

# Defining a conversion method for the SCO

The conversion method between the PCO and SCO decides how data is converted in order to align the color response of the SCO to the PCO. The conversion method is the type of curves or DeviceLinks that ColorFlow generates in order to align the SCO color output to that of the PCO. You can select a different conversion method than the default recommendation, and later adjust the generated curves or DeviceLinks in order to fine-tune the conversion. The conversion curves and DeviceLinks that ColorFlow generates are available in your Prinergy Process Templates in the Prinergy workflow.

**Note:** Depending on the DeviceLink options you choose, the gamut of the SCO is either mapped or clipped. All colors from the PCO can only be reproduced on the SCO when the SCO's gamut entirely encompasses the PCO's gamut. You can [generate an SCO verification report](#) to see how well the SCO gamut covers the PCO gamut.

1. Click the **Color Setups** tab, and then click the desired color setup from the list to show it in the viewer window.
2. In the color setup viewer, click the **Conversion** icon  between the PCO and an SCO.
3. In the **Output Version** box, enter a name if you don't want to use the default version name.
4. For a curve controlled device, do the following:
  - a. For G7 calibration, select the **G7** check box. This selects the G7 target automatically.
  - b. If you want the curve to be available in Prinergy, select the **Show curves in Prinergy** check box.
  - c. In the **Process Inks** tab, from the **Curves Method** list, select a desired method:
    - **Tonal Match:** Refers to Tonal Value Increase (TVI), also known as dot gain, and uses the calculated Effective Dot Area (EDA) for calibration. Calculations are based on the density measurements of each ink or colorant. You can use the same target response for each process color, or different target responses for optimizing color builds
    - **Gray Balance:** Adjust tonality by simultaneously calibrating cyan, magenta, and yellow inks so that neutral shades of gray are maintained, while the black ink is calibrated separately for lightness and darkness.
    - **Manual Adjustments only:** Generates a linear curve that can be manually adjusted later
  - d. If you have added and measured one or more spot inks, in the **Spot Inks** tab, select a target from the **Target** list and select a curve method.

**Note:** For a spot ink whose response has not been measured, the following settings always apply: **Curves Method: None** and **Curves Method: Manual Adjustments Only**. You can view the Curves Method for each spot ink by clicking **Details** in the Conversion Definition dialog.

    - If you have measured the SCTV response of spot inks, select **Target** value **Linear** (selected automatically). This sets the **Curves Method** to **Linear SCTV**.
    - To calibrate spot inks to an EDA or TVI target, select any **Target** value other than **Linear** or **None**. This sets the **Curves Method** to **Tonal Match**.
    - To generate linear curves that can be manually adjusted, select **Target** value **None**. This sets the **Curves Method** to **Manual Adjustments Only**.

5. For a discontinuous flexographic SCO:
  - The color in the highlight region of the PCO is typically lighter, unless the PCO is also discontinuous. If the color in the highlight region of the PCO is *darker* and you want to improve color match across the entire tonal region, select the **Allow Mindot Tint Out Increase** check box.
  - To adjust the transition from the Mindot to the defined curve, adjust the **Highlight Contrast** slider or enter a value in the box. For most cases, the default value of 70% is acceptable.
    - Reducing Highlight Contrast produces a curve that is flatter near the Mindot, meeting the defined curve at a lower point but reducing contrast in this region.
    - Increasing Highlight Contrast produces a curve that preserves highlight contrast, but meets the defined curve at a higher point.
6. To use a DeviceLink profile, do the following:

- If your ColorFlow edition is not licensed to generate DeviceLinks, from the **DeviceLink Method** list, select **Imported** and then click **Import** to import a DeviceLink profile.
- To generate a DeviceLink profile, from the **DeviceLink Method** list, select the desired method. For more details, see [Generating a DeviceLink profile](#).

**Limitations:**

- You cannot generate a conversion DeviceLink for a discontinuous flexographic SCO.
- If the PCO is discontinuous, you can generate either a conversion calibration curve or a discontinuous SCO conversion DeviceLink, but you cannot generate both.

7. Click **OK**.

**Note:** If the SCO device condition has [extended process inks](#), they are calibrated to match the [Spot Color Tone Value \(SCTV\)](#) response of same-named inks present in the PCO. For extended process inks not present in the PCO, linear SCTV calibration is performed.