

**RISO KAGAKU CORPORATION** 



## Refuting conventional wisdom in color printing and broadening the possibilities of business through the world's highest speeds and unique color solutions—ComColor

### - Realizing office environments for large-volume color printing without cost concerns -

In the latter half of the 1990s, a common assumption was that "color printing is costly and time consuming." At this time, monochrome printers were the main type of printers used in offices, while color printers, which had high printing unit costs, were still out of reach. RISO's ComColor high-speed inkjet printers shattered this assumption and "made color even more accessible" with the same ease as monochrome printing. Thoroughly pursuing high speed and economic efficiency, ComColor achieves the world's fastest printing speed of 165 pages<sup>\*1</sup> per minute and has a low running cost of 1.51 yen<sup>\*2</sup> per page even for color printing. ComColor enables easy large-volume printing of previously unaffordable materials, including color leaflets with photos and presentation materials containing easy-to-read color-keyed graphs, without having to worry about costs. The unrivaled potential of ComColor ensures flexible handling of a wide range of print jobs, from conference materials and business forms to manuals, pamphlets, posters, direct mail materials and educational tools. ComColor enables higher-grade, efficient print work and is being used in an extensive

range of business settings around the world.





<sup>\*1</sup> Available on ComColor GL9730. A4 long-edge feed, simplex, continuous printing in standard density setting, and using the Face Down Tray. Based on office color printers commercially available as of March 2024 (Source: Data Supply Inc.). These printers have continued to extend their record for the world's highest print speed since being launched in 2003.

<sup>\*2</sup> A4 long-edge feed, simplex printing, using RISO GL F ink. Uses color pattern with 300dpi resolution that was designated by ISO/IEC24712 for measurement image and calculated using RISO's original measurement method based on ISO/IEC24711. Uses monochrome pattern with 600dpi resolution that was designated by ISO/IEC19752 for measurement image and calculated using RISO's original measurement method based on ISO/IEC24711. Cost of paper is separate.



## Used widely in over 190 countries and regions around the world, **RISOGRAPH** significantly expands the potentials of stencil printing.

### - Enables easy high-speed and large-volume printing at low cost -

The origin of the RISOGRAPH series is the mimeograph, a kind of stencil printing style reputed to have been invented by Thomas Alva Edison. Over many years, RISO has continued to place emphasis on stencil printing technology. Stencil printing is a printing method that involves perforations in a master and pressing ink through the holes to transfer an image onto paper. Although this is an extremely simple process, producing the masters and carrying out printing requires significant amounts of time and labor. To overcome these issues, RISO developed the all-new RISOGRAPH digital duplicator by fusing the principles of stencil printing in 1980 with its unique technology. These digital duplicators can be operated as easily as copiers by anyone without staining one's hands with ink. Compared with regular office printers, RISOGRAPH is exceptional in terms of cost and speed when printing the same document in high volume and can also handle a wide

variety of paper quality and weights.

The RISOGRAPH features of "high-speed, large-volume printing, easy operation and low cost" have received broad support and this product is currently being used at educational institutions, government and public agencies, companies and stores in over 190 countries and regions of the world. RISO is continually advancing the RISOGRAPH series to respond to diverse requirements worldwide. Moreover, RISO will not only strengthen the RISOGRAPH from a functional perspective but will also enhance environmental performance such as by curbing power consumption.



GOCCOPRO MiScreen a4



### The Digital Screen Maker: **Revolutionizing Screen Printing Productivity**

The RISO digital screen maker significantly simplifies the screen making process compared to conventional emulsion technology. It eliminates the need for facilities such as darkrooms and wash-out booths. The RISO Dry Thermal Screen Making System\*, which consumes less power and generates no wastewater, dramatically improves the productivity of screen printing. RISO offers the professional GOCCOPRO series and the compact MiScreen a4 model. In addition to the hardware, we provide various mesh counts of dedicated screen masters to meet diverse needs.



\*The RISO Dry Thermal Screen Making System is a CTS (Computer-to-Screen) system with a thermal head that heat-perforates a screen master of mesh laminated with film

# Sukurire

## Sukurire: Digitizing School Communication to Support Faculty and Caregivers

Sukurire is a digital solution service launched in 2021 to digitize communication channels connecting schools and caregivers. Utilizing a smartphone application, it not only supports both faculty and caregivers, but also fosters an enriched educational environment.





Yomiyas: Cloud Service for Automatically Assessing Document Readability and Ease of Understanding

Yomiyas is a cloud service launched in 2023 that automatically assesses the readability and ease of understanding of documents. This service quantitatively verifies whether documents such as application forms are designed to be visually appealing and easy to read, automatically visualizing areas that do not meet the criteria



# **Inkjet Heads RISO TECHNOLOGIES** CORPORATION





# **Inkjet Heads: Meeting Various Printing Needs** In Different Fields

RISO TECHNOLOGIES CORPORATION, based in Shizuoka Prefecture, handles the development, manufacturing, and sales of inkjet heads. Inkjet technology accurately ejects small ink droplets toward a target object, enabling precise printing without direct contact. This technology, combined with various ink types, enables high-guality printing on a wide range of materials such as paper, plastic, and film. RISO TECHNOLOGIES' inkjet heads not only fulfill various printing needs across difference fields but also play a crucial role in the continual evolution of printing technology.

> Ink recirculation system and inkie

### Product Introduction / GOCCOPRO - MiScreen a4 / Sukurire / Yomiyas / Inkjet Heads

\*Application Examples (Photos are for illustrative purposes only.)



**Business Activities** 



Our development policy is "Creating fundamentally unique products." RISO's innovative manufacturing generates new value to create useful products.





**Three Core Technologies** of **RISO** 

### RISO INK FII TYPE Obtains the First "Ink Green Mark" for Stencil Printing Ink

RISO INK FII TYPE, a consumable for the RISOGRAPH SF E II series of digital duplicators, obtained the "ink green mark," the first in the industry for stencil printing ink. This ink acquired the highest-rank certification for the "ink green mark," which sets a three-step certification standard based on the ratio of biomass\* in printing ink. In this way, RISO's product manufacturing that aims to reduce environmental burdens was highly acclaimed. \* Biomass: renewable biologically derived organic raw materials



and "beauty" of printers.





Office and home-use inkjet printers use water-based inks. With water-based inks, the paper absorbs water and deformations such as waves and curls easily arise, which can easily lead to folds and wrinkles

in high-speed printing. In contrast, oil-based inks used by ComColor cause no deformities immediately after printing and enable a smooth paper-feeding process, making oil-based inks suitable for high-speed printing.



Ink Development

Technology

Some familiar examples of products using emulsifiers include mayonnaise, butter, milk, cosmetics cream, and wood glue. RISO succeeded in developing an emulsion ink that does not dry out inside the printer, yet dries quickly after printing by optimizing the formulation balance of oil, water, and pigment as well as the processing conditions.



### Successful development of world's first rice ink

RISO has developed the world's first stencil ink that contains domestically produced rice bran oil. By effectively utilizing ordinarily discarded rice bran as a resource, RISO realized an environmentally conscious ink while raising the quality of ink.



8 RISO CORPORATE PROFILE

### In 1954, RISO succeeded in developing RISO INK as the first domestically produced emulsion ink. Since then, RISO has worked to develop a variety of ink technologies that create the "speed"

### Oil-based ink supports the world's highest-speed color printing.



Oil-based pigment ink for minimal paper deformation



Deformations such as waves and curls easily arise with water-based

### **RISOGRAPH RISO developed Japan's first emulsion ink.**

RISOGRAPH uses emulsion ink that utilizes the actions of a surfactant (emulsifier) to preserve the two incompatible substances of oil and water in a stable liquid state.



Magnified photograph of emulsion i



"High-speed paper feeding system technology" that realizes "large-volume and high-speed printing" cultivated over many years in RISOGRAPH duplicators has also been integrated into *ComColor* high-speed inkjet printers. We have continued to advance this technology as one of RISO's core technologies.

**High-Speed Paper** Feeding System Technology



### Realizes the world's fastest speed of 165 pages<sup>\*1</sup> per minute through reliable paper feeding technologies.

ComColor is a full-color high-speed printer that applies ink drops to paper fed at high speeds under an inkjet printing head. Timing mismatches between paper

feeding and printing head ink discharging will result in poor image printing quality. Therefore, the accuracy of paper feeding is the key to realizing the world's fastest print speed, which is the chief characteristic of the ComColor.





In-line inkjet printing heads arranged in parallel

### RISOGRAPH High-speed paper feeding system technology cultivated over many

years realizes the incredibly fast speed of 190 pages<sup>\*2</sup> per minute. RISOGRAPH utilizes a stencil printing technique. With this technique, a master that

is the basis of printing is wrapped around the print drum. Printing is performed by

pressing and transferring images underneath paper fed at high speed under the rotating print drum. After the image transfer, the paper attached to the drum is quickly removed

and sent to the paper receiving tray. This method smoothly performs a series of operations and applies ink uniformly, which has enabled high-quality printing with no irregularities. \*2 RISO SF series, high speed mode, paper feed tray.



Paper is fed under the drum at high speed.



ComColor high-speed printing.

**Printing Process** 

Optimization



for a range of print environments that include normal office environments.

Ink has the properties of softening in hot conditions and hardening when it is cold. To ensure uniform printing quality in accordance with these changes in ink properties, the RISOGRAPH hardware is automatically controlled.



To raise print speed and print quality, developing consumables matched to the features of hardware and alternatively developing hardware compatible with the characteristics of consumables are extremely crucial. RISO undertakes such development that matches hardware and consumables as it continually works toward printing process optimization.

### Developing printers matched to the characteristics of oil-based ink

To realize fast printing with high image quality, it is necessary to control microscopic ink droplets from the inkjet printing head to ensure the droplets are sprayed rapidly and applied accurately. We evaluate the flight condition of the ink droplets and verify a variety of conditions and combinations as we optimize the printing process to ensure stable and



The ink discharges from the inkjet printing heads like a water gun onto the paper 1.5mm away at a speed of 7-10 meters per second (30km/h)

### **RISOGRAPH** Developing printers matched to the characteristics of emulsion ink

Continually maintaining stable print quality of RISOGRAPH used around the world

in a variety of climates and environments is a crucial issue. For this reason, RISO thoroughly evaluates the printing quality of its products



Multi-laver structure of the print drum that uniformly transfers an optimal amount of inl





# Building a global supply chain to provide the best quality to customers worldwide

The RISO brand is earning high acclaim throughout the world. Besides domestic manufacturing bases in Ibaraki Prefecture and Yamaguchi Prefecture, RISO has set up overseas manufacturing bases in China and Thailand. As it proceeds with the globalization of its production, RISO is also deploying its domestic production technologies overseas and is providing technical guidance at overseas manufacturing bases to ensure the smooth startup of production and to maintain mass production. RISO is building a global supply chain and is thoroughly pursuing the essence of manufacturing amid all flows of business ranging from the procurement of materials to shipments.

As one initiative in this area, RISO has introduced concurrent engineering techniques aimed at sharing and quickly resolving various issues. The production departments collaborate with the development departments

from an early stage of R&D and are building a production structure capable of undertaking highly efficient mass production with stable quality.

To maintain mass production and standardize quality, we also use 3D CAD to design and undertake in-house production of jigs (a production tool). RISO also carries out simulations to ensure that overall production flows smoothly and also performs production line design.

In production planning as well, the sales departments and the production departments share market data that has been closely analyzed and flexibly execute planning. By producing necessary products in the required amounts when needed, RISO is flexibly responding to market needs while working to conserve resources and energy and to reduce the environmental burden.







Recycled products molded with a RISOGRAPH ink bottle

#### Promoting reuse and recycling

RISO does everything possible to reuse products and components. Products are collected and then gathered at the RISO Parts Center and only those reusable parts that meet stringent quality standards after collection are used. RISO has attained a reuse and recycling rate of 99%\*.

Used digital duplicators are disassembled and separated into reusable components and consumables. Only those reusable components that pass RISO's strict quality assurance standards are used in products. Collected used ink bottles are processed into small pellets and reused in a portion of ink bottles or as new plastic products.

Used ink cartridges for *ComColor* are separated according to material. Exterior paper is recycled as raw material for paper making and other components of these bottles are recycled as shipping pallets and alternative fuel. (\*Calculated from fiscal 2022 production results)

ture capable of ty. so use 3D CAD tion tool). RISO



In-house manufacturing of assembly jigs for inkjet printing heads





### Stable consumable supply and maintenance systems lead to high evaluation from customers worldwide.

RISO's overseas business started on a full-scale basis in 1986, spurred by the strong desire of founder Noboru Hayama for RISO's RISOGRAPH to be of practical use in the field of school education around the world for the benefit of children, the leaders of tomorrow. Since then, RISO's products have been used by educational institutions, government and public agencies, companies, and local communities in over 190 countries and regions that include Europe, the Americas, Asia, the Middle East, and Africa. The name RISO has become synonymous with digital duplicators (stencil printers) and is known widely around the world.

We attribute our outstanding evaluation not only to the excellence and high quality of product performance but also to our enhanced consumable supply and maintenance systems. Customers are able to use our products with reassurance and for long periods of time thanks to the introduction of a comprehensive consumable supply system and top maintenance system that complements the outstanding reliability of our hardware technology.

Only those dealers that have strong maintenance capabilities become RISO's business partners. In addition, we provide technical training at technical training centers in Japan, the United States, and the United Kingdom as we strive to improve our maintenance capabilities at all times.

The same finely tuned solutions business that we provide in Japan together with a global network that links approximately 2,800 RISO Group employees, including 22 overseas subsidiaries, and our dealers enable us to earn the trust of numerous customers.

Our aim is to realize true globalization rather than mere internationalization. It is our hope that the RISO brand is still going strong when the world becomes one, transcending borders as well as cultures, languages, and customs.

Business Activities / Overseas Business Development

### Rolling Out VALEZUS as a Brand for the **Production Printing Market**

From 2019, RISO began rolling out VALEZUS as a brand of high-speed inkjet printers for the production printing market in North America and Europe. The VALEZUS T2200 inkjet printer realizes high-speed color duplex printing on A4-size paper at a speed of 330 pages per minute. The introduction of this brand of printers expands new possibilities for high-speed inkjet printers in high-volume printing applications in the small- and medium-sized printing and data output industries, the financial and insurance industries and at private companies and government offices. The printer was also released into the





### Aiming to Realize the Company Name RISO, Meaning "Ideal"

946

The history of RISO began with a single mimeograph printing device on the birthday of founder Noboru Hayama on September 2, 1946. At the end of World War II, he had entered Nihon University. He had to raise the money for both educational fees and family finances all by himself, and so that's why he chose the mimeograph printing industry as his occupation. Hayama believed that "people should not lose their ideals

because then there would be no future for Japan as a nation. Thus, we must always pursue our ideals to ensure the future." He reflected this conviction directly into the company name and founded "Riso-Sha," meaning "ideal."



Noboru Hayama focusing his energy on the development of ink. 1952

#### 1946–1974

mpany Founding and a Shift from Printing Business to a Consumables and Hardware Manufacture

- 1946 Founder Noboru Hayama established mimeograph printing company "Riso-Sha"
- 1948 Changed company name to "Riso Printing Company" and opened mimeograph print shop in Nihonbashi, Tokyo
- 1954 Developed and launched Japan's first emulsion ink, *RISO INK*
- 1955 Reorganized company and changed company name to "Riso Science Laboratory Limited"
- 1958 Launched mimeograph printing device *RISO-Graph*
- 1963 Company incorporated under new name "RISO KAGAKU CORPORATION"
- 1965 Completed Kasumigaura Plant
- 1967 Launched thermal stencil master making device RISO FAX JF-7
- 1972 Launched thermal transfer OHP film printer *RISO TRAPEN-UP TU230* and *RISO* OHP 750
- 1974 Launched RISO XENOFAX FX-150 and RISO XENO MASTER

### Launch of World Unique PRINT GOCCO and RISOGRAPH 977 / 1980

This period saw RISO reap the rewards of efforts in development and take a major stride forward as a comprehensive manufacturer of stencil printers. During this time, RISO created a series of fundamentally unique products for the home and the office. In 1977, RISO launched *PRINT GOCCO* for home use. This product recorded explosive sales soon after its release and by the end of the year had

become a huge hit. RISO also developed the *RISOGRAPH*, an all-new printing system for the office based on original duplicating technology. It has continued to lead the field since its debut in 1980.



Demonstration of *PRINT GOCCO* around the time of launch. It attracted the interest of both children and adults alike.

1975–1988

A Huge Leap Forward to a Comprehensive Stencil Printer Manufacturer

#### 1977 | • Launched personal card printer PRINT GOCCO B6



1980 • New corporate logo and symbol introduced under corporate identity enhancement program for a nature corporate image





- 1984 Launched full-auto duplicator RISOGRAPH 007
- 1985 Established RISO OKINAWA CORPORATION

1981

1986 • Established RISO, INC. in the U.S.A. • Completed Ube Plant

Launched digital duplicator RISOGRAPH 007 DIGITAL



Mimeograph printing device RISO-Graph

### Delivering RISO's Products to Customers around the World

Beginning in 1986 with the establishment of RISO, INC. (U.S. state of Massachusetts), RISO made its first foray into overseas markets in different parts of the world and created a sales network. Thereafter, RISO set up a series of sales bases around the world. Now with more than 20 subsidiaries, the Company is operating at a truly global level.

In terms of production, in 1999 RISO started operating its first plant overseas in Zhuhai City, Guangdong Province, China. Subsequently,

operations of plants commenced in Shanghai and Shenzhen in China as well as in Thailand. This signaled the establishment of a true global production structure.



Exhibiting products at CeBIT 2002, which was held at an international exhibition site in Hanover, Germany

### 1989-2000

Bringing New Duplicating Technology to the World as a Top Manufacturer of Digital Duplicators

1989	• Established RISO EUROPE LTD. in the U.K.
	<ul> <li>Listed in the over-the-counter stock market in Japan (JASDAQ)</li> </ul>
1990	Established RISO (Deutschland) GmbH
1991	Established RISO FRANCE S.A.
1992	• Established RISO (U.K.) LTD.
1993	Established RISO IBERICA, S.A. in Spain
	Established RISO HONG KONG LTD.
1994	<ul> <li>Launched the world-first inner-press-engine digital duplicator RISOGRAPH SR7200</li> </ul>
1996	Tsukuba Plant obtained ISO 9002 certification
1999	• Established RISO TECHNOLOGY ZHUHAI CO., LTD. in China
2000	Launched RISO V8000 world-first one-pass two-color digital duplicator
	Tsukuba Works (Tsukuba Plant and     R&D Technology Center) obtained

ISO 14001 certification



### **Birth of the World's Fastest Inkjet Printer** ComColor

Responding to the need for "lower-cost and easy-to-use color printing," RISO and Olympus Corporation jointly developed the high-speed inkjet printer ComColor HC5000. This printer integrated a host of previously unavailable functions that include in-line inkjet printing heads and oil-based pigment ink optimally suited to high-speed printing. RISO created this novel high-speed inkjet printer by combining high-speed paper feeding technologies cultivated in the RISOGRAPH digital duplicator business and thor-

oughly pursuing high speed and economic efficiency.



A showcase of new products at Tokyo rnational Forum in 2003

### **Riso Research and Design Center Established as New Development Base**

RISO established the Riso Research and Design Center in Tsukuba city, Ibaraki Prefecture, to integrate development bases that were spread out over a number of locations. By enhancing the efficiency of information communication and development and promoting smooth mutual communications, RISO has established a development structure capable of undertaking integrated development ranging from hardware to consumables and software. The center has become a base for creating the next "fundamentally unique products."



Riso Research and Design Center

### 2001-2012

#### Challenging New Markets with a New Generation of Business Printers

- Launched compact type digital duplicator RISO KS 2001 series for overseas markets
- 2003 • Established RISO INDUSTRIES (H.K.) LTD. Completed RISO Shin-Osaka Building and RISO **Omotesando Building** • Launched *RISO HC* series of high-speed inkjet printers
- 2004 • Launched RISO MZ/RZ series
- 2006 Listed on the First Section of the Tokyo Stock Exchange

• Launched ComColor series



- Launched GOCCOPRO 100 digital 2011 screen maker Established RISO INDUSTRY (THAILAND) CO., LTD.
- 2012 • Established RISO INDUSTRIES (SHENZHEN) LTD. in China

2013 • Launched new ComColor series Completed Riso Research and Design Center in Ibaraki Prefecture

Pursuing Our Ideals

2015 • Established RISO (SG) PTE. LTD.

2013-Now

- 2016 Established RISO TURKEY BASKI COZUMLERI A.S.
  - Launched ComColor FW series
  - Launched RISO SF series
- Launched ComColor GD series
- •Launched VALEZUS T2100 2019
- •Launched ComColor FT series 2020
- •Start of Sukurire app 2021
- •Launched RISO MH series
- •Launched ComColor GL series
- •Start of Yomiyas cloud solution 2023
- Established RISO TECHNOLOGIES CORPORATION 2024

# Materiality (Key Contribution to SDGs)

RISO contributes to the SDGs from three perspectives: Economy, Society, and Environment with the aim of realizing a sustainable society.







2009

# **RISO** Today



Americas 8.0%

Kansai Shikoku Business Partner Sales Department

20,000

FY2020 FY2021 FY2022 FY2023 FY2024

1.651

FY2020 FY2021 FY2022 FY2023 FY2024

1 3 94

683

1,000

	Sapporo Business Office
	Sendai Business Office
	Niigata Business Office
	Maebashi Business Office
ent	Saitama Business Office
	Tsukuba Business Office
	Chiba Business Office
	Tokyo Business Office 1
	Tokyo Business Office 2
	Tokyo Business Office 3
	Tokyo Educational Institution Business Office
ent	Kanagawa Business Office
	Tama Business Office
	Nagoya Business Office
	Mikawa Business Office
	Shizuoka Business Office
	Hamamatsu Business Office
	Kanazawa Business Office

Note: Certain products and initiatives that are introduced in this corporate profile apply to the Japanese market only.

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https://www.riso.co.jp/english/

RISO KAGAKU Corp. official social media accounts



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Here is a list of official social media accounts. https://www.riso.co.jp/english/sm/

