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Ricoh Launches New Industrial Inkjet Printheads

Three models for different applications, offering high image quality and productivity

TOKYO, March 16, 2022 – Ricoh Company, Ltd. today announced the launch of three newly developed industrial-grade inkjet printheads, RICOH MH5422, RICOH MH5442, and RICOH MH5422 Type A, which customers can use as key components in digital printing systems. The new products will be available globally starting today.

The new printheads provide high image quality and productivity by utilizing Ricoh's high-precision technology. They feature a wide range of ink compatibility and improved durability through enhanced nozzle surface abrasion resistance. Ricoh has also improved system compatibility by applying separate cables and high-precision surface alignment features.

These printheads are positioned as an enhanced addition to the Ricoh MH5320/5340 product family, the sixth generation of Ricoh inkjet printheads released in 2019. The new printheads inheriting the sixth generation's technology, enable users to select the inkjet printheads that are most compatible with their needs. Customers using the existing RICOH MH5420/5440 (released in 2012) and RICOH MH5421/5441 (released in 2017) can easily upgrade their printers to this printhead while maintaining existing print quality with the same droplet volume.

Ricoh will continue to expand its inkjet printhead lineup to respond to the diverse needs of its worldwide customers. Ricoh's industrial printing solutions strive to resolve social issues by helping to build a safe and secure global environment for clothing, food, and housing.



RICOH MH5422

Background

There is an increasing demand for easy-to-use inkjet printheads compatible with a wide range of inks. Digital printing continues to expand into a broader range of fields and accelerate resource-saving, labor-saving, and local production for local consumption. In the industrial printing market,

the number of customers involved in digital printing continues to increase and is expanding to include sign graphics, textiles, and building material decoration and ornamentation.

Main features of the newly developed inkjet printhead

1. High-quality printing and high productivity
 In addition to a nozzle layout of 1,280 nozzles, 150 npi x 4 rows, and a standard droplet volume of 7pl, the new printhead achieves high image quality printing by improving the accuracy and uniformity of the droplet ejection speed and direction. Ricoh has also improved the stability of high firing frequency, and a firing frequency of up to 50 kHz provides increased productivity.

2. Enhanced ink compatibility
 Supports all types of inks: UV, water-based, and solvent. In particular, when using water-based ink, product durability has more than doubled*¹ compared to their predecessor, RICOH MH 5421/5441 (released in 2017).
 *1 Results based on water-based inks and evaluation methods specified by Ricoh.

3. Enhanced abrasion resistance of the nozzle surface
 Strength of the ink repellent film improved*² compared to conventional printheads*³. This reduces the nozzle plate's deterioration against repeated wiping and provides stable image quality even after extended use.
 *2 Results based on ink and evaluation methods specified by Ricoh.
 *3 Conventional printheads: RICOH MH5420/5440 and RICOH MH5421/5441

4. Improved system compatibility
 Print head alignment is available in two configurations: the pin-alignment compatible model or a high-precision surface-alignment compatible model for easy alignment for system integration and field service replacement. In addition, the separate cable structure with a general-purpose connector increases the flexibility for attaching and detaching the printhead.

Model name	RICOH MH5422	RICOH MH5442	RICOH MH5422 Type A
Method	Multilayer piezo push mode		
Print Width	54.1mm		
Number of nozzles	1,280 Staggered array (320 x 4 rows)		
Nozzle pitch	1/150 inch/row (approx. 0.1693mm/row)		
Compatible ink	UV ink, solvent ink, water-based ink, etc.		
External printhead dimensions	Width: Approximately 89mm Depth: Approximately 24.51mm Height: Approximately 66.3mm		
Weight	228g (including 45C cable)		
Max. number of color inks	2 colors	4 colors	2 colors
Ink port	yes	yes	no

Related Links

[RICOH MH5422/MH5442/5422 TypeA](#)
[Industrial Inkjet RICOH TH/MH/GH](#)

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Ricoh is [empowering digital workplaces](#) using innovative technologies and services that enable individuals to work smarter from anywhere.

With cultivated knowledge and organizational capabilities nurtured over its 85-years history, Ricoh is a leading provider of digital services and information management, and print and imaging solutions designed to support digital transformation and optimize business performance.

Headquartered in Tokyo, Ricoh Group has major operations throughout the world and its products and services now reach customers in approximately 200 countries and regions. In the financial year ended March 2021, Ricoh Group had worldwide sales of 1,682 billion yen (approx. 15.1 billion USD).

For further information, please visit www.ricoh.com

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