

Traffic signage tiling performance



HP Latex 700 and 800 Printer Series

Description

The aim of this document is to share the latest changes to the traffic signage OMS and the length repeatability specification for this application.

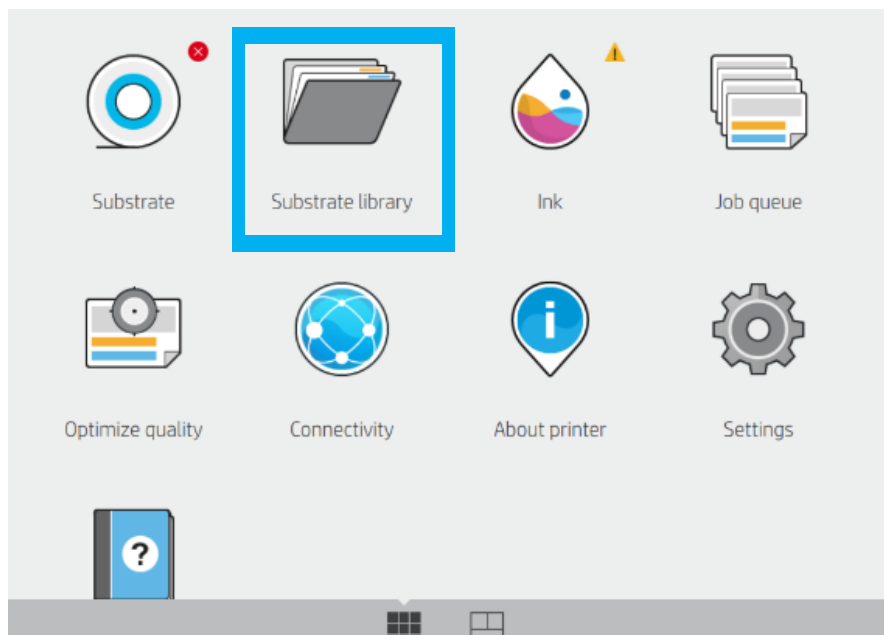
Traffic signage OMS update

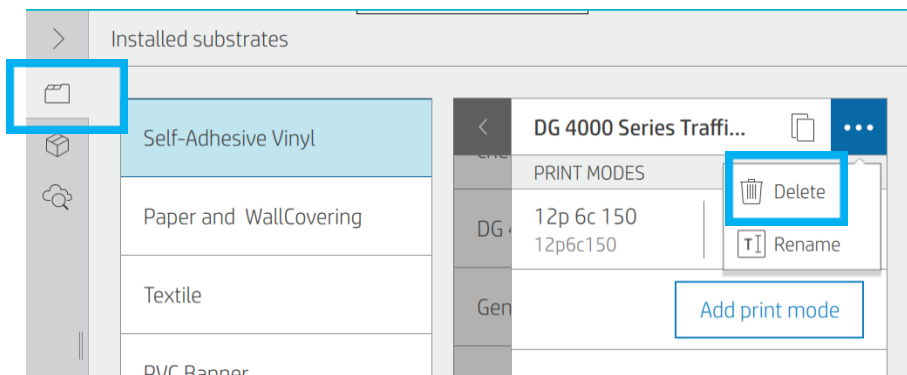
The traffic signage OMS published in the media locator (3M DG 4000 Traffic Colors v3, 3M 3930 Traffic Colors v3, 3M Temporary Traffic black only) has been updated with a series of changes to optimize the performance length repeatability for tiling application. The modifications made are the following:

- Media set as not navigable by OMAS+ (OMAS+ disabled)
- (Forward) input tension = 15 N/m
- Backward input tension = 30 N/m (internal setting, not actionable by user in the control panel)
- Take-up-reel tension mode: do not apply tension

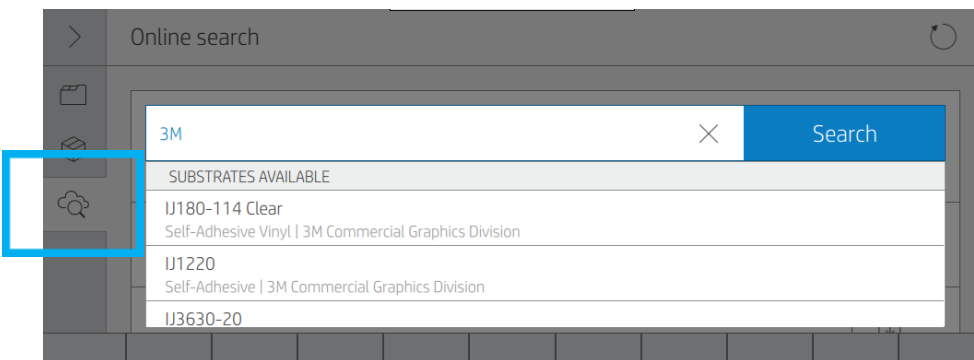
For these changes to apply, the OMS needs to be downloaded and installed again. Follow these steps to do so:

1. Delete any previous version of the OMS installed in the printer from the Substrate library menu.





2. Download it again from the Online Search tab in the Substrate library menu.



3. Search for the correct substrate and install.

Traffic signage performance length repeatability for tiling application

For all tips on how to print traffic signage applications, see the Traffic Signage Cookbook by following this [link](#).

To achieve the best performance length repeatability, these steps must be followed before starting the tiling job:

1. Load the media. See page nine of the Traffic Signage Cookbook for more details on this process.
2. Perform media-advance calibration:
 - a. Edit the print mode in your substrate.
 - b. Click on Advanced Settings.
 - c. On Substrate-Advance Calibration, click on Print plot.
 - d. Identify the right value (lightest and most uniform column).
 - e. Introduce the value.

Substrate " DG 4000 Series Traffic Colors v3 " : edit print mode

Ink density 150 % >

Curing temperature (from 70 to 115 °C)
If ink is not cured, increase temperature. If substrate deforms, decrease temperature. 90

Vacuum (from 0 to 100 mmH2O)
If substrate suffers from smears or lifts from print zone, increase vacuum. If vertical banding or substrate not advancing, decrease vacuum. 35

Inter-pass delay offset (from 0 to 1550 ms)
Recommended for heat-sensitive substrates. If substrate deformation and/or smears occur, increase delay and decrease curing temperature. If ink is not cured, increase delay or curing temperature. 0

Advanced settings ↗

Advanced settings

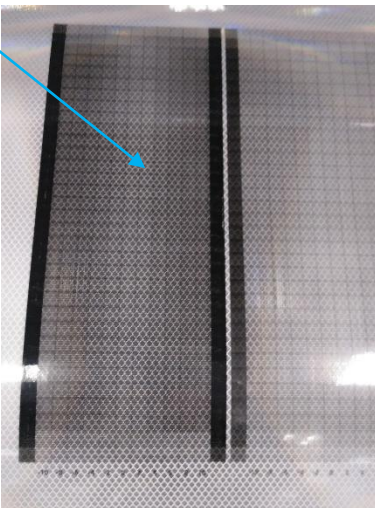
Automatic movements during cool-down to avoid substrate overheating and deformations, especially in heat-sensitive substrates. Disable for manual cutting. ☐

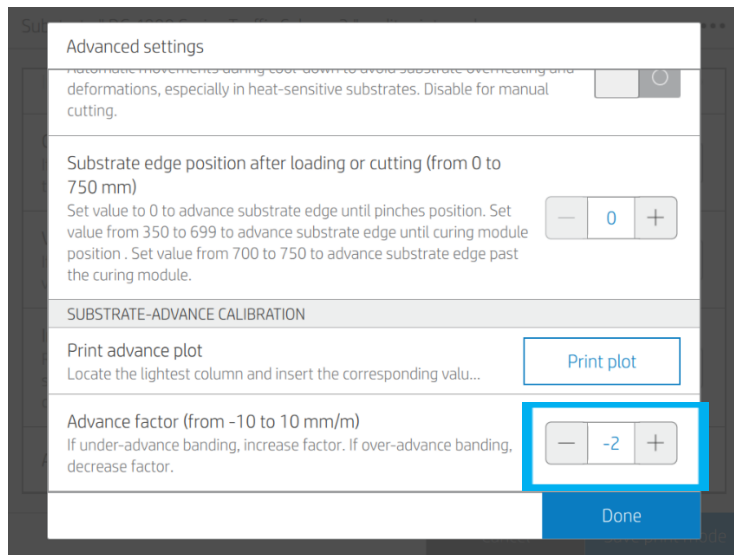
Substrate edge position after loading or cutting (from 0 to 750 mm)
Set value to 0 to advance substrate edge until pinches position. Set value from 350 to 699 to advance substrate edge until curing module position. Set value from 700 to 750 to advance substrate edge past the curing module. 0

SUBSTRATE-ADVANCE CALIBRATION

Print advance plot
Locate the lightest column and insert the corresponding value...

Advance factor (from -10 to 10 mm/m)
If under-advance banding, increase factor. If over-advance banding, decrease factor. -2





3. Total length accuracy adjustment: The length of the tiles may not exactly match the original size of the job, even if they are consistent from tile to tile. This variation in size can be compensated for using a scale factor in the RIP:
 - a. Rip and print a first-meter stabilization plot and a sample of a tile.
IMPORTANT: Both images must be ripped together as one single job and be printed with the print mode that will be used in the tiling job.
 The first-meter stabilization plot can be any image of one linear meter length; any job that won't be used for tiling or a low ink density image.
 - b. Measure the sample tile and compare the length with the original image size.
 - c. Apply the scale factor in the RIP accordingly.
 - d. This total length accuracy adjustment is only required the first time this specific media is printed.
4. Printing the tiling job: Once the media has been characterized and a scale factor has been chosen, you can proceed to print the complete tiling job.
 - a. Connect the substrate to the TUR and calibrate the TUR. See pages 9 and 10 of the Traffic Signage Cookbook for tips on how to attach the TUR.
NOTE: The TUR tension mode is "Do not apply tension", which simulates free-fall printing.



- b. Prepare the job: rip a first-meter stabilization plot together with the complete tiling job. This plot is required every time a tiling job is printed. Then flip odd tiles using the RIP feature.
- c. Print the first-meter stabilization plot with the tiling job.

NOTE: A maximum tiling length deviation of +/- 0.5 mm/m is to be expected if the previous tips are followed.

NOTE: With future FW releases PLS_30_22_XX.X, the first-meter stabilization plot will only be required once at the beginning of every roll.

NOTE: If the first-meter stabilization plot is not printed, a maximum tiling length deviation of +/- 1mm/m is expected.

NOTE: If the final application is not tiling, these additional steps do not need to be applied. If this is the case, the media feed accessory can be used to minimize media waste, and the stabilization plot is not required. See the Traffic Signage Cookbook for more information.
