

Press release

## **KYOCERA Develops one of the World's Fastest 360dpi Recirculating Inkjet Printheads**

**Applications include printing onto ceramic tile — up to 50m per minute**

**September 17, 2015** – Kyoto/Neuss – Kyocera Corporation (President: Goro Yamaguchi) announced today that it has developed a new 360-dot-per-inch (dpi) inkjet printhead — a key component of industrial inkjet printing equipment — which sets a new world speed record in its class\*1, printing 50 meters per minute using 84-picoliter (pl) droplets. Marketed as the Kyocera KJ4C-0360, it will be available in October 2015.

### **Applications**

Uses for the new Kyocera printhead include the ability to print onto ceramic tiles in full color with designs and patterns. In the future, Kyocera aims to expand the product's applications into textile printing, such as carpeting and apparel fabric; and medical printing, such as on pharmaceutical tablets.



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Model	Inkjet printhead KJ4C-0360
Dimensions	200×39×54mm (W×D×H)
Print speed	50m/min. (Max. drop volumes: 84pl)
Resolution	360dpi
Effective print width	109mm (4 inches)
Ink compatibility	Oil-based / water-based
Development facility	Kagoshima Kokubu Plant, Japan

## Main features

### 1. World's fastest printing

The KJ4C-0360's prodigious ink-discharge power, made possible by Kyocera's proprietary piezoelectric technology, delivers the fastest printing in its class — 50m/min. using 84pl droplets.

### 2. Leading print width

Industry-leading<sup>\*2</sup> effective print width (109mm / 4") reduces the number of printheads required.

### 3. Fully adjustable ink discharge volume

Discharge volume can be adjusted between 15 and 84pl at a printing speed of 50m/min, with maximum discharge of 120pl at 25m/min, facilitating a wide range of high-efficiency, high-speed printing applications.

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### 4. Broad ink compatibility allows printing on diverse media

By utilizing components with high durability against various types of ink for the fluid channel, it enables the printhead to be compatible with both oil- and water-based inks having viscosities between 10 and 18mPa/s; large-particle pigment inks, for printing on carpet and other textiles; and quick-drying inks for special purposes. Kyocera's proprietary technology and highly efficient ink-recirculation structure inhibit ink sedimentation in the head and drying and thickening on the nozzle.

### 5. Simple design for easy mounting

The KJ4C-0360's light weight<sup>\*3</sup> and efficient connector simplify mounting and replacement.

### 6. Stable performance

Kyocera's proprietary ink recirculation structure maintains a steady ink temperature and helps prevent ejection failure due to air bubbles. Even if this phenomenon does occur, the structure recovers by ejecting the air bubbles, reducing the need for ink purging.

## Development Background

Inkjet printing is a simple-process digital printing technology that enables plate-less printing without contact on the print media. Nowadays, in the commercial printing field there is a growing demand for digital printing, which can respond to diverse needs such as smaller-lot sizes, short delivery times, high productivity and reduction of environmental load. The printing market has shifted

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from mass-volume printing to more flexible mid- to small-lot printing. Applications for inkjet digital printing are increasing for various materials such as fabric and building-materials in addition to paper.

By utilizing Kyocera's proprietary technologies for material development of the piezo actuator and fluid channel design, the company has succeeded in developing a printhead that responds to these needs. With the launch of this product to the market, Kyocera enters the construction tile printing field for the first time, aiming to increase its printhead share in the market.

\*1 The world's fastest speed for an inkjet printhead at a print resolution of 360dpi (based on research by Kyocera; as of September 17, 2015).

\*2 Among inkjet printheads for construction tile printing.

\*3 When compared to Kyocera's inkjet printheads with similar resolution

## For more information about Kyocera:

[www.kyocera.eu](http://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

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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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