

**RISO KAGAKU CORPORATION** 

## Creating Fundamentally Unique Products





RISO KAGAKU CORPORATION (RISO) is a development-oriented company that provides unique products and services in the paper communication field.

Founded in 1946 as a mimeograph printing company, RISO subsequently commenced the development and manufacture of ink. Guided by its development policy of "Creating fundamentally unique products," RISO worked to develop new products and transformed the content of its business from producing office supplies toward being a manufacturer of printers. Currently, our mainstay *RISOGRAPH* digital duplicators and *ComColor* high-speed color printers are used widely in over 190 countries and regions worldwide.

RISO aims to create truly essential value that people might not even be aware of and transform this value into tangible products and services. By anticipating changes in the times, we seek to provide attractive products that strongly appeal to people's senses, making them realize that a certain product was in fact what they wanted and is extremely useful.

RISO will continue to take on the challenge of creating new products and services to pursue the possibilities of new print work and ensure the satisfaction of customers the world over.

Akira Hayama President & CEO





## ComColor

### 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 color 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 1.44 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.

\*1 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 September 2021 (Source: Data Supply Inc.). These printers have continued to extend their record for the world's highest print speed since being launched in 2003.
\*2 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.



ComColor



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### 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 be invented by Thomas Alva Edison. Over long 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.





**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 CSR in development



RISOGRAPH SF E II series

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" and "beauty" of printers.

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

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.





Oil-based pigment ink for minimal paper deformation

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

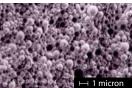
#### **RISOGRAPH RISO developed Japan's first emulsion ink.**



The *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. 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.



Magnified photograph of emulsion ink



#### 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.



High-Speed Paper Feeding System **Technology** 

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

## ComColor

#### Realizes the world's fastest speed of 165 pages\*1 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*.

\*1 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 September 2021 (Source: Data Supply Inc.).



In-line inkjet printing heads arranged in parallel

## RISOGRAPH High-speed paper feeding system technology cultivated over long years realizes the incredibly fast speed of 190 pages<sup>\*2</sup> per minute.



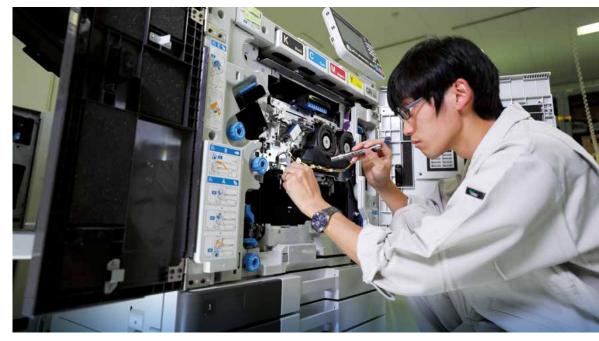
*RISOGRAPH* utilizes a stencil printing technique. With this technique, a master that is the basis of printing is wrapped around the print drum. Printing is performed by pressing and transferring images underneath paper fed at high speed under the

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.

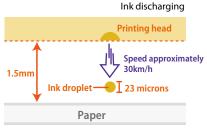


To raise print speed and print quality, developing consumables matched to the features of hardware and alternatively developing hardware compatible with the characteristics of consumables are extremely crucial. RISO undertakes such development that matches hardware and consumables as it continually works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

#### **ComColor** 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 high-speed printing.



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

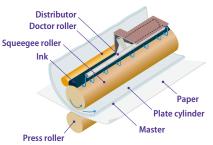


Continually maintaining stable print quality of RISOGRAPH used around the world

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

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.



Multi-layer structure of the print drum that uniformly transfers an optimal amount of ink





Business Activities

## Production





# Building a global supply chain to provide 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



#### the best quality



A recycled product 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 2020 production results)

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.



In-house manufacturing of assembly jigs for inkjet printing heads





# Stable consumable supply and maintenance 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

New Brand

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

From 2019, RISO began rolling out *VALEZUS* as a new brand of high-speed inkjet printers for the production printing market in North America and Europe. The *VALEZUS T2100* inkjet printer realizes high-speed color duplex printing on A4-size paper at a speed of 320 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 Japanese market in 2021.

VALEZUS

VALEZUS T2100

systems lead to

ies

comprehensive consumable supply system and top maintenance system that complements the outstanding reliability of our hardware technology.

argest printing equipment exhibition in the world (Germany)

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 3,000 RISO Group employees, including 23 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.

## History of RISO

#### Toward the global stage backed by leading-edge

#### 1986

#### Introducing RISOGRAPH at education venues worldwide

RISO started full-scale overseas business development spurred by the strong desire of founder Noboru Hayama for RISO's machines to be of practical use in the field of school education around the world for the benefit of children, the leaders of tomorrow. Starting with its first overseas subsidiary, RISO, INC. (U.S. state of Massachusetts), RISO set up bases in various countries around the world. Today, the RISOGRAPH is widely used at educational institutions, government and public agencies, companies and local communities in over 190 countries and regions worldwide.



Actively taking on the challenge of hardware development and sales A huge leap forward toward becoming a comprehensive stencil printer manufacturer

1972

#### **1977** Launch of unprecedented hit product *PRINT GOCCO*

By integrating the plate-making and printing processes into a single unit, RISO developed this simplified personal card printer that is compact and can be easily used in homes. This product was named PRINT GOCCO to embody the desire for parents and their children to enjoy printing. Thanks to its features that enabled anyone to easily make beautiful cards, PRINT GOCCO recorded explosive sales and became an indispensable product for creating New Year's greeting cards.



Demonstration sales of PRINT GOCCO at a department store



The birth of "RISO" and the road toward becoming a manufacturer of printing equipment

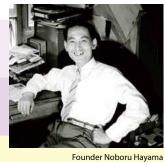


RISO INK

#### 1954 Development of Japan's first emulsion ink

At that time, founder Noboru Hayama strongly realized it was necessary to secure stable supplies of emulsion ink, which were available only through imports. In 1954, after one and a half years of trial and error, he succeeded in developing Japan's first emulsion ink called RISO INK. With this achievement, RISO took its first step from being a mimeograph company and moved toward becoming a manufacturer of printing equipment that focuses on "creating fundamentally unique products."





1946 **Establishment of the** Company as "RISO"

Following the end of the war, founder Noboru Hayama, who was an army second-lieutenant, entered university in 1946. To provide for his educational fees and family finances, he began a mimeograph printing business in 1946. Hayama firmly 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." Hayama incorporated this conviction into the company name and established "Riso-Sha," which means "ideal."

RISO OHP 750 (left) RISO TRAPEN-UP TU230 (right)

#### Overcoming an unprecedented bankruptcy crisis by developing new products

In 1968, RISO received and accepted OEM contracts for RISO MASTER from overseas companies, viewing this as a major opportunity for global business expansion. RISO rapidly expanded its sales by receiving a large volume of orders. In 1969, RISO began construction of a new plant as it geared up to strengthen its production structure. However, orders then declined, pushing RISO to the brink of bankruptcy by the end of the year. Despite these precarious circumstances in which most people would be hesitant to take on new challenges, Hayama realized that the only way to overcome this crisis was to develop new products. Acting on this conviction, in 1972 Hayama developed audio-visual equipment, namely the RISO OHP 750 overhead projector and the RISO TRAPEN-UP TU230 thermal transfer OHP film printer. These proved to be innovative hit products that virtually transformed class lectures and meetings at schools and offices and enabled RISO to avert bankruptcy.

#### technologies

#### RISO, INC

#### **Pursuing our ideals**

#### 2013



Riso Research and Design Center

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."

Developing high-speed inkjet printers that make color printing even more accessible



"One million page test" that was carried out in shifts by groups of two people and a progress chart on which each supervisor recorded test results

#### 1980 Birth of RISOGRAPH stencil printer

RISO commercialized a master maker that utilized its original emulsion ink and master. Nevertheless, most printers used in the market at that time were compatible only with oil-based ink and so the benefits of this RISO product could not be fully deployed. In response, RISO decided to independently create its own printers that were specifically suited to its own inks. Although the development of its first printer proved to be extremely difficult, RISO finally succeeded in developing RISOGRAPH FX7200/AP7200 stencil printers after taking on the "one million page test" and repeatedly checking a prototype printer from a customer perspective.

#### 2003

Birth of the world's fastest color printer ComColor



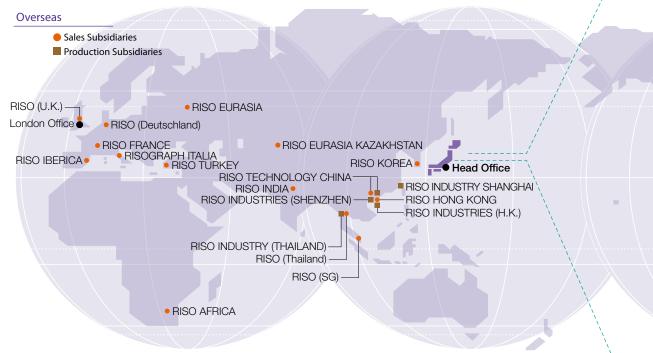
A showcase of new products at Tokyo International Forum in 2003

Responding to the need for "lower-cost and easy-to-use color printing," RISO and Olympus Corporation jointly developed the high-speed color 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 color printer by combining high-speed paper feeding technologies cultivated in the RISOGRAPH digital duplicator business and thoroughly pursuing high speed and economic efficiency.

> For details, please access this Website. https://www.riso.co.jp/english/company/history/

## RISO Today

• RISO Network (as of July 1, 2022)



#### Corporate Data

Board of Directors, Audit	ors and Executive Officers
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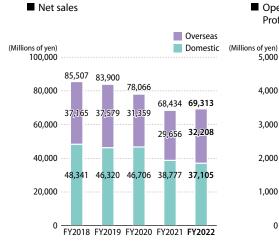
Corporate Name:	RISO KAGAKU CORPORATION	[Board of Directors and Auditors]		[Executive Officers]	
President & CEO:	Akira Hayama	President	Akira Hayama	CEO	Akira Hayama
Head Office:	5-34-7 Shiba, Minato-ku, Tokyo 108-8385, Japan	Director	Shoichi Ikejima	Executive Officer	Shoichi Ikejima
Established:	September 2, 1946	Director	Toshihiko Kawatsu	Executive Officer	Toshihiko Kawatsu
Incorporated:	January 25, 1955	Director	Toshiaki Yatabe*	Executive Officer	Kenji Oshima
Paid-in Capital:	14,114,985,384 yen	Director	Shigekazu Torikai*	Executive Officer	So Suzuki
Stock Listing:	Tokyo Stock Exchange Prime Market (Code: 6413)	Director	Kaeko Gondo*	Executive Officer	Hiromasa Nakajima
Number of Employee	s: 1,650 (2,970 for the RISO Group)	Standing Auditor	Hideya Ebita	Executive Officer	Yoshiomi Narumiya
	(as of March 31, 2022)	Standing Auditor	Kazutoyo Suzuki	Executive Officer	Yukihiro Nishida
Subsidiaries:	26 companies (Domestic: 3 Overseas: 23)	Auditor	Yoshinari lizuka*	Executive Officer	Akimasa Kasuya
Main Banks:	Kiraboshi Bank, Ltd., Sumitomo Mitsui Banking	Auditor	Shinji Hatta*	Executive Officer	Takehiko Nishiyama
	Corporation, MUFG Bank, Ltd.,	Auditor	Masaya Nara*	Executive Officer	Hidetoshi Miuma
	Sumitomo Mitsui Trust Bank, Ltd.	(8	as of June 24, 2022)	Executive Officer	Fumiya Tomiyama
				Executive Officer	Kentaro Harada

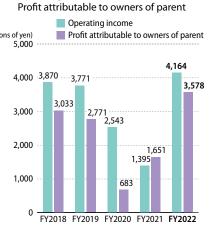
Operating income/

(as of July 1, 2022)

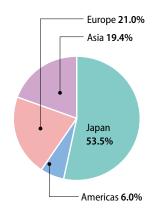
Note: "\*" refers to outside directors and outside auditors, as stipulated under Item 15 and 16 of Article 2 of the Corporate Law.

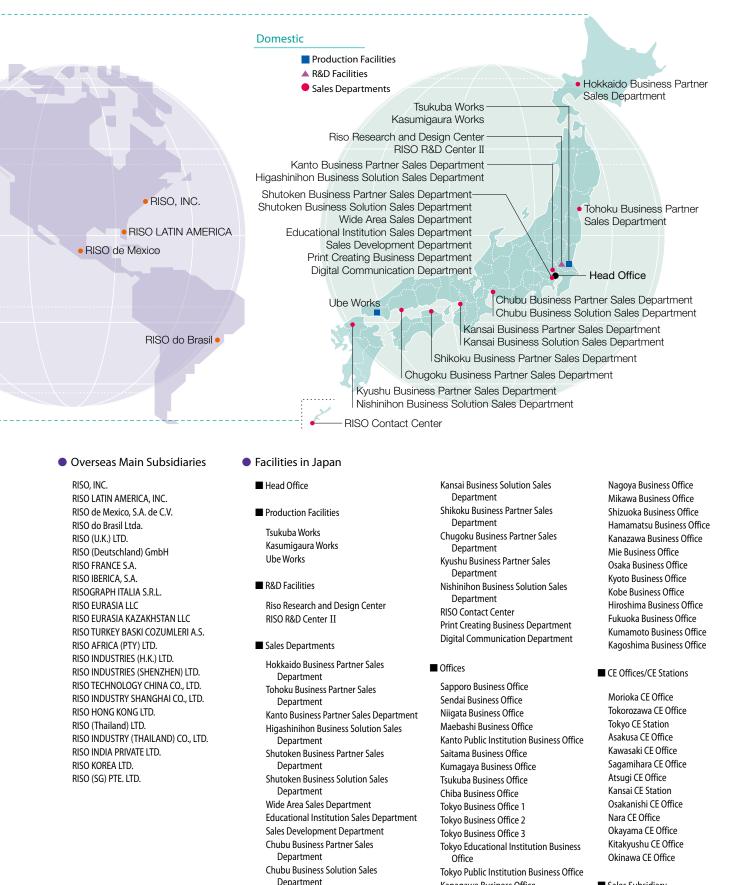
#### • Financial Highlights Note: Amounts less than the unit expressed are omitted.





Sales by region (fiscal year ended March 31, 2022)





Kansai Business Partner Sales

Department

Sales Subsidiary

**RISO OKINAWA CORPORATION** 

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

Kanagawa Business Office

Tama Business Office

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#### **RISO KAGAKU CORPORATION**

5-34-7 Shiba, Minato-ku, Tokyo 108-8385, Japan

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

RISO KAGAKU Corp. Official social media accounts



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

