



HP Latex printers

TECHNICAL DOCUMENT

Color matching between an HP Latex 300 Series printer and an HP Latex 3000 Series printer

There are some end-users with work environments comprised of multiple platforms running HP Latex ink. In that instance, a common question surrounds how to create, use and share profiles from one device to another.

This article will help clarify that subject, and get you started on the path to success.

Begin first with the knowledge that despite the fact that all the generation 3 printers share the same ink, this doesn't mean that the color output is necessarily the same. There are multiple factors that contribute to the final color observed on the media: dot positioning of media of each color, speed, and drop weight to name a few. Every printer family, the HP Latex 3000 series for instance, has a printing engine designed to maximize overall performance at every speed, and this means that, even when using the same amount of ink, colors are slightly different among printers of different families.



Latex 300 Series and Latex 3000 Series Printers

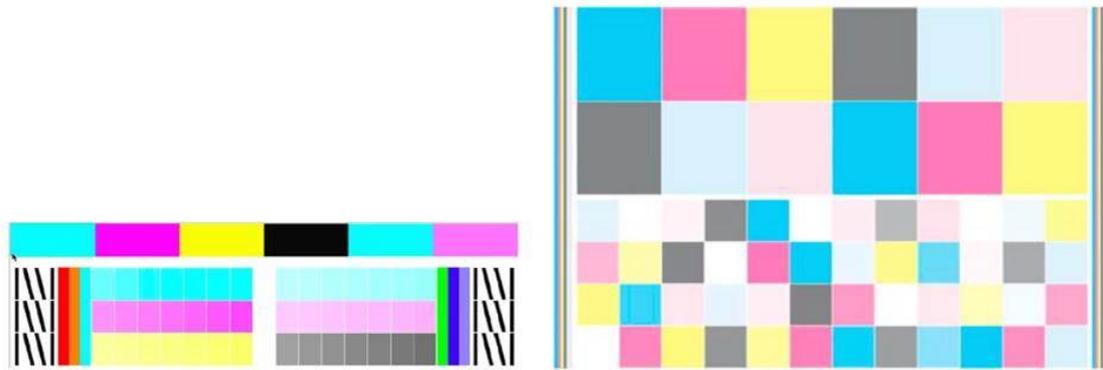
But there is still a way that a Latex 300 series printer can be used to closely match, or even work as a color proofer for an HP Latex 3000 Series printer.

There are quite a few steps that need to be followed and the process is dependent on the RIP being used. Because the steps are RIP specific, step-by-step instructions should be acquired by end-users, who should refer to their RIP documentation. Nevertheless, it is possible to describe the process in broad terms, which you will find below.

In this workflow, the HP Latex 3000 Series printer is the target printer (or *master*) with the objective being having the 300 series printer simulate the printing behavior of the master. We usually recommend our customers use, as master, the printer by which they will produce the most volume, and then use the other printer as the *emulator*.

Keep these things in mind:

- An ICC profile will need to be created for each printer using the same external spectrophotometer and the same software for both.
- The printers should be calibrated/linearized periodically and, of course, before the ICC profiles are created, meaning: the media you are working on to emulate needs to be, in its color calibration status, "ready." Otherwise, you should run a color calibration prior to creating the ICC file.

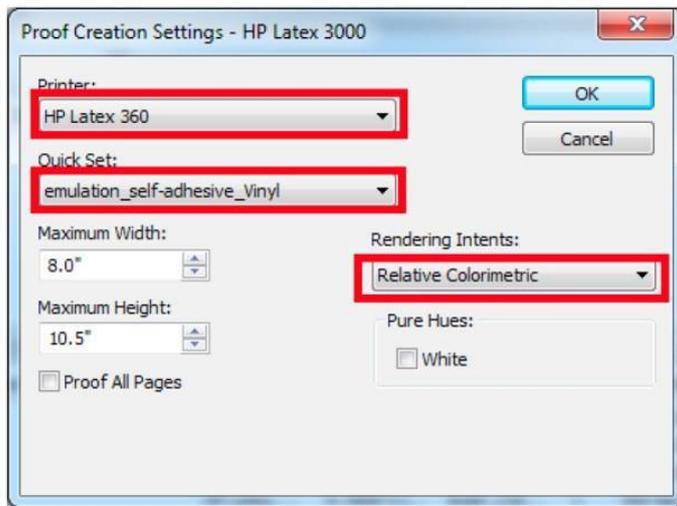


Color Calibration patterns for the Latex 300 Series and Latex 3000 Series Printers

- The capability of matching will be valid for just one specific condition (media, ink limit and print mode) of the target printer. This means that if you need to emulate the master for multiple applications, this process will have to be repeated for every media and print mode you want to use as an emulation.
- Using the same substrate in both the target printer and the proofer is highly recommended.
- The gamut volume of the emulator has to be bigger than the color gamut of the Master. So you need to pick a print mode with at least a 20% higher ink limit on the emulator than on the master. For example, if your production print mode for your HP Latex 3000 series is 6p 6c 100%, you would have to pick 12p 120% for your HP Latex 300 series.

With all that in mind, here are the steps to be followed:

1. Set up the Latex 3000 series printer with the media that will be used, with a baseline set of printer settings: printheads checked and cleaned and verification of a good printhead alignment gotten.
2. Color calibrate the target printer from the IPS (internal print server). If the media cannot be calibrated by the printer (as in the case of backlit media), the calibration should be performed from the RIP.
3. Generate characterization of the printer from the RIP, including generating an ICC profile (refer to the RIP documentation for specific instructions). These steps complete the process of creating the master preset and configuring the color information that the 300 Series printer will utilize.
4. Set up the HP Latex 300 series printer with the same media that will be used for emulation, with the same adjustments to substrate settings. Verification of proper printhead alignment should also be performed on the emulator.
5. Color calibrate the proofer baseline from the printer's front panel. If the media cannot be calibrated by the printer (as in the case of backlit media), the calibration should be performed from the RIP.
6. Generate the color characterization of the printer from the RIP media preset and an ICC profile of the target printer baseline as well (refer to your RIP's documentation for specific instructions).
7. Once both printers have been profiled, specific instructions for setting up the proofing workflow will be found in the documentation of the RIP used in your workflow.



Some of the color-matching workflow, as seen in Onyx (left) and Caldera (right)

8. Keep in mind that periodic printer calibration will be required, and whenever a color deviation is observed, the printer should also be calibrated/linearized. If a calibration does not bring the printer back to its original conditions, please consider re-creating its ICC profile for the media and print mode. In the case that the target printer ICC has been re-created, please save it in the Color Management settings of the proofer printer again.
9. Also note that this process is only effective for individual media types and print quality modes. The steps will need to be repeated for alternative media and/or print quality modes.