

FOR IMMEDIATE RELEASE

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New Next-generation Warehouse Completed at Toyohashi Plant

“Delivering Only What Is Needed in Necessary Quantities” and Promoting *Yoki-Monozukuri*^{*1} with ESG Integration that Contributes to a Resource-circulating Society

Kao Corporation has constructed a next-generation warehouse capable of full automation at the Toyohashi Plant, which produces a wide variety of products, mainly skin care and hair care products. Operation began on March 31, 2023, with a focus on logistics that can flexibly and efficiently supply products from plants to distribution bases and retailers.

Kao is committed to *Yoki-Monozukuri* with ESG integration which contributes to a resource-circulating society and reduces the burden on resources and the environment by delivering unique products that meet diversifying needs in the required amount.

With the completion of the new warehouse, the Toyohashi Plant will be able to flexibly handle high-mix low-volume products, and Kao aims to build a sustainable supply chain with the Toyohashi Connected Flexible Factory, an integrated base for production and logistics that links efficient high-mix low-volume manufacturing with highly flexible distribution functions.

*1 Kao defines *Yoki-Monozukuri* as a strong commitment by all members to provide products and brands of excellent value for consumer satisfaction.



[A new next-generation warehouse launched at the Kao Toyohashi Plant](#)

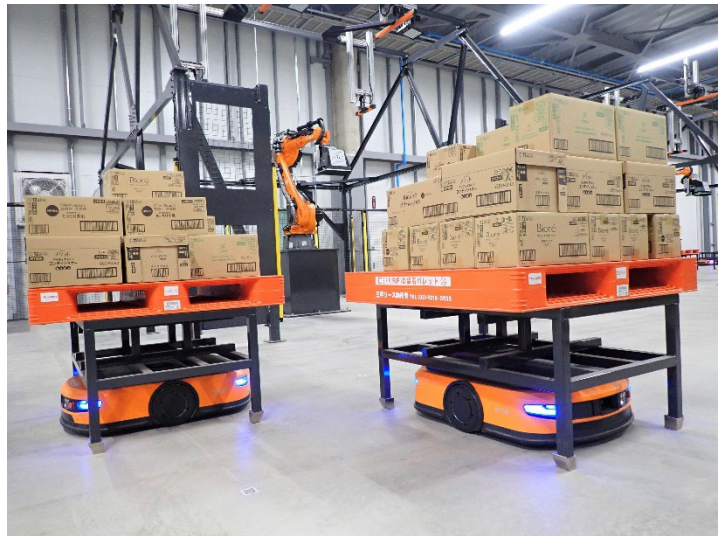
■ Features and Overview of the New Warehouse



The exterior of the new warehouse at the Toyohashi Plant



Case sorting (depalletizing/palletizing) robot



Automated guided vehicles (AGVs)

The new warehouse is designed to flexibly handle high-mix low-volume products. It will fully automate logistics operations, integrate operations with nearby plant and logistics base, improve the efficiency of receiving and shipping by trucks unlike any other.

- Full automation

The new warehouse achieved full automation from receiving products to sorting for destinations and shipping out.

In addition, in conjunction with the automated forklift demonstration project*2 under the Promotion Business for Further Transportation Efficiency Utilizing AI, IoT, etc. publicly solicited by the Agency for Natural Resources and Energy of the Ministry of Economy, Trade and Industry, Kao is promoting the automation and unmanned loading of products onto trucks.

- Flexible design for high-mix low-volume products

By utilizing automated guided vehicles (AGVs), the new warehouse has achieved automation with a high

degree of freedom that enables the simultaneous loading and unloading of a wide variety of products onto and off from pallets. It is possible to increase work efficiency and flexibly respond to changes in the business environment at the same time. In addition, the warehouse uses RFID^{*3} to link product information and pallets, automate sorting and other tasks and enhance traceability, including production processes.

- Integrated operation with plants and logistics bases
By integrating operation with plants and logistics center for retailers, etc. within the premises, it is possible to supply products efficiently, reduce lead times, and control distribution costs.
- Smarter on-site truck operation
By linking the reservation system for trucks, the automatic number-plate recognition system at the time of entrance and exit, and the control system for the equipment inside the warehouse, products can be shipped from the warehouse according to the trucks' reservation and arrival status. This improves productivity by reducing the concentration of visiting trucks and decreasing waiting time, and also promotes sustainable logistics^{*4} that allow drivers peace of mind while they work.
- A fulfilling workplace friendly to both people and the environment
Automated logistics work will improve the working environment and enable efficient and flexible work styles, as well as reducing the environmental burden, such as reducing CO₂ emissions through solar power generation.

*2 [Joint demonstration project launched to link AI-equipped automated forklifts with truck operations](#) (in Japanese)

*3 RFID (Radio Frequency IDentification): A system that uses radio waves to read electronic tag information through wireless communication to identify and manage objects.

*4 [Sustainable logistics campaign portal site](#) (in Japanese)

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| Location | 4-51 Akemi-cho, Toyohashi, Aichi Prefecture (Toyohashi Plant) |
| Building area | 7,204 square meters |
| Storage capacity | 1.2 million cases |
| Receiving and shipping capacity | 40,000 cases each/day |
| Automation equipment | Automated multilevel pallet warehouse / Case sorting (depalletizing/palletizing) robots / Automated guided vehicles (AGVs) / Automated forklifts |
| Environmental-friendliness | <ul style="list-style-type: none"> • Kao's proprietary technology for an asphalt modifier, NEWTLAC 5000^{*5}, was used for pavement in the facility • Acquisition of CASBEE Aichi Rank A^{*6} and BELS 5 stars^{*7} certifications • Solar power generation (to be installed) |
| Start of operation | March 31, 2023 |

*5 [Asphalt modifier that reuses waste PET to improve pavement performance, including durability, and reduce environmental impact](#)

*6 [The Comprehensive Assessment System for Built Environment Efficiency Aichi ranks the environmental performance of homes and buildings on a scale of five: S/A/B+/B-/C](#) (in Japanese)

*7 [The Building-Housing Energy-efficiency Labeling System, a five-level third-party certification of a building's energy-saving performance](#) (in Japanese)

■ The Supply Chain Kao Aspires for

Kao is working to build a sustainable supply chain by optimizing, automating and integrating supply and demand planning, production and logistics functions, in order to achieve marketing and manufacturing to provide products adapting to consumers' diversifying needs. Furthermore, Kao works closely with other manufacturers, logistics providers, wholesalers, retailers, etc. to build a co-creative logistics platform to share supply chain information for realizing efficiency such as joint transportation, in order to address logistics issues like the shortage of truck drivers and the rise in transportation volume brought on by the expansion of the e-commerce market.

With the corporate purpose "To realize a Kirei World in which all life lives in harmony," Kao Group established its ESG strategy, the Kirei Lifestyle Plan in 2019, and since 2021, has been employing the Kao Group Mid-term Plan 2025 (K25) with its vision of "protecting future lives" and "sustainability as the only path."

Kao is promoting *Yoki-Monozukuri* with ESG integration which preserves resources and reduces the burden on the environment, and is working to help people live richer lives and create a caring and resource-circulating society that develops sustainably.

By utilizing rapidly evolving digital technology and collaborating with various partners, Kao aims to develop innovative technology and build a sustainable supply chain that meets the expectations of society and is kind to people, society and the Earth.

About Kao

Kao creates high-value-added products and services that provide care and enrichment for the life of all people and the planet. Through its portfolio of over 20 leading brands such as *Attack*, *Bioré*, *Goldwell*, *Jergens*, *John Frieda*, *Kanebo*, *Laurier*, *Merries*, and *Molton Brown*, Kao is part of the everyday lives of people in Asia, Oceania, North America, and Europe. Combined with its chemical business, which contributes to a wide range of industries, Kao generates about 1,550 billion yen in annual sales. Kao employs about 35,400 people worldwide and has 136 years of history in innovation. Please visit [the Kao Group website](#) for updated information.

■ Related Information

- [Kao to Establish New Flexible, Efficient Production System and Logistics Model at Toyohashi Plant](#)
- [Kao launches new ESG Strategy "Kirei Lifestyle Plan" to support consumer lifestyle changes](#)
- [Kao's New Challenges for the Future: Accelerating Purposeful Business Commitment with ESG](#)
- [Kao Sustainability website](#)

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