Japanese Industry Builds Systems for Global Change

Japan connects precision manufacturing, cleaner energy and field-tested innovation as industry adapts to global demands

BY
DANIEL DE BOMFORD

Across energy, mobility, electronics, agriculture and global branding, Japanese companies are finding new value in precision, reliability and the ability to connect products into larger systems. Japan demonstrates a manufacturing culture adapting to harder questions: how to secure cleaner power, protect complex technologies, use resources more intelligently and compete internationally without losing the discipline that made Japanese industry trusted in the first place.

As power systems become more compact, denser and more integral, SOC Corporation demonstrates why trust still begins at the component level. Fuses may be invisible until something goes wrong, but their role is to move upstream in the design process. "Customers can no longer think about protection at the very end of the process," President Kayoko Arikawa said. Safer electrification depends on that earlier discipline.

The same pressure is remaking mobility. Molitec Steel, long tied to conventional automotive systems, is preparing for charging infrastructure, new energy applications and future business fields beyond today's gasoline-era supply chain. President Takashi Kado said the company sees the need "to begin preparing early for long-term transformation rather than waiting until changes become unavoidable." It is a measured response to a changing industry.

Inside advanced electronics production, NIX, INC. works where small handling problems can become costly quality issues. Its Nikko-Rack PCB racks reflect a broader capability in plastics, materials and production-site problem-solving. President and CEO Kazuhide Aoki described the company's role as going beyond specifications: "Our objective is not only to respond to explicit requirements but also to uncover latent needs that customers themselves may not yet recognize." Ryokusan Co., Ltd. brings that systems thinking to agriculture, forestry and biomass. Its work in slurry handling, composting and wood processing comes from a belief that waste often carries hidden value. "Agriculture, environmental management and energy production should not be viewed as separate fields," Representative Director and President Katsuji Kosuge said. "They are all part of the same system." REX-One gives that philosophy a practical machine.

SDG Co., Ltd. demonstrates a different kind of transformation: how a Japanese manufacturer builds visibility and market knowledge by entering the field. Through motorsports, marine business and its U.S. base at Texas Boat World, SDG is turning experience into growth. "Small differences may not be visible at first, but over time they grow into significant outcomes," President and CEO Kensaku Kashiwagi said.

SDG Rebrands for Global Racing, Marine Growth

SDG's rebrand connects Japanese manufacturing with motorsports, marine business and field-driven global growth from Japan to Texas and beyond. BY DANIEL DE BOMFORD AND BERNARD THOMPSON

photo by Major League Fishing

At a race circuit, speed is measured in fractions of a second. On a bass boat, success depends on timing, control and the ability to read changing conditions. Kensaku Kashiwagi sees business in much the same way. For Kashiwagi, president and CEO of SDG Co., Ltd., factories, racetracks and fishing tournaments are not separate worlds. They are places where people, machines and decisions are tested in real time. That field-first mindset now sits at the center of SDG's evolution from a long-established Japanese manufacturer into a company building a wider global identity. For nearly 75 years, SDG has built its reputation through Japanese manufacturing discipline, industrial know-how and close relationships with customers. In April 2024, the company made a decision that signaled a new stage in its growth: Showa Denki Group became SDG Group. "Showa Denki was a very familiar and well-established name in Japan, but we felt that in order to move forward and expand our presence, we needed a name that could represent us more clearly on a global level," Kashiwagi said.

Customers have noticed the response. "Many customers now naturally refer to us as SDG Group, and their perception of the company has shifted," he said. The company has also updated its visual identity, introducing a new logo in 2025 with three bars in red, blue and light gray, after first adopting a simple red SDG mark in 2024. "This new identity fits very well with areas such as sports fishing, motorcycles and motorsports," Kashiwagi said. "In those environments, branding is very visible, and the SDG name works much better than our previous identity." SDG is building its core strategy around its newfound visibility. In the United States, the company's marine business is anchored by Texas Boat World, its American marine business headquarters. From that base, Kashiwagi has supported professional anglers such as Takahiro Omori, a renowned Japanese bass pro in the United States, built relationships in bass fishing and brought market knowledge back to Japan and Asia. "I have spent the past few years working in the United States, particularly in bass fishing tournaments," he said.

"Through those activities, many people have come to understand what SDG is and what our U.S. company, Texas Boat World, represents." The marine business has also become a practical learning platform. "Through Texas Boat World, we learned how pricing works, how service operations are structured, and how to generate profit," Kashiwagi said. "We also learned a lot from fishing tournaments, including the needs of customers, the types of equipment required, and the techniques for installation." SDG has taken a similar approach in racing. In 2014, SDG began sponsoring HARC-PRO, one of the most famous motorcycle teams in Japan. Through motorcycle and car racing, the company is building connections that extend beyond brand exposure. In 2025, SDG began supporting TEAM IMPUL in Japan's Super GT Championship, expanding its presence in one of the country's most visible racing environments. "Our involvement in motorsports and related activities has had a very strong impact on both our image and our business," Kashiwagi said. "In the past year and a half, we have received many new orders from customers who discovered us through these activities." For SDG, racing, fishing and manufacturing are connected by the same principle: growth comes from being present in the field. As Kashiwagi put it, "Every day, I try to move forward and make the company grow."

"Small differences may not be visible at first, but over time they grow into significant outcomes."

Kensaku Kashiwagi
President and CEO, SDG. Co., Ltd.

SDG RACING FAMILY
https://www.sdg-ing.com/en

Molitec Steel: From Japanese Steel Processing to Next-Generation Mobility

As the automotive industry shifts from gasoline to electrification, Molitec Steel is building on its 80-year manufacturing roots to develop EV charging infrastructure, overseas production bases in Mexico and Thailand and future clean-energy technologies. BY DANIEL DE BOMFORD AND KYANN EDOUARD

"We believe it is essential to begin preparing early for long-term transformation rather than waiting until changes become unavoidable."

Takashi Kado
President, Molitec Steel.

Molitec Steel Co., Ltd., is entering a new phase of growth as the automotive industry moves beyond gasoline-powered systems. While much of the company's business has been built on engines, transmissions and other conventional automotive technologies, President Takashi Kado sees this transition as a chance to apply Molitec's manufacturing expertise to new markets.

"One major direction for us is participation in new energy-related ecosystems," Kado said. That includes EV charging infrastructure, where Molitec has already developed a strong position through retractable cable systems designed for safety, reliability and practical use in complex environments. As charging hardware becomes more standardized, the company is also looking beyond equipment alone, with communication systems that connect infrastructure, users and data across smarter mobility networks. This strategy is supported by Molitec's growing overseas footprint, including Mexico, Thailand and North America, where the company can serve customers as a dependable Japanese automotive supplier with local reach.

By combining precision manufacturing, EV infrastructure and connected mobility technologies, Molitec is positioning itself as a trusted partner in the clean-energy ecosystems that will shape the future of transportation.

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

REX-One Drives Forestry Recycling Efficiency

From trench work to biomass innovation, Ryokusan turns agricultural and forestry waste into resources for Japan's circular, sustainable future.

BY DANIEL DE BOMFORD AND CIAN O'NEILL

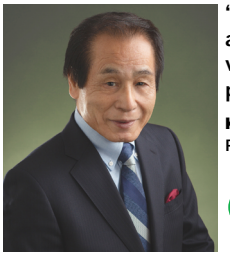
Founded in 1969, Ryokusan has provided solutions for the Japanese market that enhance productivity while promoting the circular use of biological resources, spanning fields from irrigation systems and slurry handling to manure recycling and woody biomass utilization. Today, woody biomass is one of the company's core businesses.

Drawing on more than 20 years of experience supplying large-scale imported shredders and chippers to the biomass industry, Ryokusan developed its own compact crawler-mounted wood chipper, REX-One, designed for forestry and green-waste operations where both mobility and high productivity are essential. Powered by a 228.5 PS engine, REX-One delivers a processing capacity of up to 90 m^3/h and can handle woody material up to 450 mm in diameter while producing high-quality wood chips.

Despite its impressive performance, the machine remains compact enough to be transported by a self-loader truck, enabling easy relocation between worksites and access to confined spaces and narrow forest roads. REX-One can process a wide variety of biomass resources, including thinning logs, branches, bark and green waste generated from the maintenance of parks and street trees, helping convert underutilized woody resources into valuable biomass fuel.

An in-house developed wood chipper. Processes a wide range of unused woody biomass into fuel for power generation and heating.

Although REX-One was developed in response to strong demand in the Japanese market, Ryokusan is also considering future expansion into overseas markets.



"Agriculture, environmental management and energy production should not be viewed as separate fields. They are all part of the same system."

Katsuji Kosuge,
President and Representative Director

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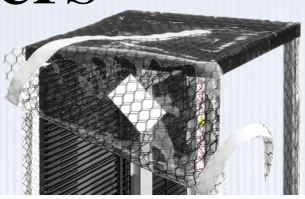
Nikko-Rack: Japan's PCB Handling Technology for Global Manufacturers



As a solution partner supporting the operations of global manufacturers, NIX aims to expand the reach of "Nikko-rack™"—a high-quality printed circuit board rack—worldwide by leveraging its expertise in plastic material development and plastic product design and development. BY DANIEL DE BOMFORD AND QUENTIN LANGE

As global electronics manufacturing becomes more advanced, the small details within production lines carry greater weight. Printed circuit boards are becoming denser, more complex and more valuable, while SMT lines and EMS operations require higher levels of precision, ESD protection and reliability. For global manufacturers, PCB handling is a direct part of quality assurance.

NIX, INC., a Japanese specialist in plastic materials and product development, has built its business around that reality. Under the philosophy of "Nothing to Something," President and CEO Kazuhide Aoki said the company has evolved from a subcontract manufacturer into an integrated solutions partner with expertise spanning proprietary materials, mechanical design, injection molding and production support. "Our objective is not simply to sell

products. It is to solve problems," he said.

That approach is embodied in Nikko-Rack, NIX's flagship PCB rack solution. With more than 1.5 million units shipped in Japan, Nikko-Rack reflects the company's focus on quality, ease of use and continuous improvement. Its ESD-compliant plastic materials help protect sensitive boards, while its parallel sliding mechanism allows operators to adjust positioning quickly and accurately. These features are especially important as PCB assemblies become more sophisticated and costly to replace.

The product also shows why NIX's value extends beyond price. Nikko-Rack is the result of decades of accumulated knowledge in materials, design and manufacturing. By working closely with customers at production sites, NIX identifies challenges that may not be visible in specifications alone and turns them into practical improvements.

This same material-led thinking can be seen in NIXAM and ARINIX, functional plastic materials that add performance directly into resin. ARINIX, developed from a customer challenge involving pest prevention, demonstrates how plastics can contribute to hygiene, safety and more sustainable operations when designed with a clear purpose.

As NIX expands overseas, Germany and France offer opportunities in high-specification automated manufacturing, while Mexico's growing role in North American supply chains creates demand across multiple product tiers. It approaches each market supporting safer, more reliable manufacturing behind the scenes and helping customers turn complex requirements into dependable solutions.

https://en.nix.co.jp

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Kazuhide Aoki
President & CEO, NIX, INC.

NIX,INC.