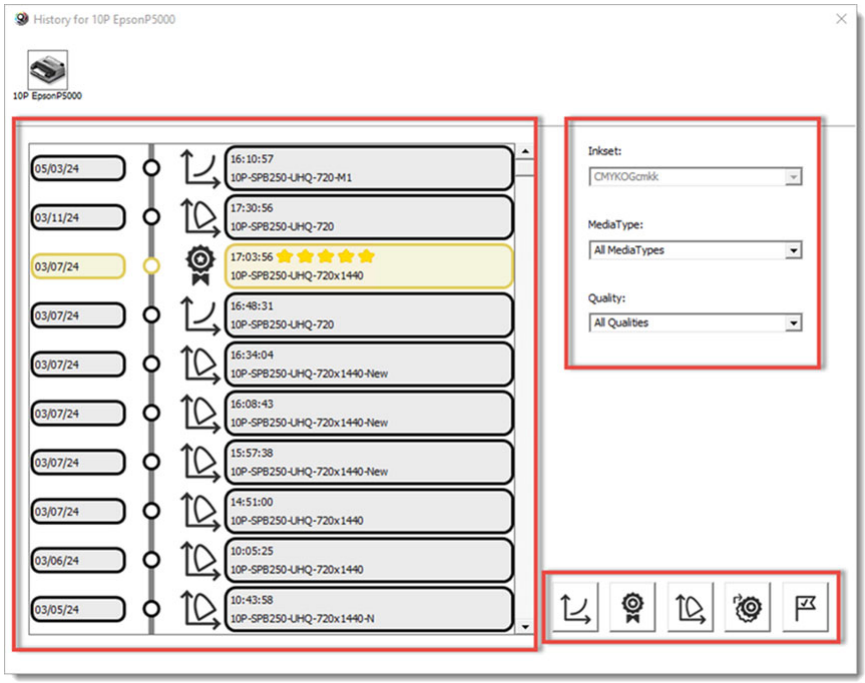
 Calibration

 Proofer Check

 Profile Creation

 Profile Reference

 Validation



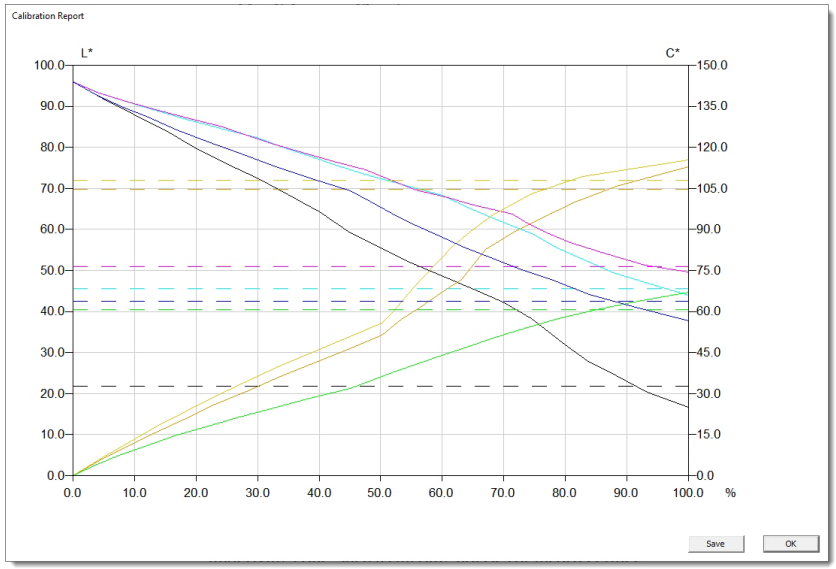
3 Double-click on the measurements/scores to access the details of the entry and open the reports. Refer to Calibration, Proofer Check, Profile Creation, Profile Reference, and Validation Reports.

Calibration

A calibration is an update of the proofer quality to bring it into a controlled state, ensuring that the output is suitable for printing. This process compensates for variations such as fluctuations in media/ink batch and environmental conditions.

1 Double-click on a calibration.

QMS displays the measurement data in Lightness (light to dark) or Chroma (color saturation of yellow/orange).



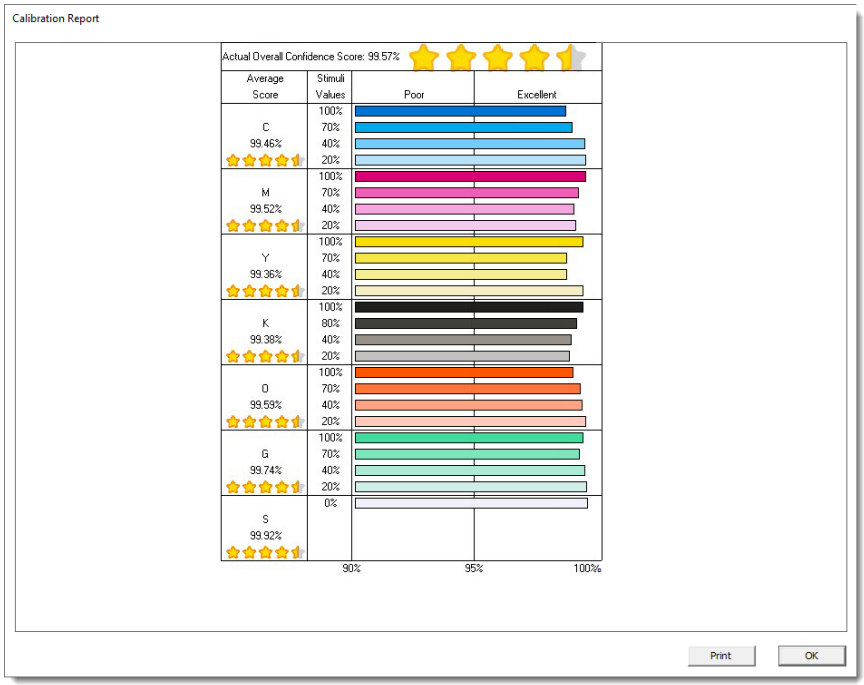
An Epson printer utilizes varying tints and droplet sizes (partial inks) to construct the color from light to dark. A slight decrease in the curve is an indication of the commencement of the lighter partial ink's decline, while the heavier ones begin to increase. Significant decreases are indicative of an underlying issue, such as missing nozzles or incorrect tints.

▷ Proofer Check

A proofer check is a routine that prints a small strip with a limited range of colors. The wedge can be measured to determine whether the calibration is still accurate.

1 Double-click on a proofer check.

QMS opens the proofer check report. The report displays an overall confidence score, as well as per ink and for the media. The values (and number of stars) express how good the output of the printer matches the reference values used as aim values during calibration. Confidence scores below 95% indicate poor calibration status, and should be avoided by recalibrating the proofer.

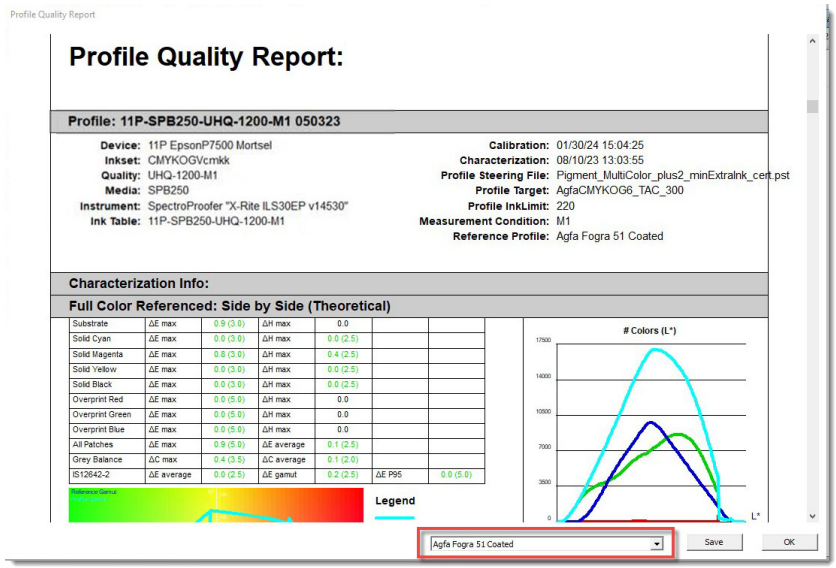


▷ Profile Creation

For each QMS created profile, a quality report will be added into the history database. A quality report is a mathematical evaluation of the proofer profile compared with a press condition (press profile).

1 Double-click on a profile creation.

QMS displays the profile quality report. Select a press profile from the drop-down list at the bottom. The proofer profile is compared with the selected press profile.



Profile Quality Report

The profile quality report enables a comparison of the color gamut of a proofer profile with the press profile. This can be used to predict the adequacy of the proofer profile to accurately reproduce the reference profile.

The following proofer profile's parameters are listed in the details:

- Device: the proofer linked to the proofer profile
- Ink set: inks used
- Quality: resolution and print parameters used

- Media: media type name
- Instrument: measurement device used for measuring the profiling target
- Ink table: calibration used
- Calibration: the time stamp of calibration used to create the profile
- Characterization: the time when the profiling target was measured
- Profile steering file: how a profile has been calculated from the measurements
- Profiling target: measured wedge
- Profile ink limit: additional limitation of the total ink to avoid drying issues and improve measure quality
- Measurement condition: measurement mode of the device
- Reference profile: the profile compared with the proofer profile (press condition)
- Characterization info: side-by-side comparison. A side-by-side comparison is a theoretical absolute colorimetric comparison between the proofer and press profile. The numbers in the table contains color differences between the proofer profile and the press profile based on a virtual IS12642-2 target using the tolerances of the ISO12647-7:2016 Proofing Standard (DE(00)).

Graphics

The same color encoding is used for all graphics:

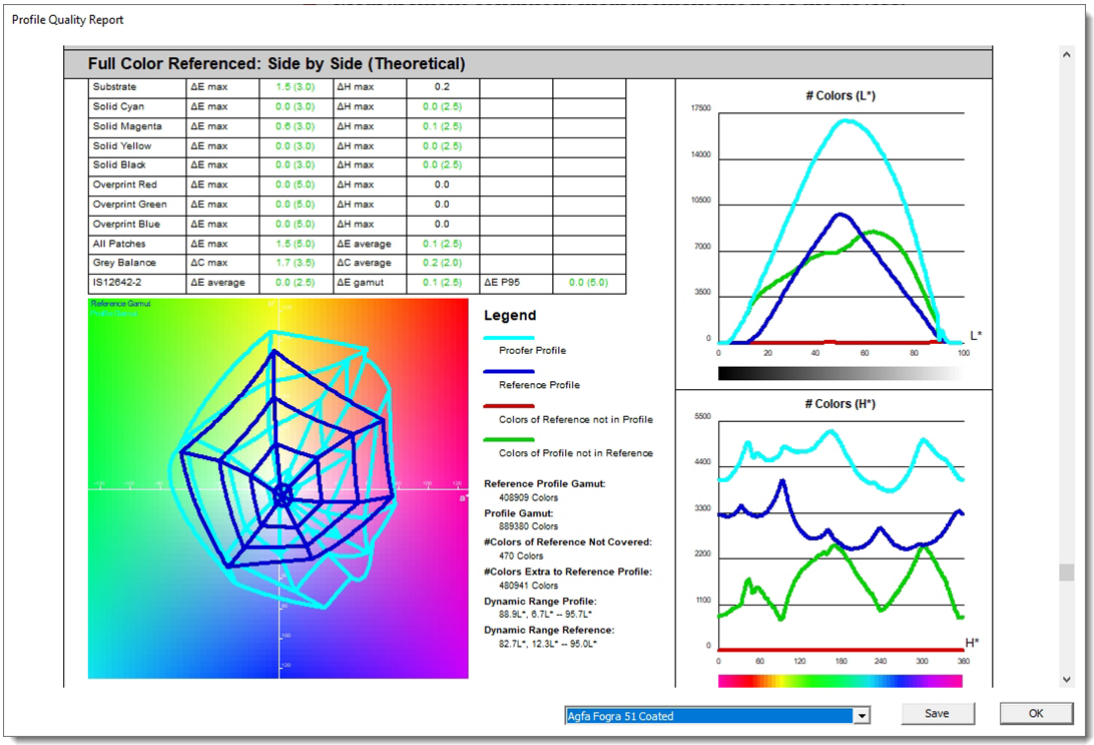
- Cyan: Proofer Profile color
- Blue: Reference colors (Press Profile)
- Red: Colors that are in the Reference Profile, but not in the Proofer Profile
- Green: The color in the Proofer Profile, but not in the Reference Profile.

Graphics on the right side represent the amount of colors for the two profiles:

- The top graphic shows the distribution of the amount of colors (gamut size) from dark (left side) to white. The higher the curve, the higher the amount of color for a given L* (lightness) value. Here, the Green curve represents the amount colors of the Proofer Profile that exceed the gamut of the Press profile per lightness level. The Red curve shows the colors that are missing in the Proofer Profile compared to the Press Profile.

- The lower right graphic shows the distribution of the amount of colors per Hue level (color angle). The Green curve represents the amount colors of the Proofer Profile that exceed the gamut of the Press profile per color hue (angle).

The Spider view (lower left graphic) provides a top-down view of the color gamuts, with the white point of the Proofer Profile at its center. A shifted Blue web (Reference Profile) indicates a tinted substrate, with the "arms" of the web representing the pure and overprinted colors. For a standard Press Profile, these are the primaries Cyan, Magenta, and Yellow, with overprinted colors Red, Green, and Blue, and intermediate steps such as highlights, mid-tones, and shadows. Proofer Profiles may be more complex with additional "arms" representing multicolor inks (e.g., Orange, Green, and Violet) and their corresponding secondary colors. The endpoints are the saturated 100% colors, and ideally, all Blue endpoints should be within the Cyan web, indicating that the saturated colors will fit within the Proofer Profile.

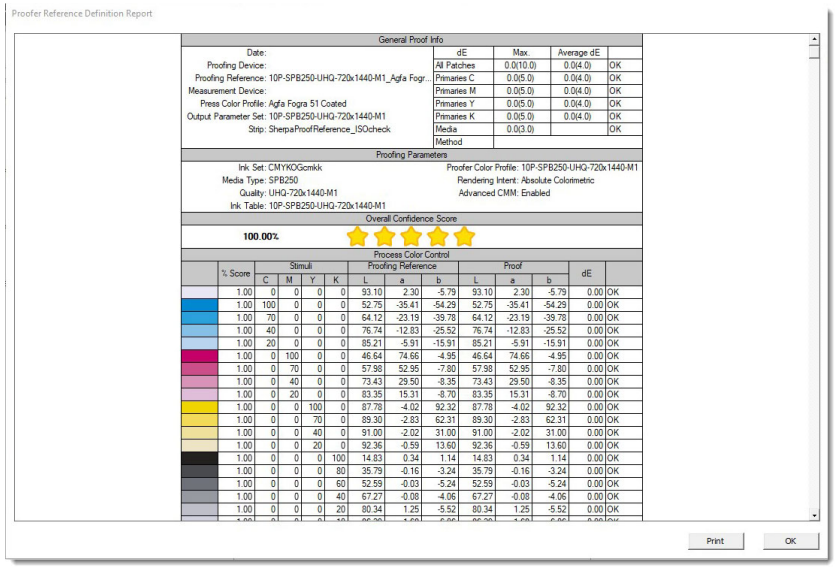

Profile Quality Report
Full Color Referenced: Side by Side (Theoretical)
Substrate ΔE max 1.5 (3.0) ΔH max 0.2
Solid Cyan ΔE max 0.0 (3.0) ΔH max 0.0 (2.5)
Solid Magenta ΔE max 0.6 (3.0) ΔH max 0.1 (2.5)
Solid Yellow ΔE max 0.0 (3.0) ΔH max 0.0 (2.5)
Solid Black ΔE max 0.0 (3.0) ΔH max 0.0 (2.5)
Overprint Red ΔE max 0.0 (5.0) ΔH max 0.0
Overprint Green ΔE max 0.0 (5.0) ΔH max 0.0
Overprint Blue ΔE max 0.0 (5.0) ΔH max 0.0
All Patches ΔE max 1.5 (5.0) ΔE average 0.1 (2.5)
Grey Balance ΔC max 1.7 (3.5) ΔC average 0.2 (2.0)
IS12642-2 ΔE average 0.0 (2.5) ΔE gamut 0.1 (2.5) ΔE P95 0.0 (5.0)
Legend
Proofer Profile
Reference Profile
Colors of Reference not in Profile
Colors of Profile not in Reference
Reference Profile Gamut:
408909 Colors
Profile Gamut:
889380 Colors
#Colors of Reference Not Covered:
470 Colors
#Colors Extra to Reference Profile:
480941 Colors
Dynamic Range Profile:
88.9L*, 6.7L* -- 95.7L*
Dynamic Range Reference:
82.7L*, 12.3L* -- 95.0L*
Colors (L*)
L*
Colors (H*)
H*
Agfa Fogra 51 Coated
Save
OK

Profile Reference

A proof-to-reference test compares a measured wedge with a stored reference in the past.

1 Double-click on a profile reference.

QMS displays the proof to reference report. The proof to reference report is an internal defined standard that compares an original proofer measurement with the current situation. A good proof to reference can be used as a guide for further production whereas and a bad proof to reference score indicates that the proofer profile or calibration needs to be updated.



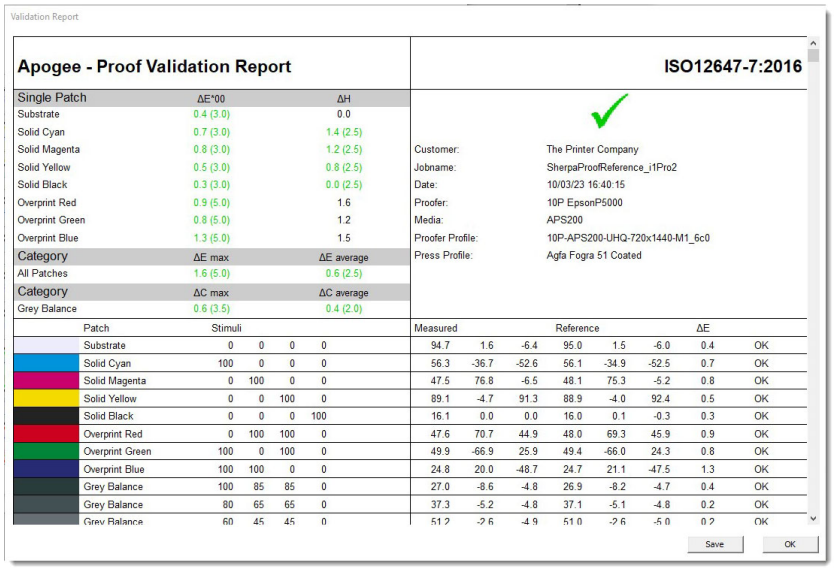
▷ Validation

Apogee can create proofing jobs in which Automatic Proof Validation is enabled. In addition to being printed as a report on the ApogeeProof job, the results of these inline proof validations (using an Epson SpectroProofer) are saved in the QMS database and accessible through the QMS History option.

In order to determine whether all parameters are within the tolerance, as per the ISO12647-7 standard, a small strip is printed and measured during a proof validation. The report includes the engine, paper, quality, press profile, and color management setup, and it is compared with the reference press profile.

1 Double-click on a validation.

QMS displays the validation report. Validations that are successful are marked as green, and those that are unsuccessful are marked as red.


Validation Report

Apogee - Proof Validation Report — **ISO12647-7:2016**

Single Patch	ΔE*00	ΔH
Substrate	0.4 (3.0)	0.0
Solid Cyan	0.7 (3.0)	1.4 (2.5)
Solid Magenta	0.8 (3.0)	1.2 (2.5)
Solid Yellow	0.5 (3.0)	0.8 (2.5)
Solid Black	0.3 (3.0)	0.0 (2.5)
Overprint Red	0.9 (5.0)	1.6
Overprint Green	0.8 (5.0)	1.2
Overprint Blue	1.3 (5.0)	1.5
Category	ΔE max	ΔE average
All Patches	1.6 (5.0)	0.6 (2.5)
Category	ΔC max	ΔC average
Grey Balance	0.6 (3.5)	0.4 (2.0)

	Customer:	The Printer Company
	Jobname:	SherpaProofReference_i1Pro2
	Date:	10/03/23 16:40:15
	Proofer:	10P EpsonP5000
	Media:	APS200
	Proofer Profile:	10P-APS200-UHQ-720x1440-M1_6c0
	Press Profile:	Agfa Fogra 51 Coated

	Patch	Stimuli				Measured			Reference			ΔE	
	Substrate	0	0	0	0	94.7	1.6	-6.4	95.0	1.5	-6.0	0.4	OK
	Solid Cyan	100	0	0	0	56.3	-36.7	-52.6	56.1	-34.9	-52.5	0.7	OK
	Solid Magenta	0	100	0	0	47.5	76.8	-6.5	48.1	75.3	-5.2	0.8	OK
	Solid Yellow	0	0	100	0	89.1	-4.7	91.3	88.9	-4.0	92.4	0.5	OK
	Solid Black	0	0	0	100	16.1	0.0	0.0	16.0	0.1	-0.3	0.3	OK
	Overprint Red	0	100	100	0	47.6	70.7	44.9	48.0	69.3	45.9	0.9	OK
	Overprint Green	100	0	100	0	49.9	-66.9	25.9	49.4	-66.0	24.3	0.8	OK
	Overprint Blue	100	100	0	0	24.8	20.0	-48.7	24.7	21.1	-47.5	1.3	OK
	Grey Balance	100	85	85	0	27.0	-8.6	-4.8	26.9	-8.2	-4.7	0.4	OK
	Grey Balance	80	65	65	0	37.3	-5.2	-4.8	37.1	-5.1	-4.8	0.2	OK
	Grey Balance	60	45	45	0	51.2	-2.6	-4.9	51.0	-2.6	-5.0	0.2	OK

Save OK

CHAPTER 5

Tips and Tricks

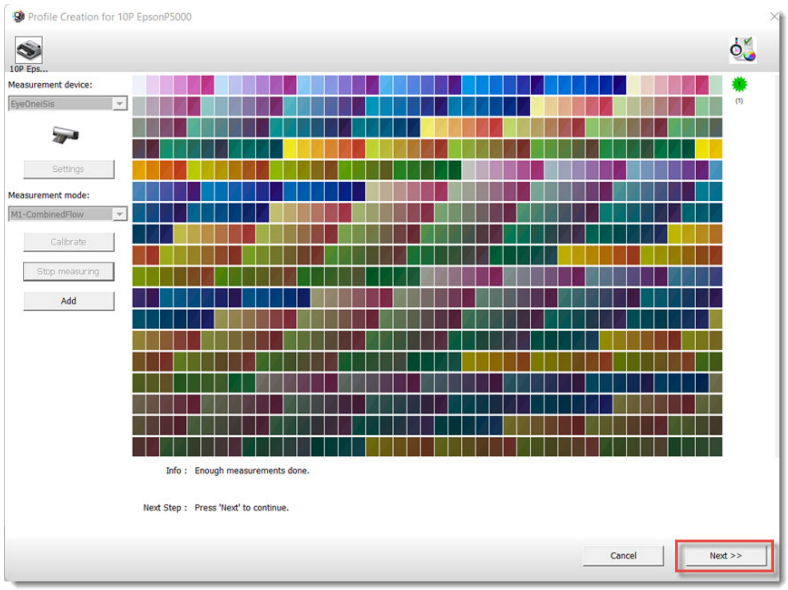
This chapter contains information to help you understand and solve issues that may arise when using QMS.

Delete Measurements

This option allows to delete the last Strip measurement, all Strip measurements, or all measurements, when you complete measuring a Standard Profile Creation Target.

▷ To delete the last Strip measurement(s):

1 After the measuring is completed, and the system has enough information, the Next button becomes available.



In order to be able to delete the last Strip measurement, all Strip measurements or all measurements, right-click on a Strip and select your choice:

- Delete Last Strip Measurement: click this option if you want to delete the last measurement of the selected Strip.
- Delete All Strip Measurements: click this option if you want to delete all measurements of the selected Strip.
- Delete All Measurements: click this option if you want to delete all measurements of the complete Target.

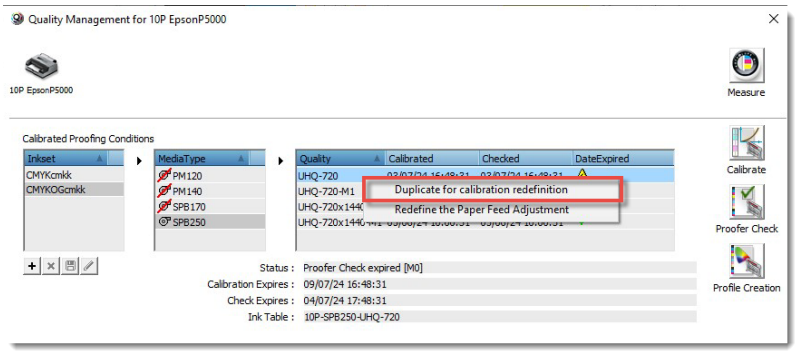
NOTE: See also Working with Proofer References on page 86.

Duplicate for Calibration Redefinition

This option allows to redefine the calibration reference data. This can be used to change the measurement mode, but it's also helpful if a custom media's Proofer Check fails.

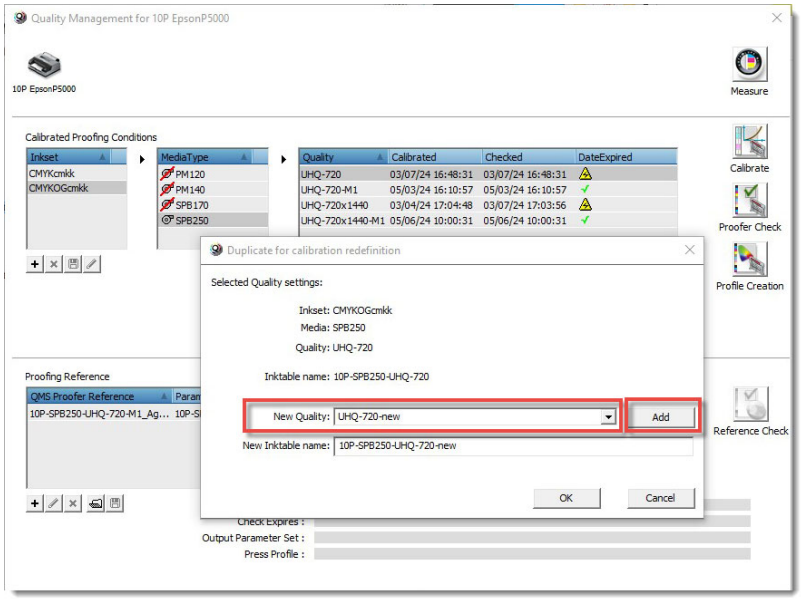
▷ To duplicate for Calibration redefinition:

1 Context-click on the quality (e.g. UHQ-720) and select **Duplicate for calibration redefinition**.

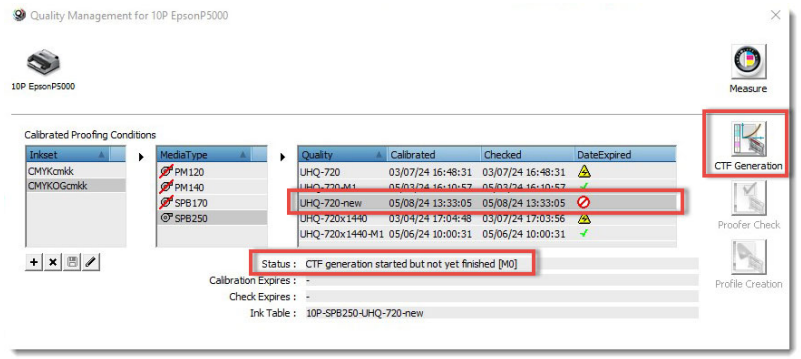


2 Duplicate for calibration redefinition window appears. Select a new quality from drop-down list or click **Add** to define a new quality.

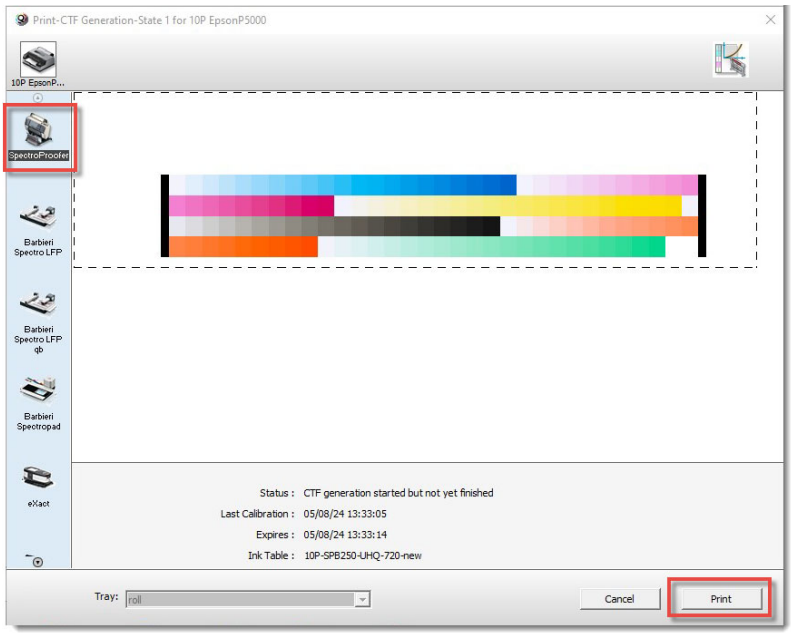
A new Ink table name will be automatically generated. You can also assign a new (unique) name. Click **OK**.



3 A new quality mode has been added. Click the **CTF Generation** button to complete the initial calibration.



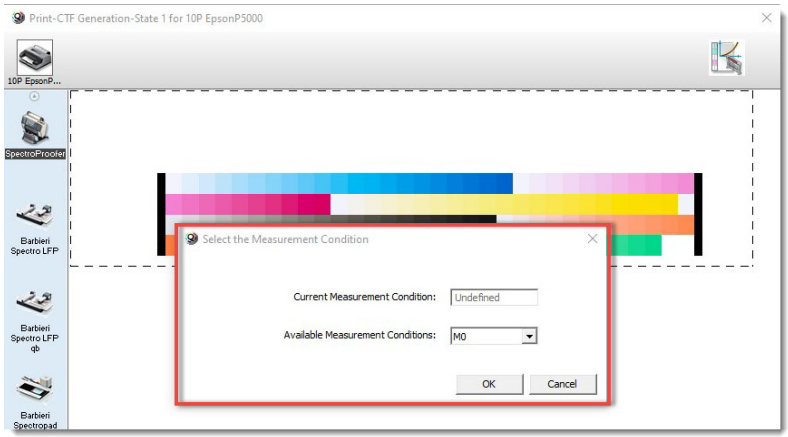
4 Print-CTF Generation-State 1 window appears. Select a measurement device (e.g. SpectroProofer) and click **Print**.



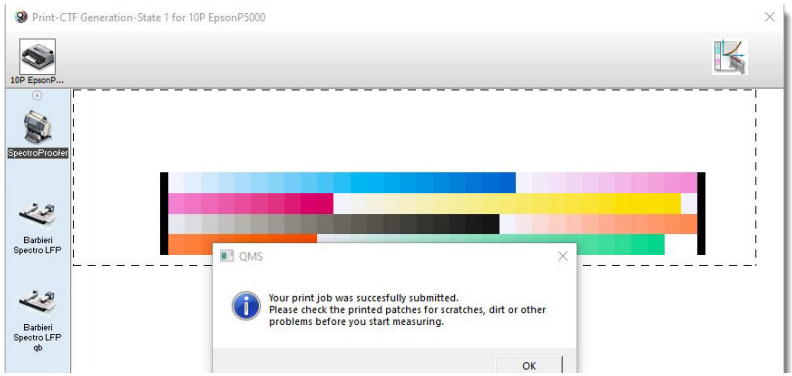
NOTE: QMS will use same color splitting settings from the original quality, but it will replace the aim values for the end points (inklimits) with the measurements of the newly created quality. This will create a new quality that can be calibrated for actually used printer/media and quality mode combination.

5 Select an available measurement condition from the drop-down list and click **OK.**

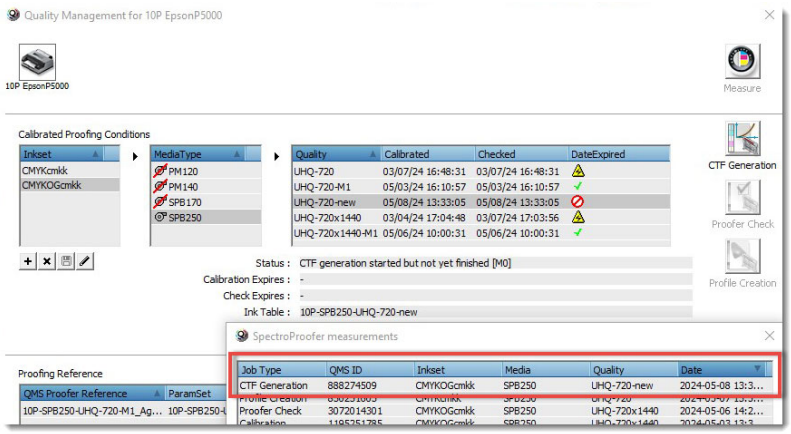
NOTE: Depending on the measurement device, the measurement condition must be set at the time of print (SpectroProofer) or measurement.



6 The print job will be submitted. Click **OK** and then **Measure** again to measure the chart in the Quality Management view.

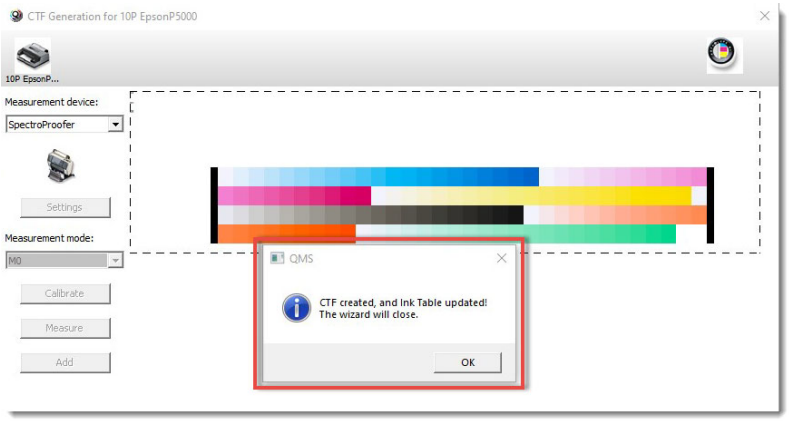


In case of measuring with Epson SpectroProofer, the measurement list will be displayed. Select the matching file to continue.

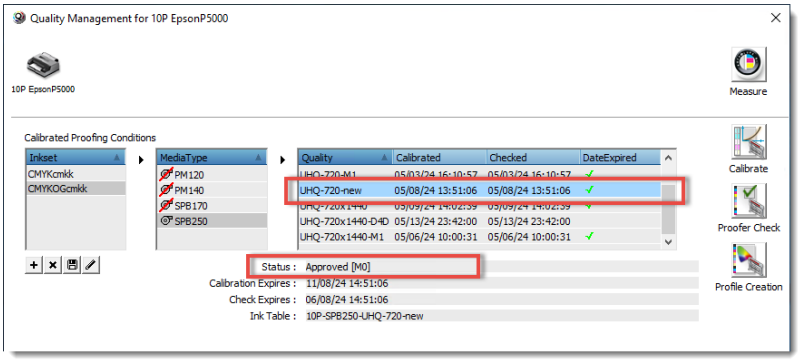


7 CTF Generation window appears. Click **Save** to accept the CTF and new Ink table as valid reference resources for upcoming calibration.

8 CTF file has been created and Ink table has been updated. Click **OK** to close the wizard.



The status has been approved, and the ink table has been updated.



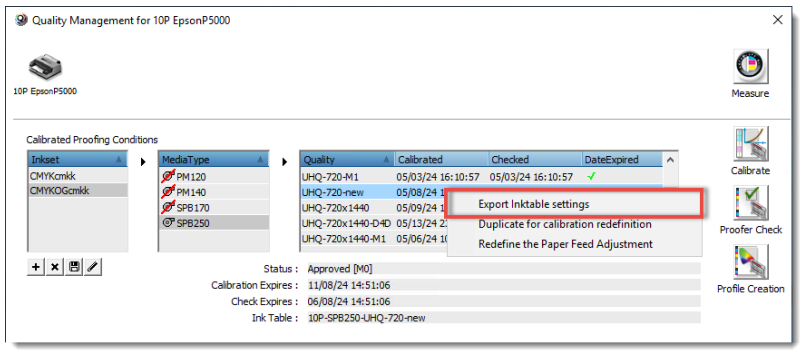
Export Ink Table Settings

This option allows to export Ink table settings.

NOTE: Exporting Ink table settings is not possible with default qualities of Apogee/QMS, only custom made qualities can be exported.

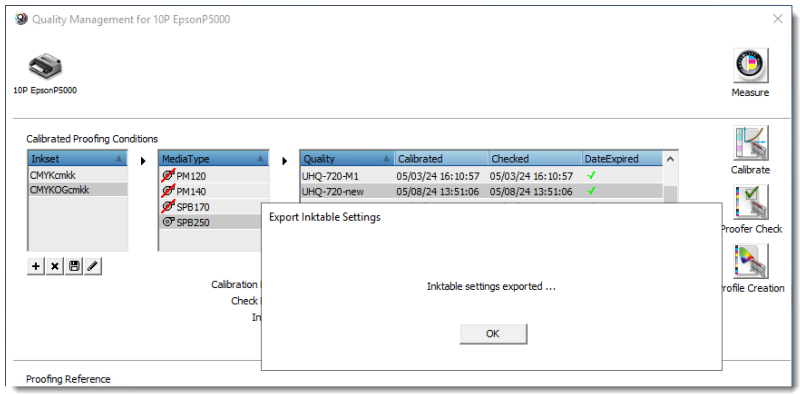
▷ To export Ink table settings:

1 Context-click on the quality (e.g. UHQ-720-new) and select **Export Inktable settings**.



2 In the Save As dialog, choose the location where you want to export the Ink table settings and click **Save**.

Ink table settings has been exported.



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