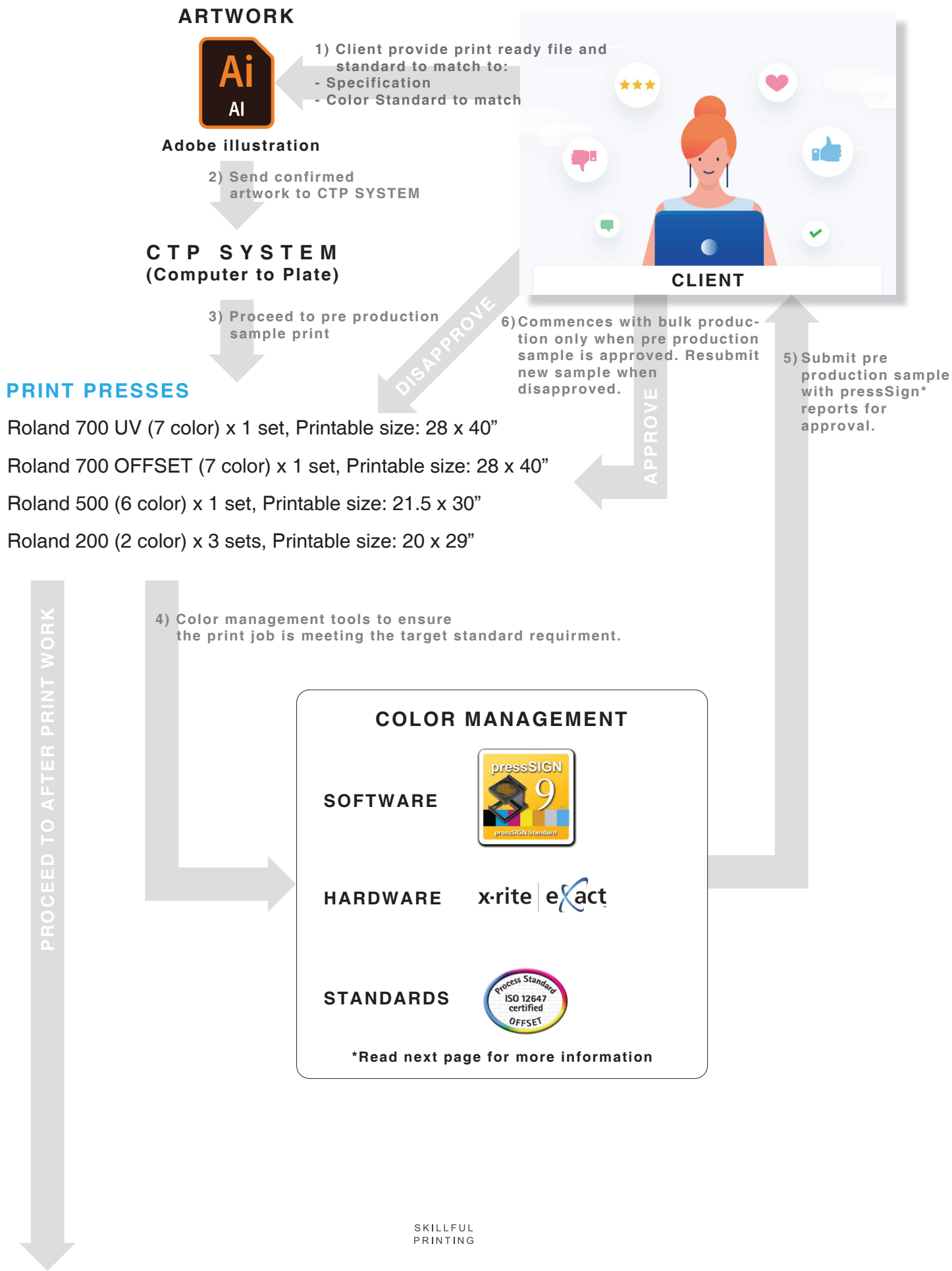


PRINT AND COLOR SYSTEM

Print production setting and flow chart from pre production sample to bulk



COLOR MANAGEMENT

x-rite | eXact Spectrophotometer

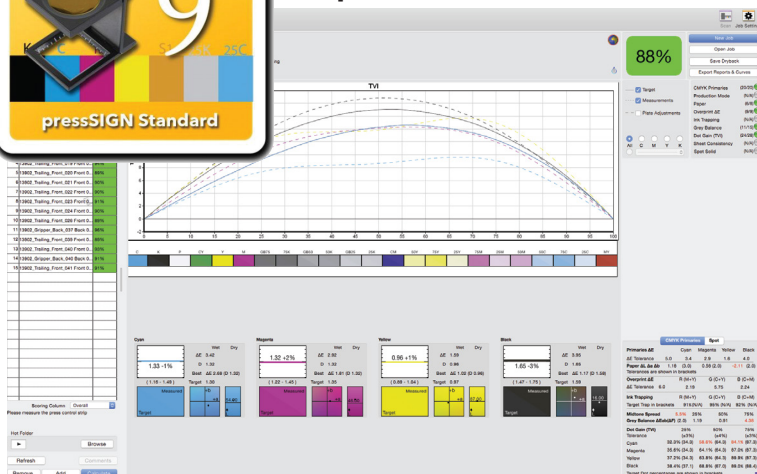
The eXact Standard spectrophotometer is specifically designed for printers and packaging converters to help ensure color validation of CMYK and spot-color ink and also leverages industry color standards for increased press process control.



The device can scan automatically or manually.



pressSIGN

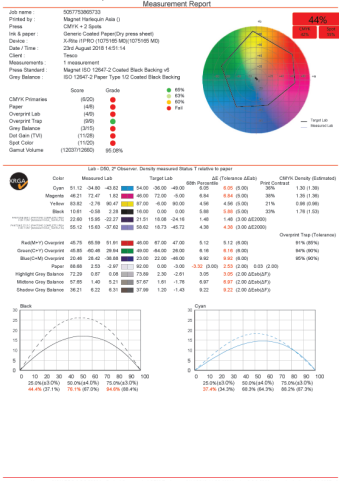


PressSign is an industry leading color calibrating system. Its objective is to enable printers to meet the print standard by their clients, and provide clear and extensive reports to printer and buyer.

Reports

PressSign provide easy to understand measure and adjustment data in reports. For example it includes Dot Gain Curve Graphics with additional production relevant data.

Example of a PressSign report
pressSIGN Certification
Measurement Report



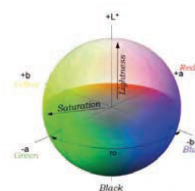
Main feature

PressSign is used the press, to ensure that the printed job is meeting the target standard requirements. This target standard can be ISO 12647-2 or any custom color target. Different standard may be imported from build-in profiles with extensive customisation possible.



ISO 12647-2

Color Process standard for Offset and Heat-set presses



The standard approval criteria is 3.0 Delta-E or below in ISO 12647-2 standard

The L.a.b color space

Compatible

pressSign is compatible for most color measuring device (Spectrophotometer), to scan and capture value from every print job.

Records

PressSign keep every reports and print job data for printers to easily access to. It can also store custom spot colors values and set as target value.

COLOR MANAGEMENT

Defining Delta E

ΔE - (Delta E, dE) The measure of change in visual perception of two given colors.

Delta E is a metric for understanding how the human eye perceives color difference. The term delta comes from mathematics, meaning change in a variable or function. The suffix E references the German word Empfindung, which broadly means sensation.

On a typical scale, the Delta E value will range from 0 to 100.

Delta E Perception

≤ 1.0 Not perceptible by human eyes.

1 - 2 Perceptible through close observation.

2 - 10 Perceptible at a glance.

11 - 49 Colors are more similar than opposite

100 Colors are exact opposite

Take the table as a general guide; it's possible to get a Delta E value below 1.0 for two colors that appear different. This is the case with CIE76 and CIE94 formulas, in which saturation is either not considered or not weighted properly.

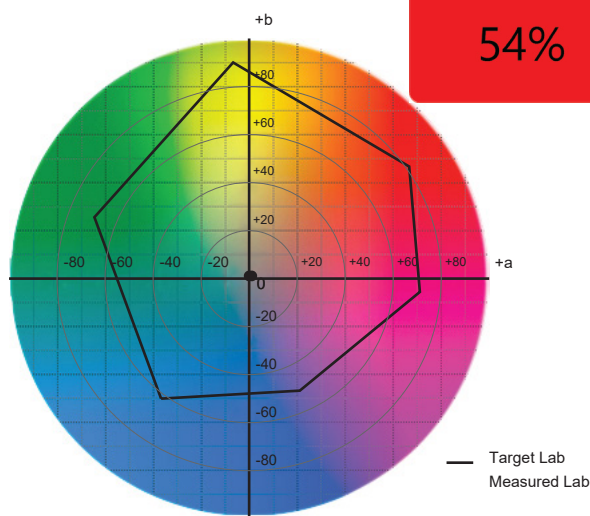
Because of inconsistencies between the three algorithms, the exact meaning of Delta E changes slightly depending on which formula is used. Think of Delta E less as a definitive answer, and instead a helpful metric to apply to a specific use case.

pressSIGN Certification Measurement Report

Example of a PressSign report

Job name : 5053526205249
Printed by : Skillful Printing Co., Ltd.
Press : 2 Spot Colours
Ink & paper : Generic Coated Paper(Dry press sheet)
Device : X-Rite eXact(1027504)
Date / Time : 29th March 2018 19:46:05
Measurements : 1 measurement
Press Standard : ISO 12647-2 Coated Black Backing v5
Grey Balance : ISO 12647-2 Paper Type 1/2 Coated Black Backing

	Score	Grade	
Paper	(5/8)	●	80%
Spot Colour	(10/20)	●	70%
		●	60%
		●	Fail



Lab - D50, 2° Observer. Density measured Status T relative to paper



Colour	Measured Lab			Target Lab			ΔE (Tolerance ΔE_{ab})		CMYK Density (Estimated)	
8 C (PANTONE COMPLETE XRG)	20.41	-2.81	-28.42	17.38	1.34	-35.96	68th Percentile	3.00	3.00	Passed
TONY (database=XRG_TEMPLATE)	61.04	-5.41	-19.69	64.40	-1.47	-31.44	5.52	5.52	3.00	Failed
TES 0111 (Tesco Brand new database=Prestige_Southend_28Nov_2013)	Paper	92.00	0.10	0.96	92.00	0.00	-3.00	-0.00	(3.00) 0.10 (2.00)	3.96 (2.00)

*The standard approval criteria is 3.0 ΔE or below in ISO 12647-2 standard.