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Analysis

RISO Accelerates Color Cut-Sheet Inkjet to 150-ipm with Its New ComColor Line

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Abstract

RISO has introduced a line of cut-sheet color inkjet products with speeds up to 150 A4 images per minute. The new ComColor product line is made up of five models ranging from the 90-ipm, A4-format ComColor 3010 (\$25,194 list price for the base unit) to the top of the line 150-ipm, A3-format ComColor 9050 (\$46,194 list price for the base unit). The products are available now and will complement the existing 120-ppm RISO HC5500, which will remain in the product line.

RISO ComColor 9050 configured with optional Scanner & Multi-Function Finisher



Source: RISO, Inc.

For More Information

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Introduction

RISO Japan unveiled its first inkjet-based product late in 2003. The product was a joint development of RISO and Olympus, and was announced in the U.S. market in June of 2004. Using piezo drop-on-demand inkjet heads, oil-based inks, and having speeds of up to 120 four-color impressions per minute (ipm), the product was known as the HC5000 and was initially positioned as a duplicator. As the product line and its front end have developed and improved, it has become a true digital printer with full variable capability. In 2006, RISO introduced the HC5000's successor: the 120-ipm HC5500.

RISO's color inkjet product line has been a success with annual sales growth rates in the 30%-40% range. At the end of RISO Inc.'s recently completed 2009 fiscal year, the company reported sales of over 600 units in the Americas. RISO Inc. has built an installed base of approximately 1,800 machines in field since the first HC5000 product installations. The company expects to see significant continued growth, more than doubling its placements by the end of its 2011 fiscal year.

Late last year, RISO Japan announced two new high-speed, inkjet-based, multifunction peripherals (MFPs) for the Japanese market. Today at a press event in Chicago, RISO Inc. (RISO's organization for the Americas) announced five new products that expand RISO's inkjet capabilities to speeds of up to 150 ipm. The products' launch will be completed over the next few weeks. RISO has created a new Web site for the products at www.newinkjet.com. Additional information can be found at RISO, Inc.'s corporate Web site at <http://us.riso.com>.

About the New ComColor Products

The announcements include five new products plus a variety of options. The product line's capabilities are summarized in Table 1. The top-of-the-line ComColor 9050 has the full 150 ipm speed, the maximum paper capacity, the 1-GB GDI integrated controller, and a maximum printable area of 12 3/8" x 21 9/16" (314 x 548 mm). The entry-level A4-format ComColor 3010 runs at 90 ipm and features the 512-MB GDI integrated controller. The range of options is covered in Table 2.

In addition to a new printhead design that is rated for six million impressions, the ComColor products have a new ink cartridge design that uses a recyclable cardboard exterior and a disposable 1,000 milliliter ink sleeve with a nozzle made from recyclable plastic. A redesigned ink circulation system keeps the inks and printheads at a constant 68 degree temperature, which RISO reports results in reduced ink clogging and head misfiring (particularly in low volume environments).

Table 1: The RISO ComColor Product Line

	ComColor 3010	ComColor 3050	ComColor 7010	ComColor 7050	ComColor 9050
Speed (A4/letter)	90 ipm	90 ipm	120 ipm	120 ipm	150/146 ipm
Resolution (dpi)	300 x 300 (stan.) 300 x 600 (fine)	300 x 300 (stan.) 300 x 600 (fine)	300 x 300 (stan.) 300 x 600 (fine)	300 x 300 (stan.) 300 x 600 (fine)	300 x 300 (stan.) 300 x 600 (fine)
Format	A4	A4	A3	A3	A3
Maximum printable area	8 1/4" x 21 7/16" (210 x 544 mm)	8 1/4" x 21 7/16" (210 x 544 mm)	12 3/16" x 21 7/16" (310 x 544 mm)	12 3/8" x 21 9/16" (314 x 548 mm)	12 3/8" x 21 9/16" (314 x 548 mm)
List price ¹	\$25,194	\$28,194	\$37,194	\$40,194	\$46,194
Integrated controller	512 MB GDI	512 MB GDI	512 MB GDI	512 MB	1 GB GDI
Input capacity	Up to 1,000 shts. (single paper source)	Up to 2,500 shts. (standard feed tray and three media drawers)	Up to 1,000 shts. (single paper source)	Up to 2,500 shts. (standard feed tray and three media drawers)	Up to 2,500 shts. (standard feed tray and three media drawers)
Output capacity ²	Up to 500 sheets (standard) 1,500 sheets (w/opt. stacking)	Up to 500 sheets (standard) 1,500 sheets (w/opt. stacking)	Up to 500 sheets (standard) 1,500 sheets (w/opt. stacking)	Up to 500 sheets (standard) 1,500 sheets (w/opt. stacking)	Up to 500 sheets (standard) 1,500 sheets (w/opt. stacking)
Main feature differentiators from other models	A4 format 90-ipm speed 1,000 sheet cap. 512 MB cont.	A4 format 90-ipm speed 2,500 sheet cap. 512 MB cont.	A3 format 120-ipm speed 1,000 sheet cap. 512 MB cont.	A3 format 120-ipm speed 2,500 sheet cap. 512 MB cont.	A3 format 150-ipm speed 2,500 sheet cap. 1 GB controller

¹ All prices shown here are the suggested retail price for the base unit plus the \$300 Non R control card and the \$199 face down tray.

² The optional stacker adds 1,000 sheets for a total of 1,500 sheets.

The ComColor line's options range from an Adobe PostScript 3 raster image processor (RIP) to a variety of paper input or output capabilities. All of the options are supported by all models. For each model, there are two required accessories: a control card and a face down tray (two such tray options are available).

Table 2: RISO's ComColor Options

Option	List Price	ComColor 3010
IS900C PostScript RIP ³	\$6,995	Adobe PostScript 3 raster image processor (RIP) based on an Intel Core 2 Duo Processor and 320 GB hard disk
IS900C Professional Package	\$1,595	
IS900C Advanced Package	\$695	
HS4000 scanner	\$5,090	Includes stand and automatic feed unit
Multi-function finisher	\$10,995	The multi-function finisher can staple, punch, offset stack, saddle-stitch, and two-fold (single or multi-sheet)
Auto-control stacking tray ⁴	\$630	Maximum paper size is 12 9/16" x 17"
Wide stacking tray	\$630	Supports documents up to 13 3/8" x 21 5/8" in size
Face down tray	\$199	
Face down offset tray	\$699	The face down offset tray offset stacks the output
IC Authentication Kit II	TBD	Card access kit for user management (option not available in Latin America)
Special paper feed kit	\$198	Expands media capacity to handle heavy papers from 27 lb. bond (100 gsm) up to 210 lb. index (400 gsm)
Paper ejection attachment ⁵	\$499	Required for auto-control stacking tray, wide stacking tray, or full finisher
RISO accounting tool	Avail. Sept. 09	
AR900 envelope feeder	Avail. Fall 09	
R control card kit	\$4,300	See description later in this document
Non R control card kit	\$300	See description later in this document

In addition to these optional accessories, software and distribution partnerships are an important aspect of meeting the needs of RISO's customers. Objectif Lune and Prism are key partners for page composition software. Pitney Bowes recently entered into a sales relationship with RISO in which they re-sell the HC5500. Since 2007, RISO Inc. has had a relationship with Kodak in which the RISO HC5500 is offered to customers as a complementary solution to the Kodak Versamark V-Series Printing Systems for shorter-run transactional data printing jobs. Astro and MBM partner with RISO for finishing equipment. RISO is also working with partners to develop magnetic ink character recognition (MICR) capability.

³ Adobe PostScript 3 RIP based on an Intel Core 2 Duo Processor and 320 GB hard disk

⁴ Maximum paper size is 12 9/16" x 17"

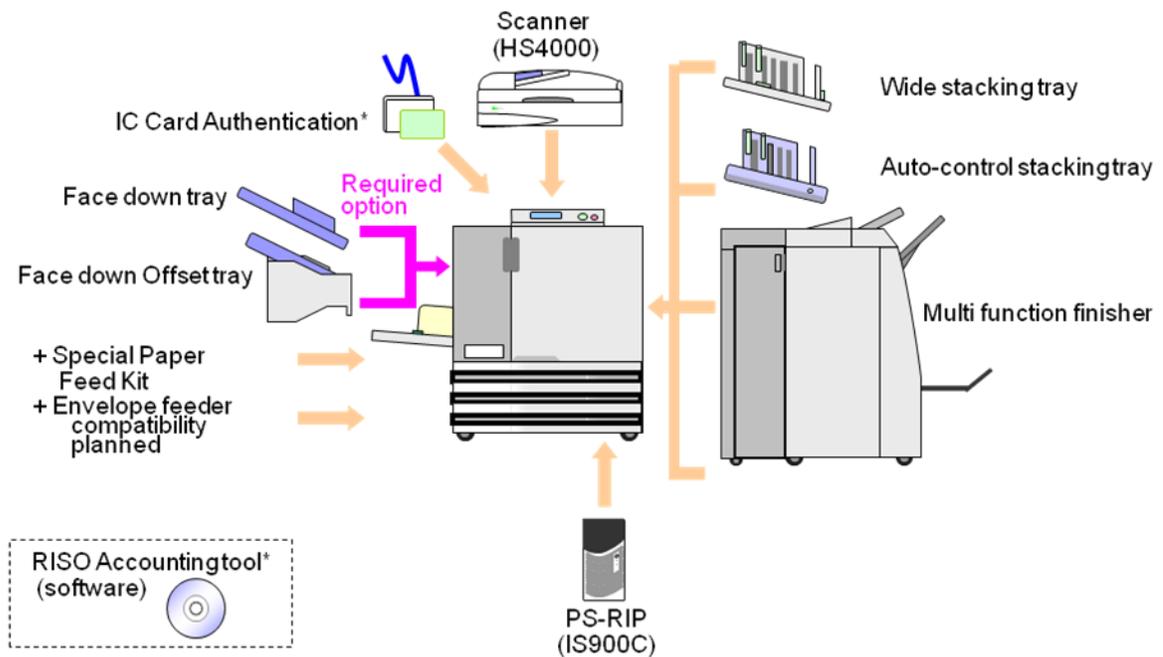
⁵ Required for auto-control stacking tray, wide stacking tray, or full finisher

Figure 1: RISO ComColor 9050 configured with optional Scanner & Auto Control Stacking Tray



Source: RISO, Inc.

Figure 2: ComColor Optional Accessories



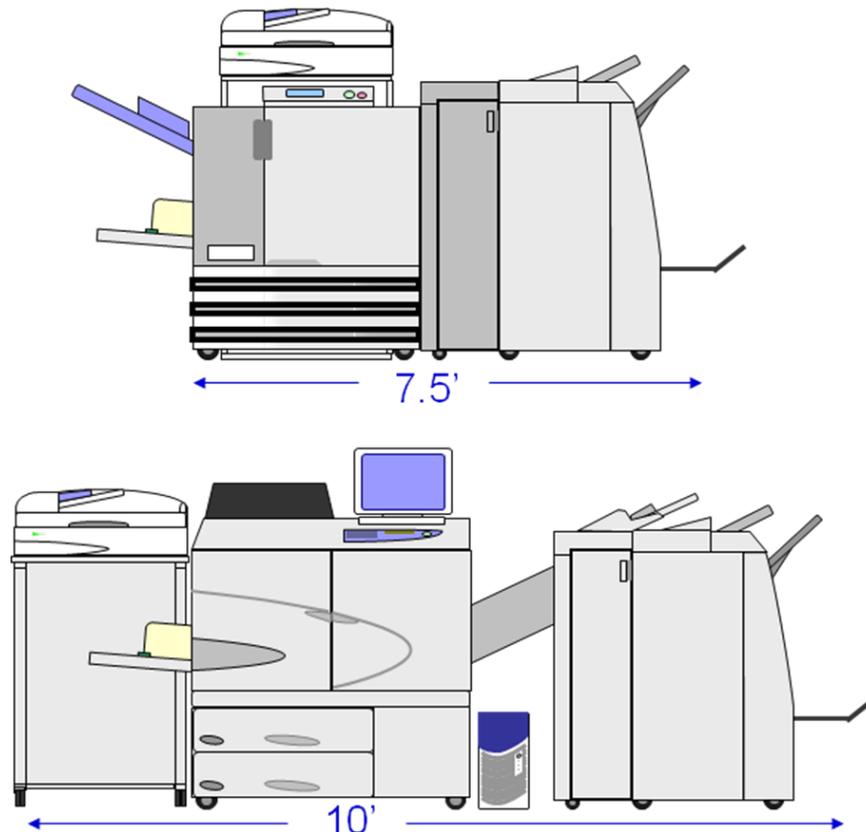
*Planned availability September 2009

Source: RISO, Inc.

Comparing the HC5500 and the ComColor 9050

What is clear in comparing the new ComColor products with the HC5500 is its size (see Figure 3). The ComColor products are more compact, benefiting from the positioning of the scanner on top of the print unit as well as the elimination of the connection bridge to the finisher. In addition, an 8.5" LCD touch panel is now embedded instead of the small LED panel and external display combination. Another physical difference is the face down output tray, which, because it allows printing to start before the full job is RIPed, accelerates the processing of variable data output and multi-page documents.

Figure 3: ComColor (top) and HC5500 (bottom)



Source: RISO, Inc.

Beyond the physical differences, other key differentiators are the higher speed of the 9050, its improved duplex capability, its denser and faster drying black ink, the improved scanner, the larger image area, and (once it is available) the new envelope feeder. Another advantage the ComColor products have over the earlier products is that with the HC Series products, the printer had to wait until the last page was RIPed before first page began printing (or before it was able to go through the duplex unit). This is no longer the case and therefore significantly increases print speed for multi-page documents. In addition, the 3050, 7050, and 9050 ComColor models have a mixed-paper-size mode for printing and scanning that allows different sized papers to be scanned and printed together (as long as the leading edge of all sheets is the same). Last but not least, the ComColor series has improved security and user management features over the HC Series.

Table 3: Comparison of the HC5500 and the ComColor 9050

	HC5500	ComColor 9050
Simplex speed	120 ipm	150 ipm (A4) / 146 ipm letter
Duplex speed	92 ipm	150 ipm
Resolution	600 dpi or equivalent (normal) ⁶ 900 dpi or equivalent (fine) 8 gray levels	300 x 300 (stan.) 300 x 600 (fine) 8 gray levels
Inks	Oil-based pigment	Oil-based pigment (improved to speed drying time)
Price	\$35,995 (with GDI Controller)	\$46,194 (with GDI controller, control card, and face down tray)
Scanning	HS2000 scanner 20-ppm, 600-dpi 20-second first copy 100-sheet capacity	HS4000 scanner 40-ppm, 600-dpi 11.5-second first copy 100-sheet capacity Scan-to-Destination (e-mail, folder, hard drive, USB)
Maximum stock	Up to 210 gsm / 110 lb. index (stan. tray)	Up to 210 gsm / 56 lb. bond (stan. tray) Up to 400 gsm / 210 lb. index (with optional special feed paper kit)
Controller	No integrated controller	Integrated 1 GB GDI controller with network printing capability
PostScript RIP	IS700C (optional)	IS900C (optional)
Energy use	1,100-watt power consumption (with external controller)	1,000-watt power consumption (with external controller) Energy Star compliant
Maximum paper size	13 3/8" x 21 5/8" (340 x 550 mm)	13 3/8" x 21 5/8" (340 x 550 mm)
Maximum image area	12 3/8" x 18 5/16" (314 x 458 mm)	12 3/8" x 21 9/16" (314 x 548 mm)
Envelope feeding	Manual only	Top-load, bottom-feed, AR900 envelope feeder (available fall 2009)
Duty cycle	500,000 monthly duty cycle	500,000 monthly duty cycle
Input capacity	Up to 2,500 sheets (1,000 sheets standard, 1,000 sheets Tray 1, 500 sheets Tray 2)	Up to 2,500 sheets (standard feed tray and three media drawers)
Output capacity	1,000-sheet auto control stacking tray standard	500-sheet face down tray (standard) 1,000 sheet auto control stacking tray (optional)

⁶ RISO's terminology in describing print resolution has changed since the HC5000 and HC5500, but the actual resolution of the new devices is unchanged. The products each have two pairs of 300 by 300 dpi printheads.

A Two-Tiered Supplies Strategy

The expanded ComColor line provides RISO with opportunities in environments with markedly different volume needs. In lower volume office or light production environments, customers value low hardware cost, a small footprint, and an easy-to-use user interface. In high volume production environments, customers focus on lower operating costs, the devices' speed, improved file processing, faster scanning capability, and production-oriented options.

RISO's new ComColor products can handle a range of target volumes from as low as 20,000 to 500,000 impressions per month. This poses an interesting challenge that is reflected by the different types of customers that RISO has attracted with the HC5000 and HC5500. The installed base of HC5000 and HC5500 printers is split about 75/25 between in-plant and commercial markets. RISO's in-plant customers are made up of institutional markets (such as religious organizations and educational services); government locations; and corporate sites in areas like manufacturing, real estate, and engineering. These markets generally have print volumes around 30,000 impressions per month. RISO's commercial markets feature customer in printing, publishing, and mailing services. These are high-volume customers printing an average of 200,000 impressions per month.

RISO has developed a two-tiered supply strategy that is designed to suit the needs of its lower- and higher-volume users. The strategy employs two control cards for each model. Users can purchase an "R" version card or a "Non R" version card. Users with the R⁷ version card are able to purchase supplies at substantially reduced prices. RFID tags differentiate the two supply types so that R supplies cannot be used in a Non R printer. Although the purchase price of the R supplies is lower, the initial purchase price of the R version control is significantly higher. The R version control cards retail for \$4,300 and the Non R version card retails for \$300. In essence, the \$4,000 difference is the price that users pay for the lower consumables over the life of the device. The only difference between the R and Non R models is the cost of the supplies. All other features and functions are identical. RISO says that users with expected monthly volumes above approximately 30,000 to 40,000 prints per month are the target for the lower priced R consumables. In essence, they pay upfront for the right to purchase less expensive consumables. This differs from many other programs where users commit to a contract that stipulates minimum monthly volume levels if they want to reap the benefit of lower consumable and service pricing.

RISO calculates that the cost per copy for monochrome output can drop to less than a half cent per page on the R models. For color, the cost per copy on an R model drops to under 2.7 cents. These figures include consumables and service. RISO's coverage estimate for these calculations is 20% total coverage (5% each for cyan, magenta, yellow, and black).

⁷ The "R" stands for Reduced.

Strengths, Weaknesses, Opportunities, and Threats (SWOT)

In looking at a new device, such as those in the ComColor line, InfoTrends looks at the product's strengths, weaknesses, opportunities, and threats. These factors are summarized in Table 4 below. Speed is the first item that jumps out, but other items such as the image area, acquisition price, and running cost are important. The inability to print on coated stocks is probably the biggest weakness of the new products, though that will mainly be an issue in production environments. Clearly, the new ComColor products have some intriguing advantages that position them well for existing and new market opportunities.

Table 4: SWOT Analysis of the New ComColor Products

<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Extremely fast speed for a cut-sheet color device • Large image area and maximum sheet size • Competitive acquisition price and cost of operation for black & white or color • No degradation in duplex speed • Cold operation (no fusing) • New envelope feeder • Small footprint • Low energy consumption • Recyclable supplies packaging • Energy Star rating 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Cannot print on coated stocks due to the oil-base inks it uses • Print quality at a level below comparably priced toner-based products • Relatively low paper input and output capability for a device of this speed • Lacks some common MFP features of toner-based devices such as faxing⁸ • Upgrading requires a trade-in
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Moving traditional digital duplicator users to color • Meeting the mixed black & white and color printing needs of lower volume users • Accessing sites in transaction, TransPromo, direct mail, and other high volume variable print applications • Reaching new markets via partners 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> • Other vendors entering the high-speed cut-sheet inkjet space • Cost-competitive and toner-based MFPs

⁸ RISO says that faxing will be available in 2010.

An Update on RISO's Digital Duplicators

Amid the excitement about the new ComColor products, it is important not to overlook RISO's digital duplicators. RISO stresses that digital duplicators still satisfy a basic market need for run lengths above 25 copiers for static copies of monochrome or spot color documents. Other key needs met by these products are reliability, low cost, the ability to provide quick turnaround, and odd size printing for items such as envelopes. Table 5 below provides an overview of RISO's current digital duplicator products.

Table 5: RISO's Digital Duplicators

	EZ220	EZ390	EX590	RZ990	MZ790	MZ990
Speed	130 ipm	130 ipm	130 ipm	180 ipm	150 ipm	150 ipm
Resolution	300 dpi	600e dpi*	600e dpi*	600 dpi	600e dpi*	600 dpi
Format	8.5" x 14"	11" x 17"	11" x 17"	11" x 17"	11" x 17"	11" x 17"
Color capability	One-color	One-color	One-color	One-color	Two-color (one pass)	Two-color (one pass)
List price (base unit)	\$5,995	\$9,995	\$13,995	\$22,995	\$24,995	\$25,995

*The "e" stands for "emulated" (the actual resolution is 600 by 300 dpi).

Conclusion

RISO calls the ComColor products the "fastest, leanest, toughest, greenest inkjet printers on the planet." It is a nice piece of marketing hyperbole that fortunately is backed up by a solid combination of features and capabilities. High-speed, cut-sheet, inkjet-based, color products are a rarity in the document printing world. RISO has had a product in the market for years now and InfoTrends has long suspected that others would follow. Yet, as of today, the greatest activity by color inkjet technology in document printing has been with continuous-feed products at higher volumes. There continues to be a significant cut-sheet opportunity and RISO's ComColor announcements put the company in a strong position to take advantage of pent up market needs for the right combination of speed, productivity, running cost, and quality.

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