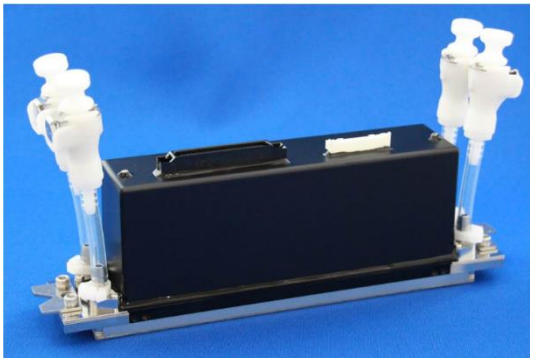
Press release

KYOCERA Launches Highly Robust Printhead for Digital Textile Printing

Offers excellent durability against harsh environments associated with the printing of garments and other applications

5 November 2015 – Kyoto, Japan/Neuss, Germany – Kyocera Corporation today announced that it will launch an inkjet printhead featuring a new, highly robust design for textile printing. For use as a key component in inkjet printers, the company will start mass production this month.



Model	Inkjet printhead KJ4B-0300-G06DS
Dimensions	200×45×68.5mm (W×D×H)
Max. drive frequency	30kHz
Resolution	300dpi
Effective print width	112mm (approx. 4 inches)
Ink compatibility	Water-based
Development facility	Kagoshima Kokubu Plant, Japan

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The textile industry is experiencing unprecedented demand for digital technologies, which eliminates the printing plate and allows for the immediate printing of only the required amount of ink, contributing not only to increased productivity and cost reduction, but also a reduction in environmental burden, as plate-washing waste is not generated in the production process. At the same time, there is a growing need for inkjet printheads which can withstand severe conditions associated with textile printing, such as fabric being caught or device errors occurring from shocks when feeding the fabric. Furthermore, the scattering of ink mist or fabric dust can result in malfunctions when entering the printhead.

In order to meet this need, Kyocera developed a new, highly robust design which enhances printheads for use under the harsh conditions of textile printing. Furthermore, the product offers the advantage of simultaneous two-color printing with one printhead, contributing to equipment downsizing. It also features the world's widest[*1] effective print width of 112mm (approx. 4 inches), which simplifies equipment design and maintenance by further reducing the number of printheads.

Kyocera already mass-produces inkjet printheads for textile printing which offer world-class levels of high print speeds with high resolution. By launching a robustly designed printhead, Kyocera addresses a multitude of market demands, thus expanding the possibilities of the digital printing industry.

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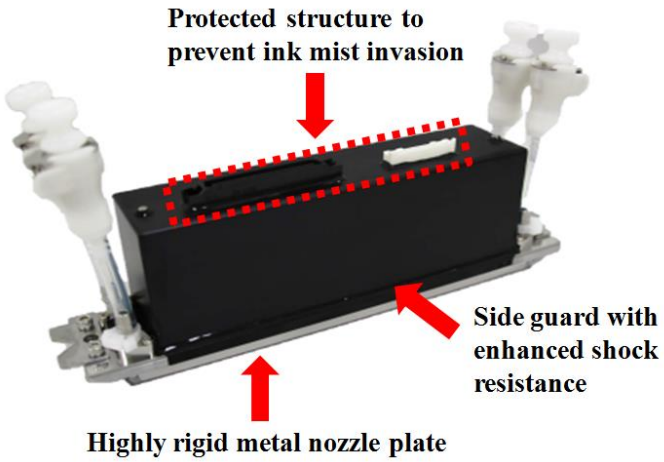
Details of the Robust Design[*2]

1. Basic structure

Features a highly rigid metal nozzle plate, side guards with enhanced shock resistance and a protected structure to prevent invasion of ink mists.



Highly rigid metal nozzle plate

Features excellent rigidity confirmed by shock tests in which an impact force of 200N was applied, which is approximately five times stronger compared to the impact caused when fabric strikes the nozzle plate during typical textile printing (Image 1).

Side guards with enhanced shock resistance

Offers high shock resistance confirmed by drop tests in which a 1kg-weight was dropped from a height of 1m, which has an impact force approximately ten times stronger compared to the impact caused when fabric strikes the printhead during typical textile printing (Image 2).

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Protected structure to prevent ink mist invasion

Prevents ink mist generated during the printing process from entering the printhead by applying sealing material around the connection parts utilized for making interface connections (Image 3).

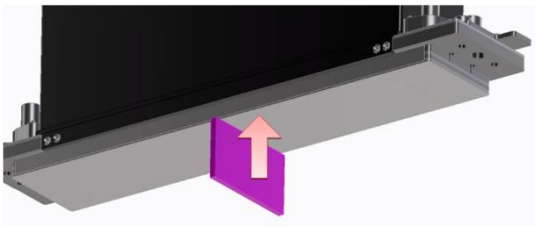

Image 1: Shock test for metal nozzle plate utilizing a printhead wiper

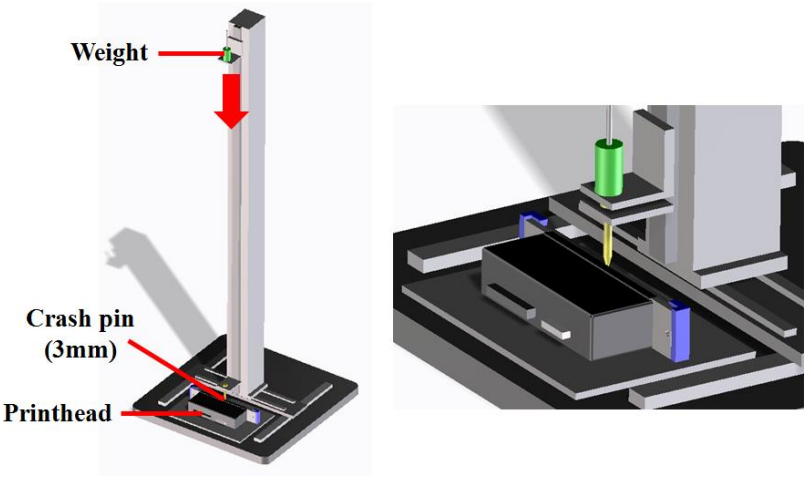

Image 2: Weight drop test for side guards

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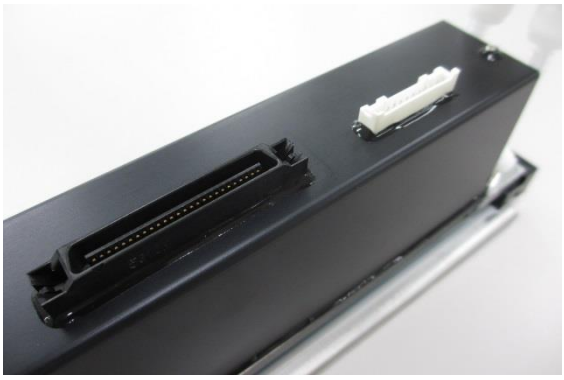

Image 3: Protected structure around the connection parts (indicated in red)

2. High temperature durability

Withstands temperatures between -20 to 80°C confirmed by Kyocera's temperature durability tests.

3. High driving durability

Durable and can operate even when dipped in high-temperature reactive ink, confirmed by continuous acceleration tests (1,500 continuous hours of actuator operation dipped in ink with a temperature of 70°C equivalent to typical usage of more than two years).

Kyocera would be delighted to conduct personal interviews on this topic with interested journalists at the ITMA exhibition. We also offer written interviews. Please get in touch with the press contact provided for interview requests.

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*1 World's widest effective print width for inkjet printheads for textile printing. Based on research by Kyocera (as of October 1, 2015).

*2 Assuming the severe operation environments in textile printing, Kyocera conducted nine reliability tests including drops, vibrations, shocks, thermal loads, electronic loads, dipping in ink and driving durability. Product features were confirmed under test conditions; full operation cannot be guaranteed under all actual conditions. Furthermore, the test results do not fully guarantee damage-free or trouble-free operations.

For more info about Kyocera Printing Devices, please visit:

http://global.kyocera.com/prdct/printing-devices/index.html

For more information about Kyocera:

www.kyocera.eu

About Kyocera

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 226 subsidiaries (as of March 31, 2015), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the largest producers of solar energy systems worldwide, with more than 6 gigawatts of solar power having been installed around the world to date.

The company is ranked #552 on Forbes magazine's 2015 "Global 2000" listing of the world's largest publicly traded companies.

With a global workforce of over 68,000 employees, Kyocera posted net sales of approximately €11.74 billion in fiscal year 2014/2015. The products marketed by the company in Europe include printers, digital copying systems, microelectronic components, fine ceramic products and complete solar power systems. The Kyocera Group has two independent companies in the Federal Republic of Germany: Kyocera Fineceramics GmbH in Neuss and Esslingen and Kyocera Document Solutions in Meerbusch.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at present €385,000 per prize category).

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