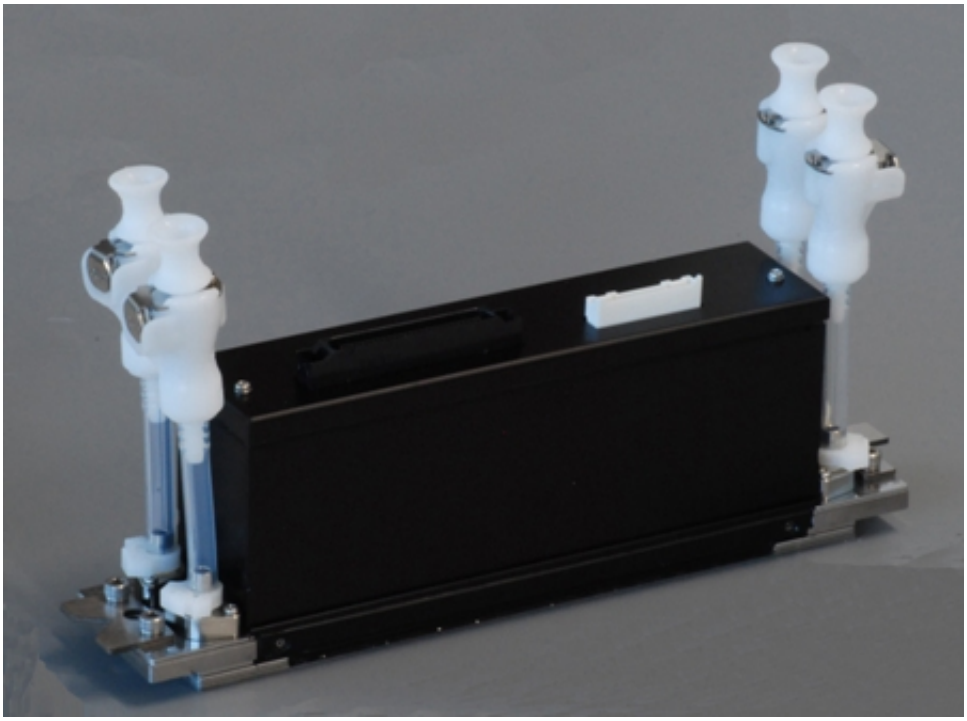
Kyocera develops world's fastest 300dpi inkjet printhead

August 8 2012

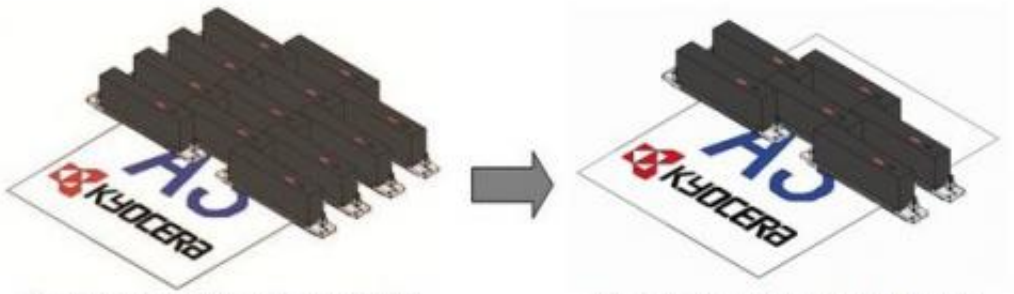


Kyocera's 300dpi two-color inkjet printhead. (water-based ink type shown)

Kyocera Corporation today announced that it has developed a new 300 dots-per-inch (dpi) inkjet printhead -- a key component for commercial inkjet printers -- which enables simultaneous two-color printing with just one printhead. With resolution of 300dpi, it offers the world's fastest printing speed of 152m/min. Samples of the new product will be available within the year.

The new product achieves simultaneous two-color printing with just one printhead. This not only effectively halves the number of printheads required in the printer, but also reduces the number of parts required for wiring, contributing to equipment downsizing. In addition, it has achieved an effective print width of 112mm, the world's widest for this type of printhead. Reducing the number of printheads used, even when wide-width printing is required, contributes to simpler equipment design and easier assembly.

The 300dpi model's nozzle configuration prevents the mixing of inks at the point of contact with the printed material — a potential problem when printing two colors simultaneously from the same printhead — ensuring that the new two-color printhead delivers quality printed images. Furthermore, the printhead has achieved the world's fastest print speed of 152m/min for a 300dpi printhead with simultaneous two-color printing, contributing to increased productivity through high-speed printing.



Number of printheads used with conventional one-color printhead

Reduced number of printheads needed with two-color printhead

In commercial printing, there is an increasing need for digital (or on-

demand) printing to accommodate and meet a wide variety of requirements such as smaller lot sizes, shorter delivery times, inventory reduction and variable printing of materials.

Off-set (or analog) printing, which is the mainstream method of current commercial printing, requires the creation of multiple plates for each project. This generates and increases costs, as it requires not only time and effort to print, but also inventory management and storage space for the plates. On the other hand, digital printing, including inkjet systems, allows for the immediate printing of only the required amount of design data. This means that there is no need to create or manage plates, contributing not only to increased productivity and cost reduction, but also a reduction in environmental burden, as plate-washing waste can be eliminated from the process.

To date, Kyocera has mass-produced 600dpi and developed 1200dpi inkjet printheads that achieve the world's fastest high-resolution print speed. By launching a new 300dpi printhead with the world's fastest speed and simultaneous two-color printing feature, Kyocera is responding to the needs of a wide variety of customers, including high-speed, high-resolution printing, equipment downsizing, cost reduction and reducing environmental burden to expand the possibilities of the digital printing industry.

Source: Kyocera