Choosing a measurement chart

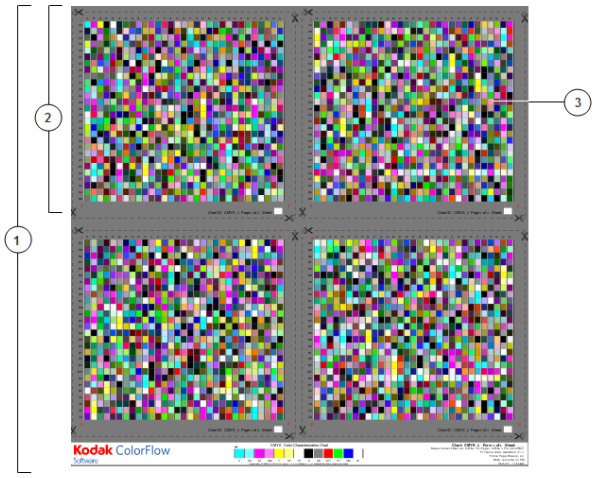
ColorFlow lets you create custom charts to suit your print device geometry. It also provides a number of built-in charts, including those commonly used in the print community.

ColorFlow supports the following types of custom measurement charts (with generated response types):

- **Tint Ramp** (Tonal only)
- **Tonal only** (Tonal only)
- **Full Color and Tonal** custom charts

A measurement chart contains all color patches required to determine the color, gray balance, or tonal response of a printing device. It includes all necessary identification and branding information that can be printed on either a single chart form or multiple chart forms, depending on the chart type and your printing device. A chart form contains one or several measurement pages. A measurement page is the portion of a chart form that can be measured by a color measurement device. It contains a footer and color patches that are a few millimeters in width. The total number of patches in a chart form, depends on the intent of the characterization (tonal, gray balance or full-color response) and the number of process inks that are used. A full-color characterization chart for a CMYK ink set requires about 1600 patches spread over multiple measurement pages, whereas a tonal characterization chart for the same inkset requires only a small single-page tint ramp chart, potentially consisting of as few as five patches. The maximum size of a measurement page is limited by the measurement device and the uninterrupted printable area on the print device.

The following shows an example full-color characterization chart that consists of four measurement pages in a single chart form:



1. Chart form
2. Measurement page
3. Patch

In addition to custom charts, ColorFlow supports a variety of built-in charts for tonal, gray balance, full CMYK color, and extended process characterization.

If you only want to generate print calibration curves, you can:

- Create a Tint Ramp chart to produce localized tonal response, for generating Tonal match curves
- Create a Tonal only chart to produce sheet-wide tonal response of your print device, for generating Tonal match curves
- Measure a built-in P2P25 or P2P51 chart which produces both tonal and gray balance response, for generating Gray Balance or Tonal Match curves

If you want to do a full-color characterization in order to generate a device profile or DeviceLink (only available in ColorFlow Pro Workflow edition), measure a Full Color and Tonal chart.

Charts for G7 support

ColorFlow clients have these five built-in industry-standard charts for G7 calibration support, each of which can be exported as a PDF file. Activation of any of these measurements produces a **Gray Balance** and Tonal response for CMYK process inks, and measurements can be exported. Each chart name indicates the devices that can measure the chart:

- P2P51 - i1iO or i1Pro
- P2P51 - i1iSis or i1iO
- P2P51 iSis mini
- P2P25 - i1iO or i1Pro
- P2P25Xa i1iSis

ColorFlow clients have the following built-in industry-standard charts for G7 support, each of which can be exported as a PDF file. Activation of any of these measurements produces a **Full Color** and Tonal response for CMYK process inks, and measurements can be exported. Each chart name indicates the devices that can measure the chart:

- TC1617x (i1iO) cf
- TC1617x_H (i1iSis) cf
- TC1617x_V (i1iSis) cf

ColorFlow clients have the following built-in custom charts for G7 support. Activation of any of these measurements produces a Full Color and Tonal response for CMYK process inks, and measurements can be exported. Each chart name indicates the devices that can measure the chart:

- CMYK Compact i1iO
  - a compact chart for small-format print devices
- CMYK 206x430 i1iSis
- CMYK 212x418 i1iSis
  - similar to TC1617x variants, but optimized for reliable measurement by the i1iSis

In a report generated by any of these measurements, CIELAB measurements reported for the device or verified output are same values that appear in exported measurements. All of the above charts for G7 support include the P2P Rows D and E tint values required for G7 Grayscale Compliance reporting.

Charts for Extended Process printing

ColorFlow clients have the following built-in custom charts for 5C, 6C and 7C extended process printing support. These charts support G7 curve generation for CMYK and SCTV calibration for extended process inks. P2P Rows D and E tint values are not included, so G7 Grayscale Compliance reporting uses interpolated values. Activation of any of these measurements produces a Full Color and Tonal response for the selected extended process ink in set, and measurements can be exported:

- KSS Compact charts for i1iO, with and without KSS footer
  - 5C: CMYKR, CMYKO, CMYKG, CMYKB, CMYKP, CMYKV
  - 6C: CMYKRG, CMYKOG, CMYKRB, CMYKOB, CMYKRP, CMYKOP, CMYKRV, CMYKOV, CMYKGB, CMYKGP, CMYKGV
  - 7C: CMYKRGB, CMYKOGB, CMYKRGP, CMYKOGP, CMYKRGV, CMYKOGV

Charts for Extended Process printing with G7 support

ColorFlow clients have the following built-in custom charts for 6C and 7C extended process printing support. These charts support G7 curve generation for CMYK and SCTV calibration for extended process inks. They also include the P2P Rows D and E tint values required for G7 Grayscale Compliance reporting. Activation of any of these measurements produces a Full Color and Tonal response for the selected extended process ink in set, and measurements can be exported:

- 7C charts for CMYKRGB, CMYKOGB, CMYKRGP, CMYKOGP, CMYKRGV, CMYKOGV extended process printing:
  - 4-page i1iO charts
  - 2-page i1iSis charts
  - 1-page i1iSisXL charts
- 6C charts for CMYKRG, CMYKOG, CMYKRB, CMYKOB, CMYKRP, CMYKOP, CMYKRV, CMYKOV, CMYKGB, CMYKGP, CMYKGV extended process printing:
  - 2-page i1iSis charts

Measurement device support

- **i1Pro**: All charts identified for i1Pro support the X-Rite i1Pro2 and i1Pro3, scanning for any measurement conditions supported by the connected device. (**Note:** i1Pro3 **Plus** Spectrophotometer is **NOT** supported)
- **i1iO**: All charts identified for i1iO support the X-Rite i1iO, i1iO2 and i1iO3, scanning for any measurement conditions supported by the connected device. (**Note**: i1iO3 **Plus** Table is **NOT** supported)
- **i1iSis**: All charts identified for i1iSis support the X-Rite i1iSis, i1iSis2, i1iSis XL and i1iSis2 XL, scanning for any measurement conditions supported by the connected device.
- **i1iSis XL**: All charts identified for i1iSis XL support the i1iSis XL and i1iSis2 XL, scanning for any measurement conditions supported by the connected device.