

# Print Control Wizard

How to Evaluate the Pixelboost Steptest

# 1. Evaluate the Pixelboost steptest

The Laser will not open the LAMS completely if it is only being used with the nominal laser power (e.g.  $3.2 \text{ J/cm}^2$ ) when imaging very small elements (like the single pixel MicroCells e.g. MCWSI or MG34). Thus more laser power is being needed and used. It is being said that these Pixel are being boosted. Depending on the actual situation (Imager, platemaking as well as printing) the amount how much more power is needed is different.

The Pixelboost need to be adjusted for three aspects:

1. No trailing edge.
  - The trailing edge is an area without ink close to the edge of a solid. This becomes extremely relevant when printing barcodes.
2. Smooth ink laydown
  - The ink may lay cloudy or uneven. This is to be avoided.
3. SID (Solid Ink Density)
  - MicroCells are used to increase the SID

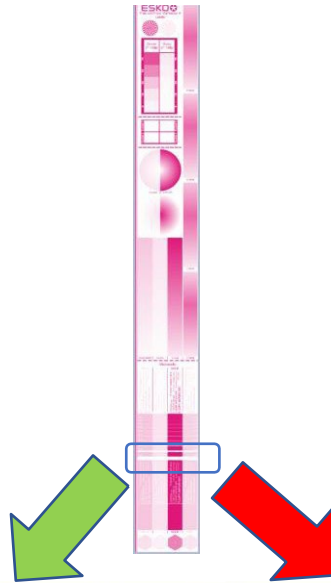
This need to be done for MCWSI as well as MG34 even if only one type of MicroCell is being used. These are independent parameters for the CDI.

The pixelboost steptest has been repeated multiple times and each step need to be checked according to the criteria described in the following chapters.



## 1.1 Trailing edge

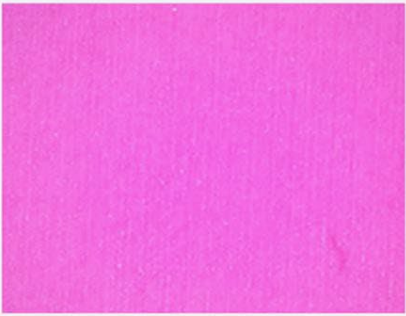
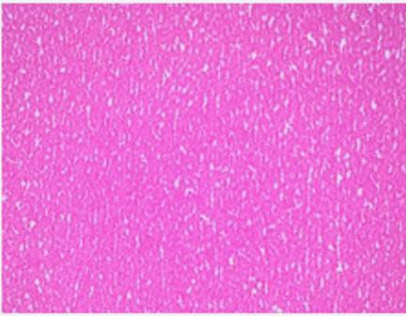

Usually the lower the Pixelboost value the less the trailing edge becomes visible. This is opposite for the SID. If a trailing edge occurs this is a criterium not to use this pixelboost value.



| Trailing Edges  |  |
|---|--|
| Ok  | Not ok   |
|  |  |

## 1.2 Smooth ink laydown

An essential criterium is the smoothness of the ink laydown. A solid should appear even (no clouds) as well as closed surface covered with ink (no pinholes). If this is not the case this is a criterium not to select this Pixelboost value.

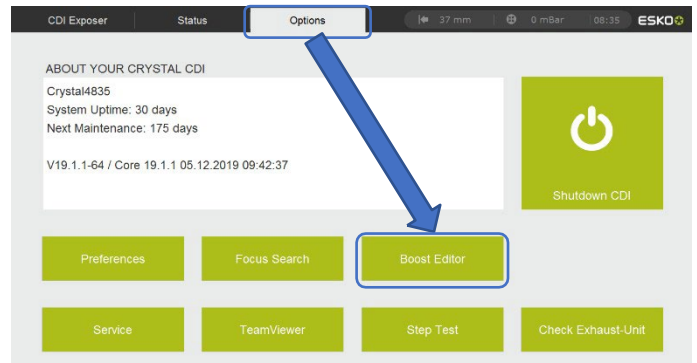
| Full tone surface homogeneity  |   |  |
|--|---|--|
| Ok   | Not ok<br>Pinholes  | Not ok<br>Mottling   |
|  |  |  |

## 1.3 SID

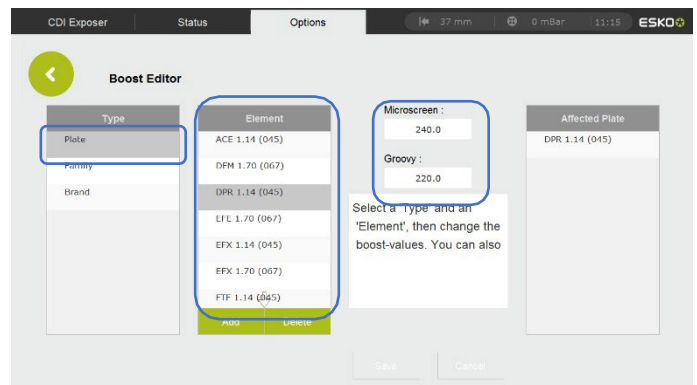
After excluding pixel boost settings from the possible selection due to trailing edge and non-smooth ink laydown the last criterium is the SID. Usually the higher the Pixelboost gets the higher the SID gets until the peak. If the pixelboost value becomes higher the SID is getting closer to a situation when using no MicroCells. The SID is to be measured with a print-densitometer (e.g. Techkon DENS). The highest value with smooth ink laydown and without trailing edge is to be selected.

## 2. Entering results to the CDI

Once the parameters have been found they need to be entered in to Grapholas. In the Exposer go to "options", "Boost Editor"



In the Boost Editor select as the Type "Plate", in Element select the used plate type in "Element" and enter the values for "Microscreen" (MCWSI) and "Groovy" (MG34). Make sure both values are entered correctly.



## 3. Surface screening

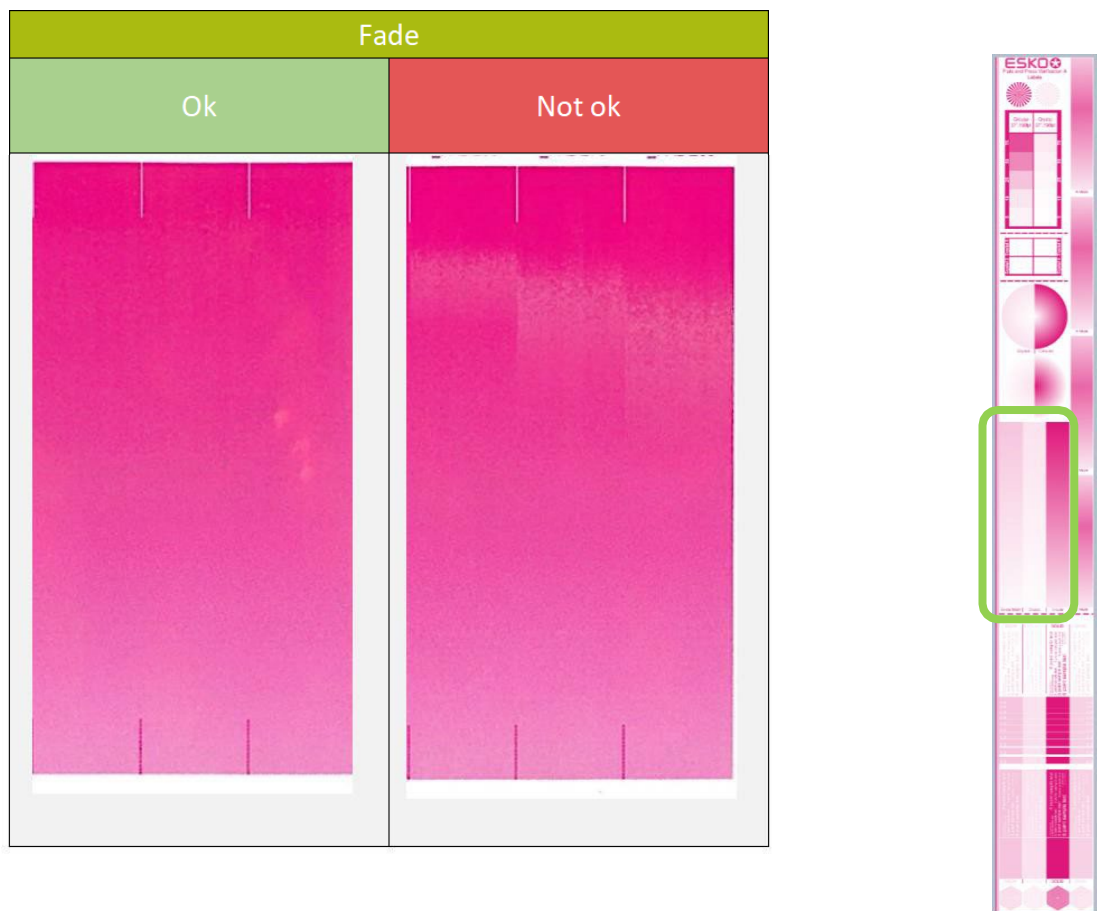
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In chapter 1 you have been selecting the pixelboost based on the trailing edge, the smoothness of the ink laydown as well as on the SID. This had happened for the two types of microcell in use, a value for MCWSI and a value for MG34 have been determined.

Here a decision between the two results need to be done as well as a crosscheck if microcells shall be used at all.

Please check the MG34 at the best Pixelboost setting for MG34 and compare this to the MC WSI at the best setting for the MC WSI. In previous steps non-acceptable settings have been rejected, so now it is required to compare regarding the smoothness of the transition (no tonal jumps) and the SID.

The transition needs to be smooth, without tonal jumps and homogeneous. Examples what is okay and what is not okay are shown below.



This is to be selected in "Surface Screening". Please also make sure the result with microcells is better than the one without (solid), otherwise select "Solid", so no Microcells are being used.

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