Droplet to film

StudioRIP is a market leader in inkjet color separation (on EPSON's 2016 Drupa stand StudioRIP was demonstrating the color separation capabilities of the EPSON printers on film and offset plates). Due to our patented technologies, as well as our high quality consumables, our inkjet films have the sharpest edges and smoothest tints on the market.

studiorip

<u>Workinė prin</u>ciple



Components and consumables Components and consumables



Advantaees

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Ink and film quality

- Small investment, about 10% of a laser imagesetter
- Low cost consumables, about 50% of the conventional film production costs
- Eco-friendly, simple operation (no chemical processing)
 The printer can be used for proofing and color printing

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RID features

2880×2880 dpi

Image quality

- 30–175 lpi halftones with sharp dots
- The smooth halftones and sharp edges are achieved by our Dynamic Density Modulation, Edge Enhancement, Ink Spread Compensation and RIP-based MicroWeaving technologies
- The registration accuracy is of ±0.1 mm for cut sheets, and of approx. ±0.2 mm on roll media for jobs below 400 mm length
- The RIP was designed for the high end market (laser CTP devices), having a much wider range of features than the inkjet RIPs
- Trapping, imposition, ganging, user-definable pre-press marks, dispro, client-server architecture, zoomable and color managed preview, dotmeter tool etc.

Excellent water resistance (the film resists under water for a long time)

Excellent scratch resistance (incomparably better than the original

EPSON inks, unintentional scratches almost impossible)

User-friendly interface

DMax > 5.0 for the UV range

High processing speed by SIMD assembly code



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2× higher speed than the competition with our 4-channel printing technique which uses the MK and PK channels together

- 2880×2880 dpi: 3 sqm/hour on normal quality settings (further quality improvement on lower speeds)
- 1440×1440 dpi: 10 sqm/hour (recommended for 65 lpi or below)

* speed figures are for the T3200/5200/7200 series; The speed of other printers may differ on the cartridge configuration and printer type

www.studiorip.com/studiorip-droplet-to-film-24-36-44/

Dynamic density modulation





Broken halftone dots in competitor RIPs



nalftone dot 4 pixels removed slightly misplaced of 6 pixels by density control droplets don't touch

- Films or papers can only take about 40% of ink on 2880×2880 dpi, 100% ink causes ink flow
- A 40% ink density is achieved by removing 60% of the droplets
- Competitor RIPs apply uniform density control across the entire halftone percentage range, resulting in broken halftone dots (see the above illustration)
- StudioRIP applies different ink density to the different halftone percentages
- This way small halftone dots have no pixels removed
- The result is sharp, compact, round dots across the entire halftone tonal range



AM settings Limits Density modulation

Ink spread compensation

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- Thin lines and texts print too thick on inkjet printers due to various factors (droplets of 35 microns, mechanical inaccuracy)
- StudioRIP compensates this by making objects thinner by 1–3 pixels, this way the actual result will have the desired thickness
- Very thin lines are protected from being removed by the Ink Spread Compensation algorithm, the line thickness is not allowed to fall below 2 pixels (or any other user definable amount)

Edge enhancement



Unsharp edges and unequal thickness without enhancements

Sharp edges and equal thickness using together Edge Enhancement and Ink Spread Compensation Density control applied (60% of pixels removed)

│ Maximum density applied │ on the outlines

- Printing the edges with full ink density on 2880 × 2880 dpi creates a local ink excess that which makes all lines thicker but sharper
 - The wrong thickness will be then corrected by the Ink Spread Compensation technology
- The result is a sharp edge with accurate line/text thickness, just as sharp as the output of a laser imagesetter

RID-based interlacing (MicroWeave)

- The printer builds the 2880 dpi image from 720 dpi head scans with an interlacing algorithm called MicroWeave
- This algorithm is optimized for high speed color prints, and is not suitable for high LPI color separations
- StudioRIP is the only RIP bypassing the MicroWeaving module of the EPSON printer firmware, controlling the head directly
- This allows StudioRIP to improve the quality on the expense of the speed by using less nozzles or doing more scans

