

# Best practices for Ink Optimizing Solution

## Rendering intent

Rendering intent is the mapping strategy used to convert color spaces.

In general, when creating ink-optimizing DeviceLinks:

- When converting between two gamuts of greatly differing volume—for example, when converting from a larger gamut color input such as “GRACoL C1 2006” to a smaller gamut CMYK Reference PCO such as “SWOP C3.”, select the **Target Simulation** or **Color Space Conversion** check box, and choose **Perceptual** from the **Rendering intent** list
- When converting between two gamuts that are not different, clear the **Target Simulation** or **Color Space Conversion** check box, and choose **Relative Colorimetric** from the **Rendering intent** list

## Total ink limit

Total ink limit (TIL) is a restriction on the maximum amount of ink allowed at one time during four-color printing. For example, if you allow 100% of all four inks to print at one time, this would be specified as 400% TIL and would result in 400% ink coverage.

It is recommended that you use the default TIL values. The default TIL values are aligned with what the device is capable of for a given print condition. If you decrease the TIL values below normal operating conditions, ink savings may not occur.

For this device condition	Use this TIL range
Heated web offset press printing on coated paper	280–300%
Newspaper web offset press printing on uncoated paper	240%
Sheetfed offset press printing on coated paper	320–350%

## Black Start

The recommended Black Start value is between 10 and 25.

### Maximum Black

Maximum black is the highest amount of black that can be introduced to a color build. Typical values for maximum black are between 90% and 100%. However, because of the increased use of black in the ink-optimized separation, you may want to set Maximum Black to 100%.

### Black strength

Black strength sets the level of available black in a color build.

Lower levels of black strength retain a corresponding amount of CMY in the color build. For an average printing condition, set the black strength to a value between 75% and 85%. If your process is under tight control, it is possible to use a Black Strength value higher than 85% and achieve a greater ink savings.

To run high levels of black strength, black ink must be printed at the density at which it was characterized. It is common to characterize black at a density of 1.8 and print it at 2.0 or higher, for work that contains images and text. With high levels of black strength, printing a higher density than is characterized darkens images and reduces chroma (also known as a “muddy” look). To avoid this, maintain process control so that the density and TVI values of the production run match very closely with the density and TVI values of the characterization run.

**Target Simulation and Color Space Conversion** check boxes

Select these check boxes to change the output color to more closely match the source space that is defined.

For this scenario	Do this
<p>You have defined an offset press device condition for a PCO and have created gray-balanced curves to simulate a target. You want to apply ink savings to this condition on output without changing the simulation color to press</p>	<p>Select the <b>DeviceLink</b> method type as <b>Ink Optimizing Solution</b>, and clear the <b>Target Simulation</b> check box.</p> <p>This DeviceLink does not change the overall color and provides ink savings</p>
<p>You have defined an offset press device condition for a PCO and have created gray-balanced curves to simulate a target. You want better alignment to your source target—for example, better blue sky</p>	<p>Select the <b>DeviceLink</b> method type as <b>Ink Optimizing Solution</b>, and select the <b>Target Simulation</b> check box.</p>
<p>You have defined an offset press device condition for a PCO and have created gray-balanced curves and a DeviceLink. You would like to take advantage of the Ink Optimization feature</p>	<p>Select the <b>DeviceLink</b> method type as <b>Ink Optimizing Solution</b>, and select the <b>Target Simulation</b> check box.</p>

The same principle applies in the context of an SCO. However, with an SCO, you are managing the conversion rather than the simulation. Consequently, when you select the **Color Space Conversion** check box, the source space is the color response of the PCO.