

# Automating Color Management Press Side

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QuadTech.

# Automating Color Management Press Side

In-line Color Measurement

Typical Press Color Workflow

Color Quality Solution



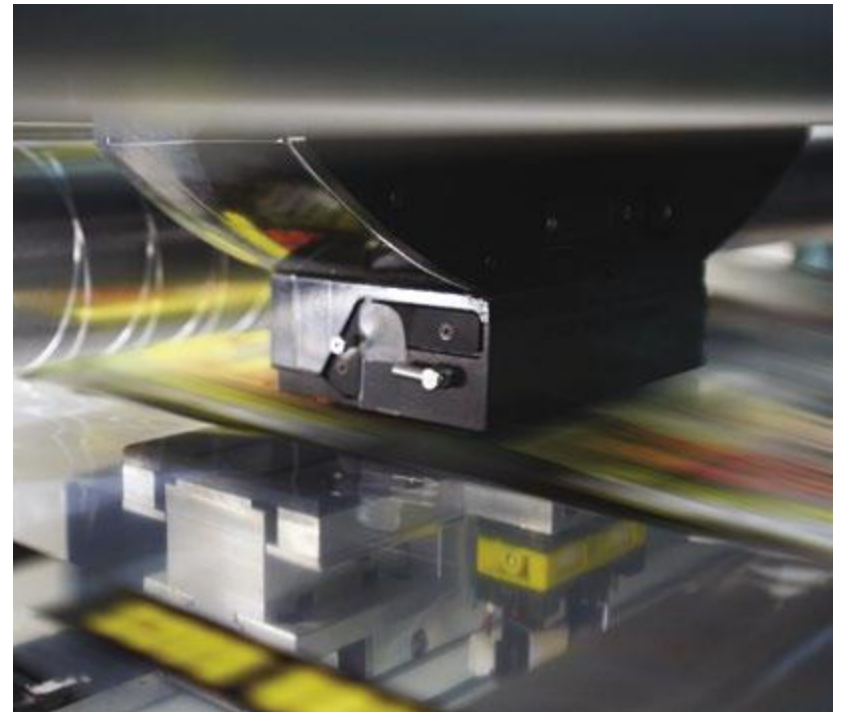
# Color Measurement System with SpectralCam

Spectral sensor

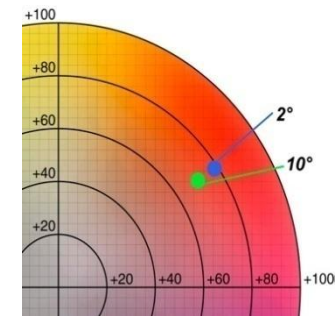
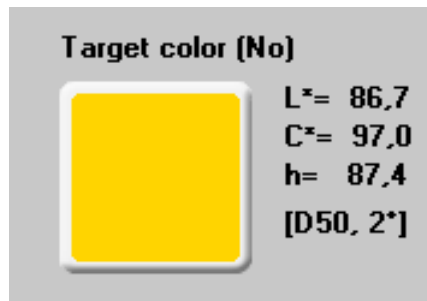
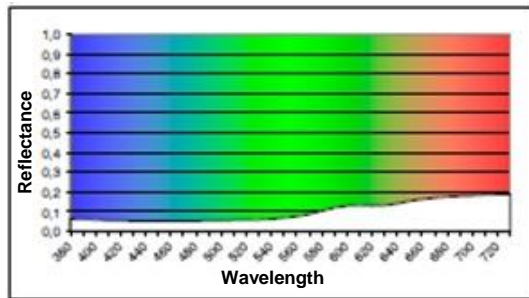
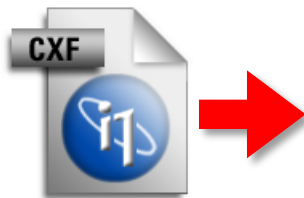
Web stabilizer

High definition camera

Paper and film substrates

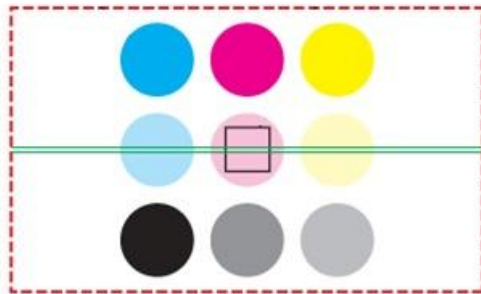
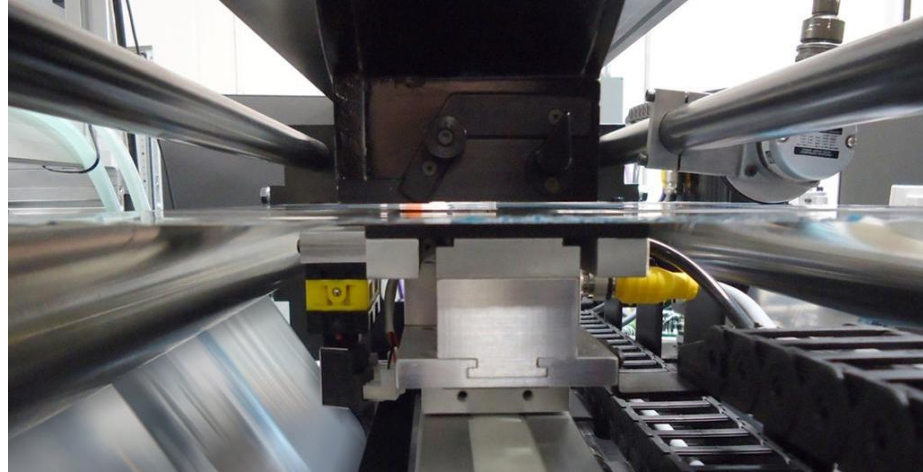


# Job Set-up - Import .CxF



$\Delta E$

# Real Time Color Measurements



Mark patterns

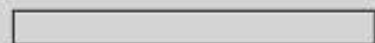


In the work



Summary

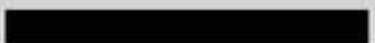
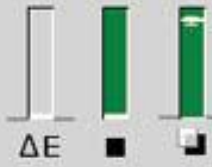
Deck View



Substrate



ΔE 0.14 88.2



PU1



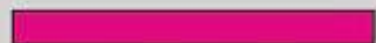
ΔE 4.21 1.59 19.0



PU2



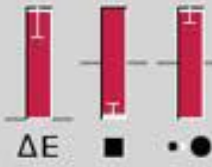
ΔE 4.62 1.29 13.7



PU3



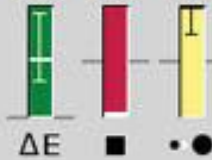
ΔE 5.74 1.39 17.0



PU4



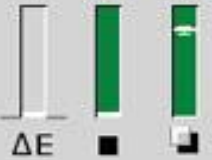
ΔE 2.55 0.99 14.7



PU5



ΔE 0.14 77.6



PU6



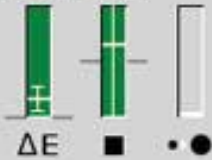
ΔE 1.12 1.24



PU7



ΔE 0.81 1.66



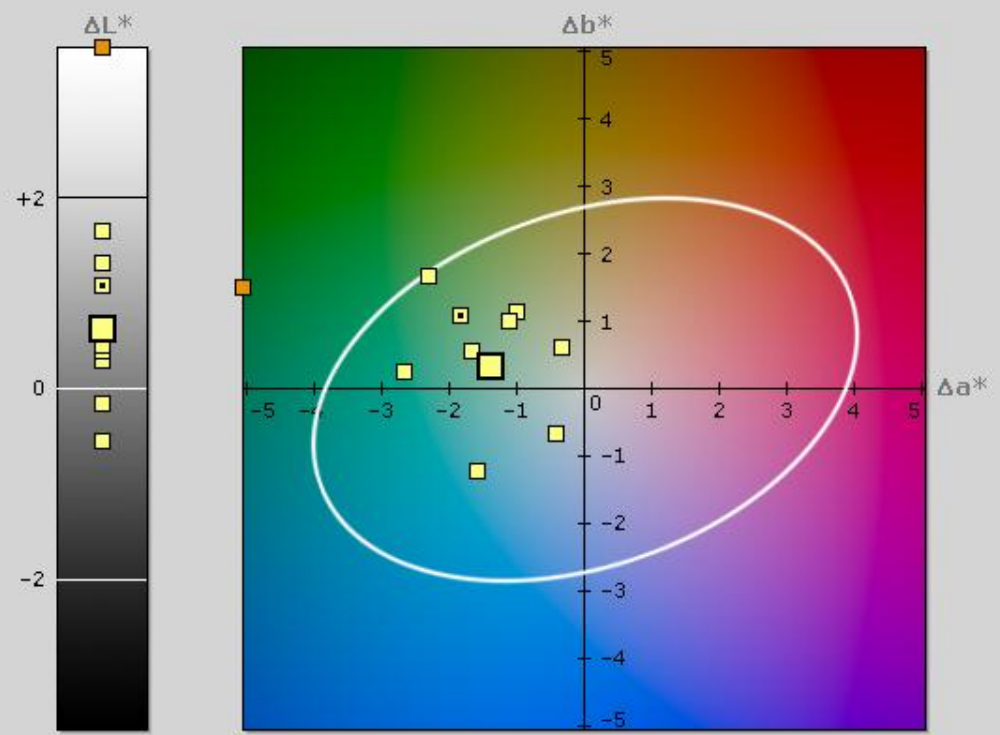
50%



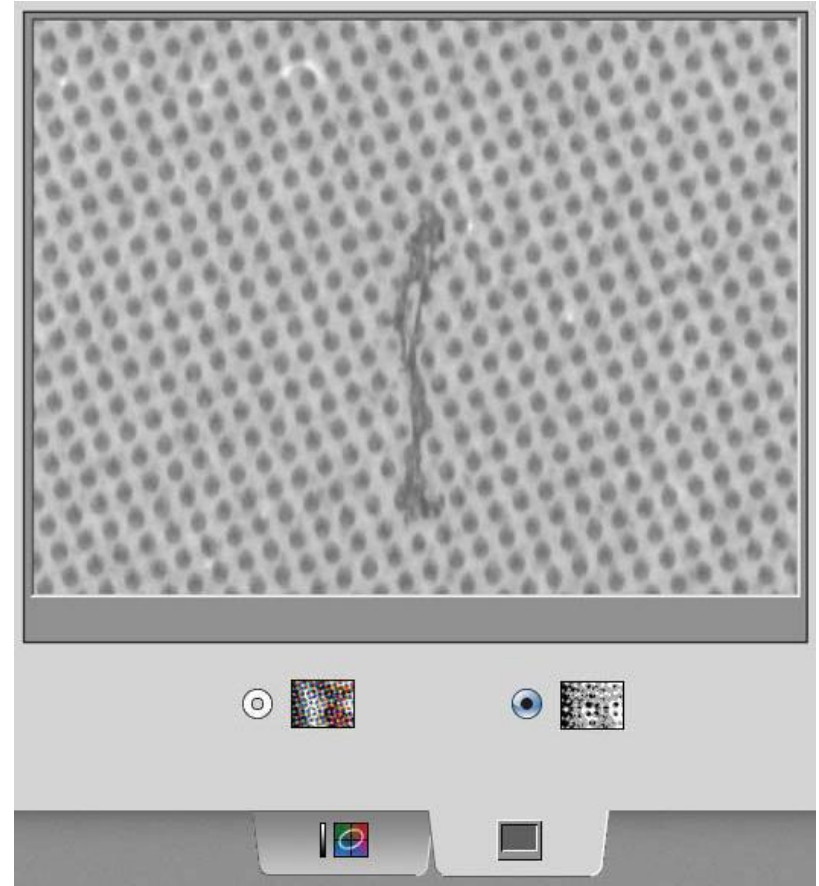
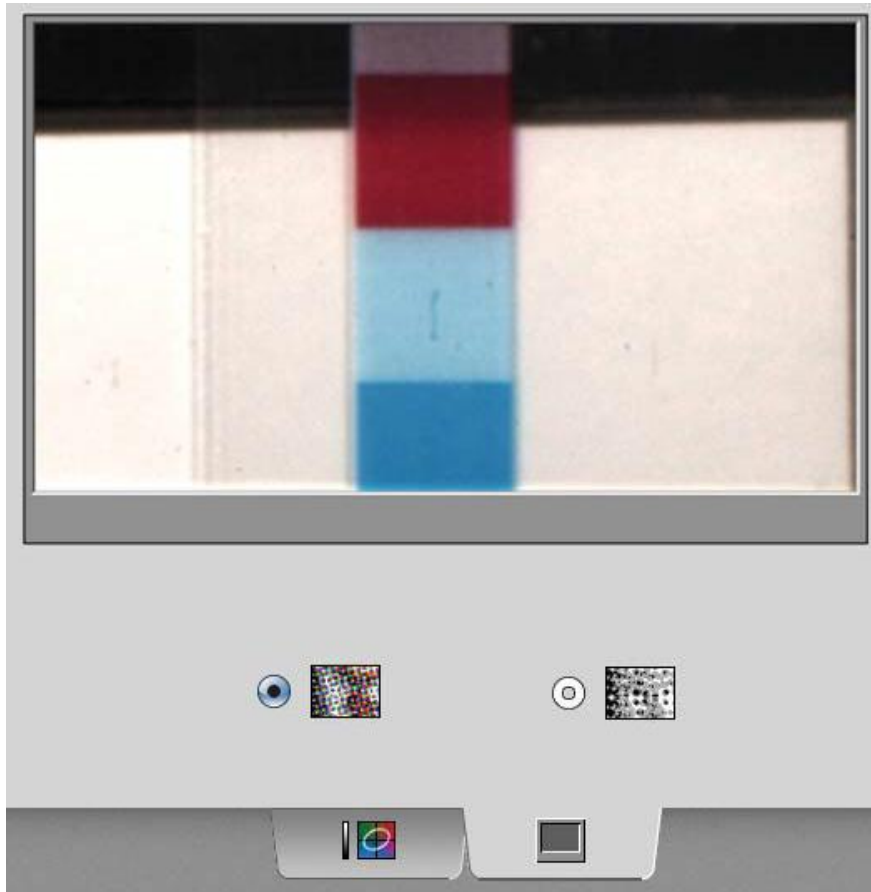
Deck 8

|      | ΔE             |                            |                      |
|------|----------------|----------------------------|----------------------|
| 100% | T 2.3<br>+ 0.4 | T 1.25<br>+ 1.20<br>⊥ 1.14 |                      |
| 50%  | T 2.3<br>+ 0.4 | T 0.66<br>+ 0.61<br>⊥ 0.58 | T 16<br>+ 12<br>⊥ 7  |
| 100% | T 2.3<br>+ 0.4 | T 1.24<br>+ 1.22<br>⊥ 1.19 |                      |
| 50%  | T 2.3<br>+ 0.4 | T 0.72<br>+ 0.68<br>⊥ 0.66 | T 17<br>+ 13<br>⊥ 10 |
| 25%  | T 2.3<br>+ 0.4 | T 0.41<br>+ 0.37<br>⊥ 0.33 | T 28<br>+ 26<br>⊥ 20 |

| Average   | Target    | Deltas     |
|-----------|-----------|------------|
| L*: 52.35 | L*: 51.88 | ΔL*: 0.47  |
| a*: 37.32 | a*: 38.70 | Δa*: -1.29 |
| b*: 10.15 | b*: 9.97  | Δb*: 0.77  |
| C*: 38.68 | C*: 39.96 | ΔE: 0.91   |
| h*: 15.21 | h*: 14.44 |            |



# High Definition Camera





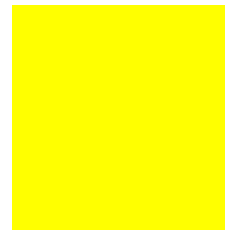
# Typical Press Color Workflow



Current



Target



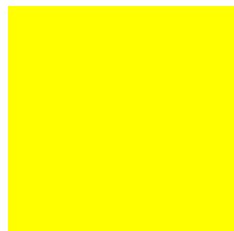
**Adjust ink recipe and press settings**

# Typical Press Color Workflow

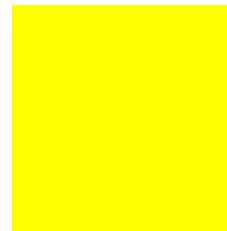


**Repeat until color is correct!**

Current

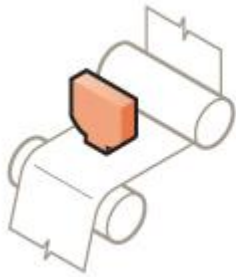


Target



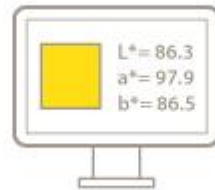
**Adjust ink recipe and press settings**

# Color Quality Solution (CQS)



**QuadTech**

In-Line Spectral Data



**x-rite**

Ink Formulation Data



Ink Dispensing System



.CxF Data File

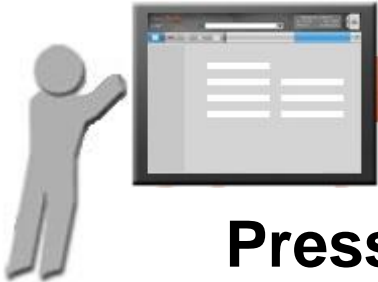
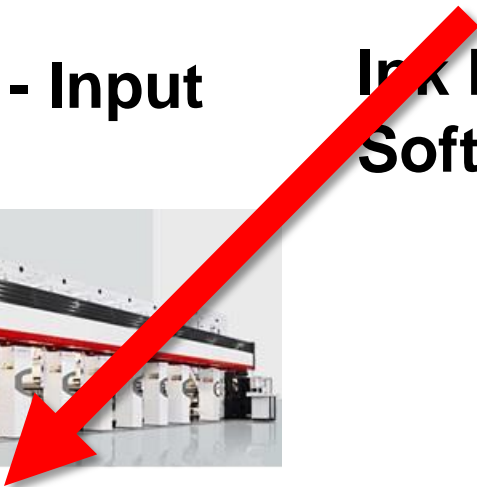
# CQS - Workflow



**Color Quality - Input**

**Ink Formulation Software (IFS)**

**Dosing System**



**Press**



**Color Measurement System**

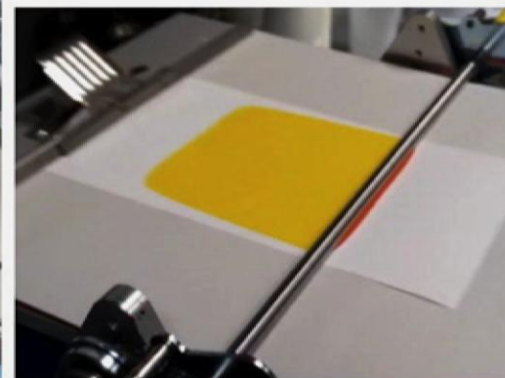
# Color Quality Solution



## INK KITCHEN LAB



Weigh the ingredient additions and repeat the mixing of colors, the viscosity check, and the printing of the correct color steps



# Benefits - Inline Color Measurement

Improved makeready time

Reduced waste

Real-time color reporting

Improved quality assurance



# Automating Color Management

## Press Side

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