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## **Ricoh Gel Printers and MFPs – New Technology for Inexpensive Color Printing**

*Ricoh Rus*

Inkjet or laser? When it comes to purchasing a new color printer or MFP, such question in fact reflects uneasy choice that a customer has to face – “costly ink or costly cartridge”. Engineers from the Japanese company Ricoh, the world leading printing equipment and solutions manufacturer, developed a new technology – gel printing – that will once a for all solve the problem of costly office and home color printing.

### **Gel Inks – a Revolution in Printing**

Gel technology can be described as some kind of inkjet and laser printing hybrid. The ink supply in gel machines is performed through piezo-head as in inkjets, but, perhaps, it is the only feature that both technologies share. Ricoh presented its first gel printer - Aficio GX 2500 - Ricoh in 2007.

The main distinction of Ricoh gel machines is the unique pigment Liquid Gel™ inks with a high degree of viscosity and penetration that allows to perform high-speed two-sided printing on a regular paper with a quality as high as with laser printers. Due to inks’ gel core, the prints do not get blurred and resist humidity and direct-light for years.

### **Why Is Gel More Advantageous?**

The simplest Ricoh gel printer costs only 3300 rubles (approximately 100 USD), and a print made on this device will cost only 2 rubles (both monochrome and color in ECOnomy Colour mode). ECOnomy Colour mode saves gel consumption by reducing image density (while the text is printed with 100% filling) making prints cost almost as much as monochrome.

The bigger models from gel printer series have more functions and provide color printing costs no more than 0.9 rubles in economy mode and 2.5 rubles in clear image mode. Color laser printers of the same (smaller office) segment offer the cost of a print that is not less than 3.6 rubles under the same conditions.

It turns out that a user can either buy a monochrome laser printer or gel color printing machine for the same price, while not losing such laser printing advantages as duplex printing, high speed, simple maintenance, and user-friendly consumables.

Besides this, gel printers and MFPs are the most energy efficient series of Ricoh equipment. The maximum electricity consumption is less than 35 watt-hours (just like luminescent bulb). Gel printers have an enormous energy saving potential for companies.

### **GelJet Printers**

The line of inexpensive Ricoh color printers using GELJET™ technology consists of three models: Aficio SG 2100N, Aficio SG 3110DN, and Aficio SG 3110DNw. All of them have small footprints, convenient frontal access, and can be easily connected to other devices (Wi-Fi connectivity in SG 3110DNw is possible as well). This machines print at 29ppm, which is a real boost to office productivity.

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First color page is out in 6.5 seconds. The maximum capacity of standard and optional trays together with paper supply unit is 850 sheets. That provides quick and uninterrupted printing. Gel jet printers can perform professional printing even on posters and envelopes and non-standard sized sheets, thanks to multipurpose bypass tray.

Aficio SG 2100N/SG 3110DN/SG 3110DNw machines are ideal for small offices – all operations are performed from the front-side of the machine. Easy to understand and user-friendly control panel simplifies the job. Users can choose any of the comfortable ways to connect, either with net interface and USB 2.0 for Aficio SG 2100N and SG 3110DN, or via Wi-Fi for Aficio SG 3110DNw. These machines also support IPV6 Internet-protocol and various operational systems including Windows 64bit and Mac OS X.

GELJET printers help users to considerably reduce their expenses, color documents can be printed almost as cheap as monochrome due to ECoNomy Colour mode. Another saving feature is improved pumping system that reduces gel consumption. Aficio SG 3110DN and SG 3110DNw use automatic duplex feature (to reduce paper consumption), both models can be equipped with high-yield cartridges, reducing printing expenses and maintenance rate. In energy save mode the power consumption can be reduced to 0.71 Watt. New printers are made from non-toxic materials and the frame (according to Ricoh strict environmental policy) is made of partly recycled plastics derived from plant materials.

### **Ricoh Gel MFPs**

In the end of 2012 the line of Ricoh gel devices was for the first time supplemented with MFPs: Aficio SG 3100SNw series of “3 in 1” models with scanning, copying, and printing functions, and Aficio SG 3110SFNw series of “4 in 1” models with an additional fax-option.

Ease of use, compactness, front-side access, wireless Wi-Fi connectivity all this makes these MFPs perfect for small and home offices. Both models have high printing speeds – up to 29ppm with 3600 x 1200 dpi resolution.

First color page is out in 6.5 seconds. Standard and optional trays provide uninterrupted printing. With “multipurpose bypass tray” option MFPs can perform professional printing on posters, envelopes and sheets of non-standard size and density. Convenient “one touch select key” option can associate copying, scanning, printing, and fax options with one universal button and perform these actions with one touch.

Another advantage of the new MFPs is that these machines support IPV6 Internet-protocol and various operational systems including Windows 64bit and Mac OS X.

### **Wide-Format “Gel”**

The latest addition to the line of Ricoh gel devices was full-color wide-format Ricoh MP CW2200SP MFP, developed especially for CAD systems. Traditionally in the computer-aided-design-system-equipment field monochrome-printing-devices were used, but lately the demand for high-quality color printing in this sphere started to grow.

Ricoh MP CW2200SP A0 MFP combines plotter, copier, and scanner functions and uses fast-drying Ricoh Liquid Gel™ based inks, which provide high productivity and accuracy of thin lines-placement. They also prevent image smudging.

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The warming up for Ricoh MP CW2200SP takes only 40 seconds. That is why the speed of standard 5-pages tasks is faster if compared with speeds of LED and inkjet equipment of the same class. The whole volume of power consumption for MP CW2200SP is 90% lower than for the other machines of the same class. The speed of black and white printing is 1.8 A0 page per minute, and 0.6 A0 page per minute for color. The growth in productivity is due to ease of use: intuitive user-friendly interface, and a USB-slot that can use memory devices directly for data saving and writing without using computer.

The width of printing for MP CW2200SP is up to 914mm; the machine is also equipped with an automatic gripping and paper cutting device, flexible exit tray for 10 sheets and additional roll feeding device.

By using a color scanner incorporated in MP CW2200SP, one can simply transfer hand-made blueprints into digital format and archive important documents. It is especially important for companies, where there are still separate devices for color scanning and printing.

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