

Corporate Profile



A corporate group in which all stakeholders can take pride

NOK is Japan's longest established oil seal manufacturer. Our functional parts such as oil seals, created through NOK's advanced seal technology, are used in automobiles, construction machinery, agricultural machinery, electronic equipment, office equipment and housing equipment, etc., thereby supporting society and people's daily lives behind the scenes.

Also, as Japan's first flexible printed circuit (FPC) manufacturer, we have greatly contributed to the development of smaller, lighter and better-performing electronic devices.

The NOK Group is aiming to become a stronger and even more unique parts manufacturer by further improving the technologies that make up the foundation of our business operations, namely our sealing and FPC technologies. Moreover, we are carrying out drastic cost-cutting measures throughout our business operations, from manufacturing to the frontline of sales, while making strenuous efforts to improve the quality of our products and services. We are committed to "producing and selling our products that are proven to be technologically unique and socially useful, on a global

scale," thereby becoming a highly profitable corporate group, in which customers, shareholders, employees, suppliers, and all other stakeholders can take pride.

At the same time, to protect the natural environment for the next generation, we are promoting sustainable environment management by way of positioning the response to environmental issues as one of the most important management issues. The NOK Group supports the ideals of the SDGs, and as a good corporate citizen, we will steadily fulfill our social responsibilities while continuing to grow as a company.

What started out as a small town factory in 1941 in Kobe, Japan, has grown to become a highly unique enterprise over the years. The corporate culture of that original factory has been passed down through the generations, constantly inspiring employees of the NOK Group to be ambitious. Taking pride in our reputation as "a small town factory born to be a great parts manufacturer" we will continue to manage the NOK Group in an even more ambitious manner.



Representative Director, Chief Executive Officer,
NOK CORPORATION

Masao Tsuru

NOK Philosophy

NOK Group's management ethos, embodied in the principle of respect for employees based on care and trust, has served as the bedrock of our organization for nearly 80 years. In 2023, we built upon this enduring legacy by crafting Our Purpose and Our Values — new guiding principles thoughtfully aligned with the prevailing social context. As Global One NOK, we unite with the shared values embraced by our worldwide workforce, and together, we aim to achieve a sustainable society while continuing to elevate our corporate worth. We intend to accomplish this goal by generating value that serves social needs and engaging in self-driven, responsible initiatives.

Our Purpose

Shaping Possibilities with Unique Technology

Our Values

RESPECT

We respect diversity and inclusivity

IGNITE

We ignite a passion for innovation

EXPLORE

We explore every possibility for better solutions

EXCEED

We exceed expectations by delivering exceptional results

We pursue our dreams

Our Founding Principles

- 1 The Management has to run the Company based on feelings of care and trust in its employees.
- 2 The Management has to run the Company while uniting to ensure full ventilation without forming any cliques.
- 3 The Management has to run the Company while making absolutely incredible efforts against all odds and risks.
- 4 The Management has to run the Company while pursuing dreams with management plan.

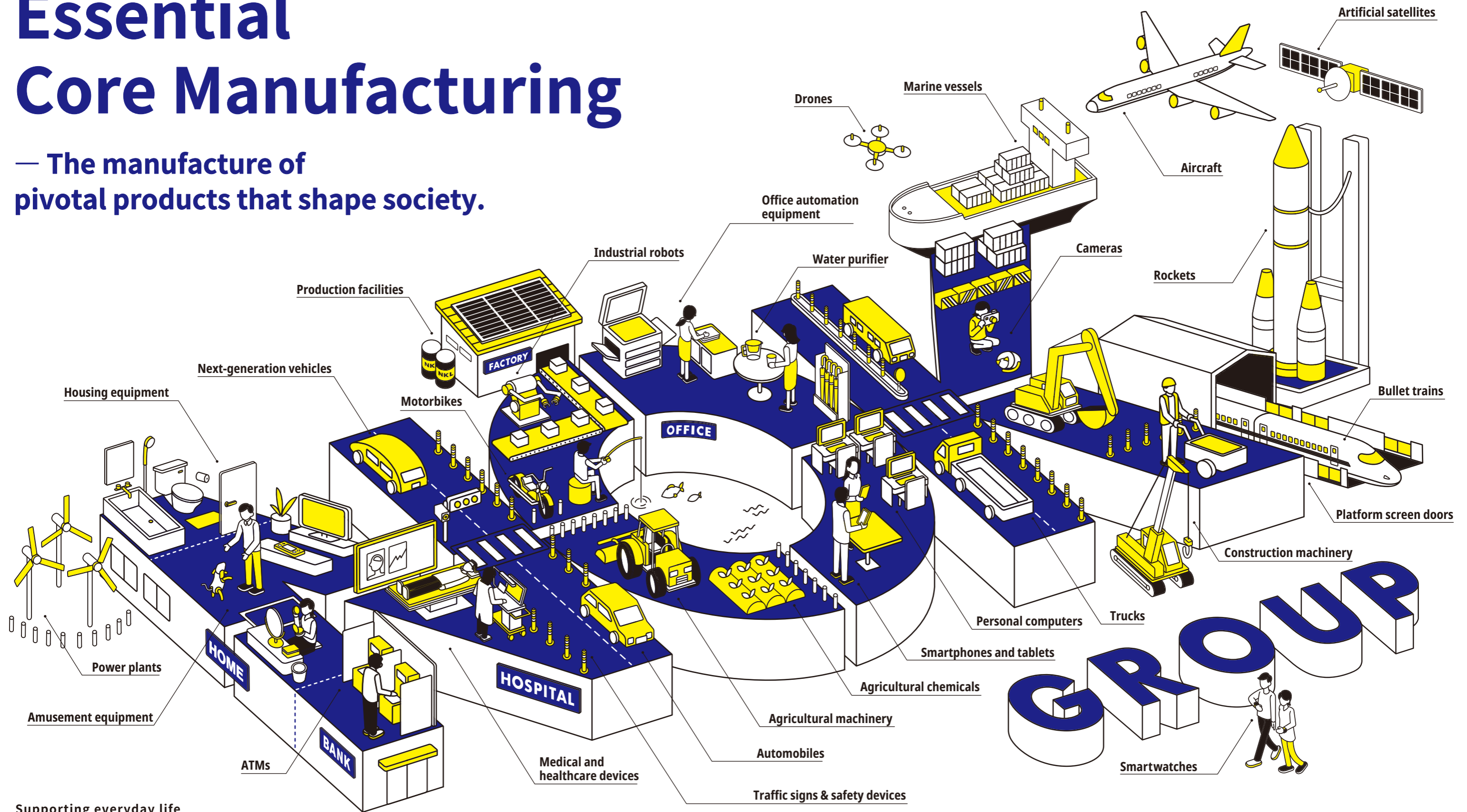


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Essential Core Manufacturing

— The manufacture of pivotal products that shape society.



Supporting everyday life
NOK Group

NOK CORPORATION [Seals]

Established in 1941. With its core technologies in material development and processing of rubber and resin, the company manufactures and sells oil seals, O-rings, packings, and other products used in a variety of industry fields, including the automobile industry.

EAGLE INDUSTRY CO., LTD. [Seals]

Established in 1964 by spinning off the mechanical seal department of NOK. The company manufactures and sells metal seals and other products based on its core technologies, namely sealing, special welding, power transmission, and valve technologies.

NIPPON MEKTRON, LTD. [Electronic components]

Established in 1969 as a company responsible for the electronic components business of the NOK Group. The company manufactures and sells flexible printed circuits (FPCs), precision rubbers, and plastic components.

SYNZTEC CO., LTD. [Rollers]

Founded in 2007, the company is founded as a result of a merger between Hokushin Corporation and Nitto Kogyo Co., Ltd. The company manufacture and sell all types of rollers for office machinery such as copiers.

NOK KLUEBER CO., LTD. [Special lubricants]

Founded in 1976 as a joint venture with Klüber Lubrication München SE&Co.KG, a German manufacturer of special lubricants. The company has been supplying products in a wide range of fields including the automobile, industrial machinery, and home electronic appliance industries.

UNIMATEC CO., LTD. [Synthetic chemical products]

Founded in 1971, the company is a chemical manufacturer. It has been developing and supplying unique products, such as special synthetic rubbers and chemical products.

NOK CORPORATION (NOK) was established as Japan's first oil seal manufacturer in 1941. It manufactures sealing devices (oil seals, O-rings, packings, etc.) used in a variety of machines, including automobiles. Through tireless research and development efforts undertaken since its foundation, the company has successfully grown to be a leading company in the oil seal field.



NOK's history with oil seals is, in effect, Japan's history with oil seals

Producing Rubber Oil Seals Ahead of Others

Around the time when NOK was established, leather packings were commonly used in Japan for preventing oil leaks from machinery. These packings did not provide stable sealing performance, and automobile garages were always filled with the smell of leaking oil. Responding to this problem, in 1942, NOK began producing rubber oil seals with superior sealing performance. In 1954, the company's head office factory was constructed in Haneda, and mass production was begun to enable the supply of products with uniform quality. We also began conducting independent research into oil seals and announced a lubricant principle with regard to the friction and sealing of oil seals in 1959. Through these and other efforts, the foundation for NOK was built into its present form.

Technological Partnership with Freudenberg

In 1960, NOK began a new chapter through a technological partnership agreement with Carl Freudenberg KG (CF) of the former West Germany. Moreover, in the same year, the company started construction of its Fujisawa Plant and expanded the production system by constructing other plants in Shizuoka, Fukushima, and Kumamoto. NOK has successfully established a system for the stable supply of quality products.

Through these measures, NOK has developed its foresight and technologies to create products that accommodate market demand, built a successful track record within and outside Japan, and developed into a leading oil seal manufacturer in Japan.

NOK Outpaces Competitors in Global Development

In 1979, when only one Japanese automaker had a production base in the United States, NOK built a manufacturing plant in the country ahead of others and began supplying oil seals to local automakers. This achievement would not have been possible without NOK's outstanding technologies, stable supply, and the trust it has built over the years.

Since then, we have established our production bases in such countries as Singapore, China, Thailand, Indonesia, India, and Vietnam. We have thus built stable supply systems to meet the needs of our customers not only in Japan but around the world.

Main Products

Oil seals

Oil seals are functional parts used to seal oil. Composed of synthetic rubber, metal rings, and springs, they prevent oil from leaking from gaps in machine shafts. They also prevent the entry of dust from the outside.

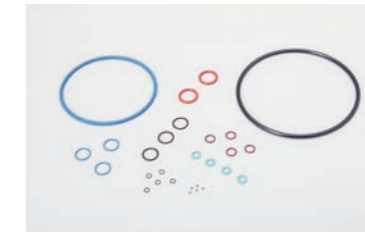


Main applications

Automobiles, construction machinery, agricultural machinery, railroad vehicles, steel mills, industrial robots, aircraft, marine vessels, office machinery, home electronic appliances, etc.

O-rings

O-rings are O-shaped rubber ring packings. They are appropriately compressed by fitting into grooves of machinery, and prevent leakage of various fluids, including oil, water, air, and other gases.



Main applications

Automobiles, construction machinery, agricultural machinery, piping joints, water-proof cell phones, etc.

Iron Rubber products

Iron Rubber (polyurethane elastomer), an intermediate product between rubber and plastic, demonstrates excellent performance in resisting abrasion and absorbing shock/vibration. We provide a wide range of products, including gaskets for machinery pistons and traffic signs & safety devices that require superior durability.



Main applications

Construction machinery, automobiles, semiconductor manufacturing equipment, food manufacturing machinery, traffic signs & safety devices, etc.

Rubber vibration / sound isolators

A wide variety of vibration/sound isolators are available, including torsional vibration dampers to reduce crankshaft vibration in automobile engines, and center-bearing supports to absorb and isolate vibration by supporting the propeller shafts of rear-wheel and four-wheel drive vehicles such as passenger cars and trucks.



Main applications

Crankshafts of car engines, propeller shafts of rear-wheel and four-wheel drive cars, etc.

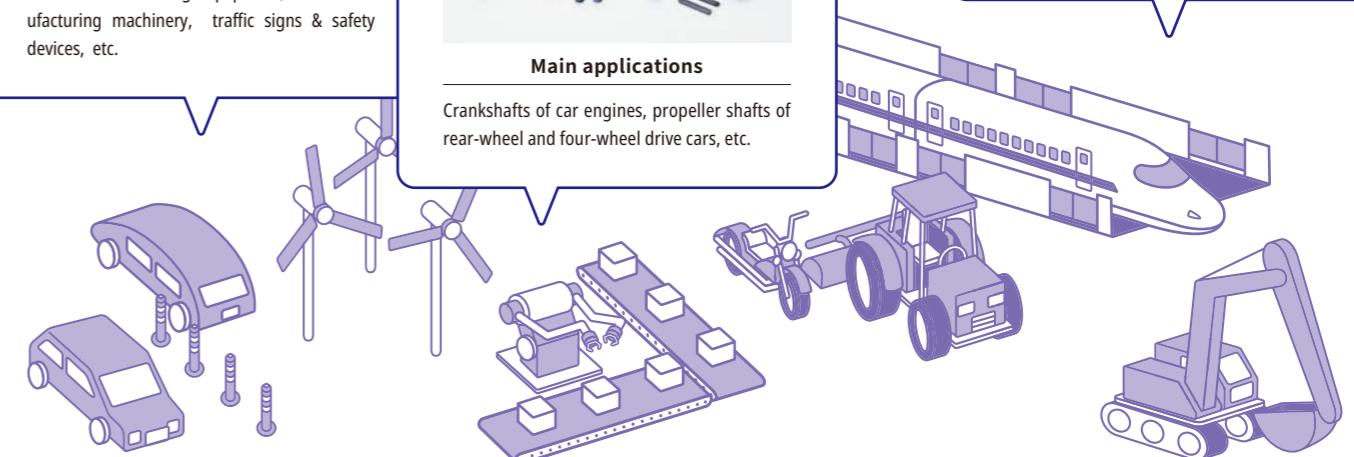
Industrial rubber products

These are functional parts for industrial use made of synthetic rubber, such as dust covers, boots, and diaphragms. We provide a wide range of products, including rubber products, as well as rubber-lined metal and resin products.



Main applications

Automobile suspension and steering, housing equipment, etc.



EAGLE INDUSTRY CO., LTD. (EKK) was founded in 1964 when NOK's Mechanical Seal Department gained independence from NOK. By manufacturing and selling mechanical seals that demonstrate stable functional performance in harsh environments, we play an indispensable role in a range of industrial fields around the world, from small pumps to rockets.



Leading Company in Mechanical Seals

Mechanical Seal Department Gains Independence from NOK

EKK, a manufacturer of mechanical seals, was initially founded as Nippon Sealol Co., Ltd. in 1964. In 1978, the company name was changed to EAGLE INDUSTRY CO., LTD. (EKK) and remains so to this day.

EKK's core technologies include sealing, special welding, power transmission, and valve technologies. Based on these technologies, we have built an integrated production system that encompasses all processes from the development of materials to the manufacturing of final products. In particular, EKK enjoys a solid reputation for a range of mechanical seals, products for marine vessels, and special valves, all of which offer both high performance and top quality.

From Automobiles to Rocket Engine and Nuclear Power Plants

Mechanical seals are metallic seal products that prevent fluids, such as oil and gas, inside a machine from leaking from the shaft and also protect the machine by preventing the entry of dust. Through these functions, these seals also contribute to the improved functionality of machines and to environmental conservation. In particular, EKK's mechanical seals are used in a variety of fields, not only automobiles and industrial machinery but also aircraft and rockets, semiconductor manufacturing equipment, marine vessels, nuclear power plants, and housing equipment. They play a powerful role in supporting the entire society, and therefore future industries as well.

Products with Infinite Potential to Support Future Industries

Along with improvement in the performance of devices, customers are also seeking the development of products that can function in extreme environments such as under conditions of high temperature, pressure, and speed. Also, in order to solve various global issues such as through environmental measures and the promotion of energy conservation, society is waiting for the further technological innovation of mechanical seals.

Leveraging its technologies developed over the years, EKK will continue to fulfill its mission as a leading mechanical seal company that speedily responds to the needs of our times.

Main Products

Mechanical seals

EKK manufactures mechanical seals capable of withstanding high speed, high temperature, and high pressure for use in automobiles as well as in various power generation applications, petroleum refining, petrochemicals, and industrial plants.



Main applications

Water pumps for automobiles, EV motors, pumps, turbines, agitators, compressors, etc.

Seals for aircraft and rockets

These are used in aircraft and rocket engines, ensuring excellent airtightness with stable functionality even under severe conditions such as extremes in temperature and in a vacuum.



Main applications

Jet engines for aircraft, engines and fuel tanks of rockets, etc.

Solenoid valves

It is a solenoid valve used for pressure control and flow control of automobiles. Realization of a design with high precision controllability and durability while making it compact. Various solenoid valves including linear solenoids can be used.



Main applications

Automobile suspension, car air conditioner, engine, transmission, etc.

Seals for semiconductor manufacturing equipment

We conduct in-house manufacturing of various highly functional products including magnetic fluid seals, welded metal bellows, rotary joints, and elastomer seals. These are all essential for semiconductor manufacturing equipment that requires a vacuum and clean environment.

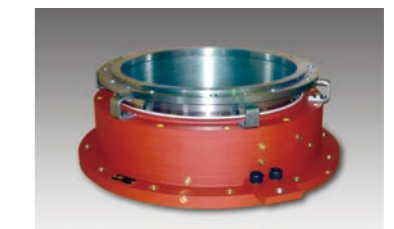


Main applications

Manufacturing equipment for semiconductors, FPDs, solar panels, etc.

Seals for stern tubes

These seals are used to prevent seawater from entering into a marine vessel and oil leakage within and outside the vessel. They are placed on propeller shafts, one of the components of marine vessels, on both the inner and outer sides of the vessel. They are manufactured with EKK's technologies for rubber materials, structural design, and sealing, and contribute to safe navigation and prevention of marine pollution.

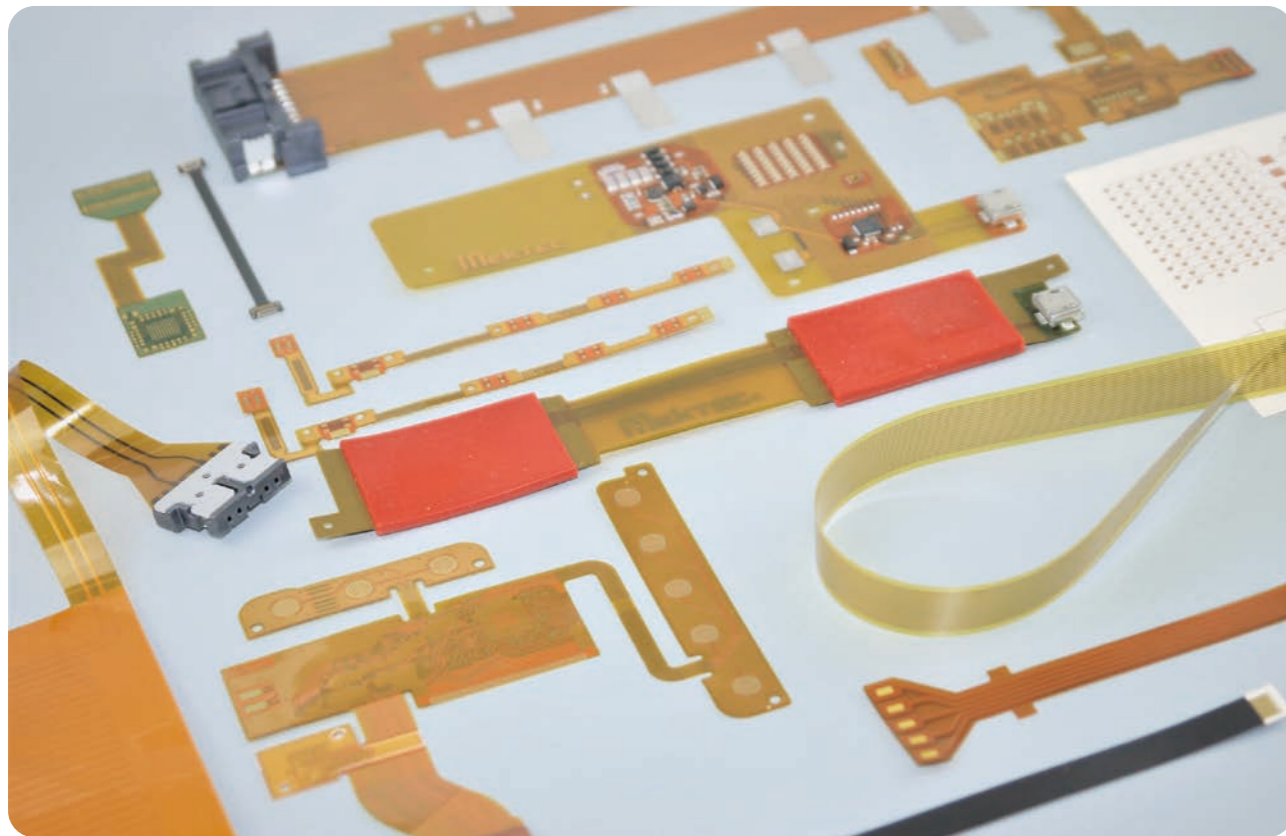


Main applications

Stern tubes of various large and small marine vessels such as luxurious ocean liners, large size tankers, drilling vessels, fishing vessels, etc.

NIPPON MEKTRON, LTD. Electronic components

NIPPON MEKTRON, LTD. (MEK) was founded as a company responsible for the electronic components business of the NOK Group. MEK develops and manufactures thin, lightweight, and super flexible electronic circuit boards called flexible printed circuits (FPCs). MEK keeps up its efforts for the research and development of FPCs that are used for a variety of electronic devices, and aims to realize more convenient and comfortable living.



Endeavoring to be a Global Company that Supports an Electronic Society

Earliest Days of FPCs

In 1969, NOK concluded a technological assistance agreement on the manufacture of electronic circuits with Rogers Corporation of the United States. MEK was founded on this occasion, and the full-fledged manufacture of FPCs had begun. At that time, FPC technology was a leading-edge technology that was not well recognized. This changed dramatically with the subsequent release of the fully electronically controlled single-lens reflex (SLR) camera, which is recognized as an excellent product that has made its mark on the history of cameras. Since FPCs were adopted as one of the core electronic parts used in SLR cameras, they attracted the attention of engineers. Indeed, the practical use of FPCs was a sign of what was to come in terms of new-generation electronics.

Realizing Flexural Resistance beyond 100 Million Times

Since FPCs were adopted for SLR cameras, their research and development has made further progress, opening up more possibilities for the products. In particular, it is noteworthy that FPCs were adopted for computer hard disk drives (HDDs). The arms of HDD heads, which read signals from disks that revolve at a super-high speed, also operate at a high speed. Therefore, FPCs used in the arms are required to have flexural resistance exceeding 100 million bends. MEK has met this requirement with its materials technology. MEK's FPCs are highly reliable and usable under very severe conditions, thus garnering the full attention of the computer industry.

Supporting the Ever-Evolving Electronic Society

Being key contributors to the downsizing and weight reduction of electronic devices, MEK's FPCs now support everyday life throughout society, ranging from indispensable smartphones to next-generation vehicles. Also, MEK has introduced a global brand, "MEKTEC," supplying a variety of FPCs globally from its manufacturing sites and sales offices around the world. MEK has been building a system to respond to a variety of needs, from material development to the manufacture of FPC modules, in a flexible manner.

We will continue to pursue our goal of becoming a global company to support an electronic-based society with untiring efforts for technological innovation and strict quality control.

Main Products

Single-sided FPCs

FPCs with circuits on one side are structured to best exhibit their thin and flexible characteristics. Durable against repetitive bending, single-sided FPCs can be mounted on moving parts and take up little space. They are also suitable for multi-dimensional wiring in narrow gaps.



Main applications

Automobiles, HDDs, digital cameras, media players, game consoles, medical and healthcare devices, etc.

Double-sided FPCs

These have circuits on both sides. Compared to single-sided FPCs, they allow more complex wiring, and contribute to downsizing and weight reduction through the mounting of parts on both sides. They can also be used for various designs because they are freely bendable.

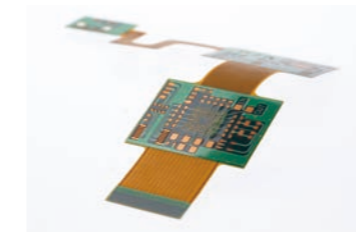


Main applications

Smartphones, digital cameras, automobiles, medical and healthcare devices, etc.

Multi-layer FPCs

These FPCs have realized higher functionality, smaller size, and lighter weight through multi-layered circuits. Integrated boards and cables contribute to downsizing, as they require no connectors.



Main applications

Smartphones, digital cameras, automobiles, medical and healthcare devices, etc.

Component assembly FPCs

FPCs are very thin films and therefore require a special mounting process. MEK not only manufactures FPCs alone, but also fulfills requests for FPC module units by mounting semiconductors, microchip components, and connectors on them.



Main applications

Smartphones, HDDs, digital cameras, automobiles, medical and healthcare devices, etc.

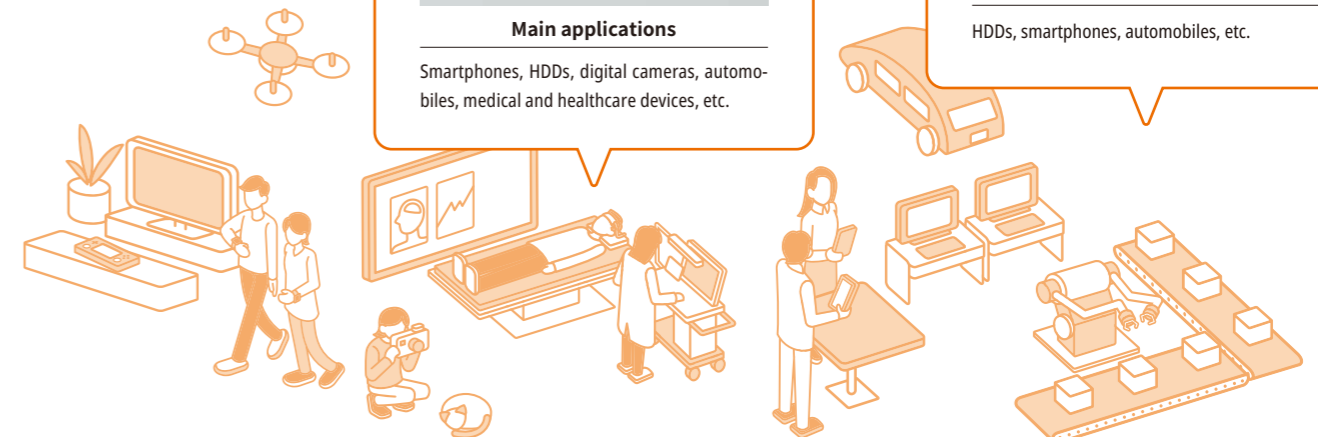
Precision rubber and plastic components

Fitted inside HDDs and smartphones or on their exterior, these products are sealing parts that prevent the entry of water and dust. Utilizing the technologies fostered in development and manufacturing processes, Mektron also offers products with additional waterproofing functionality and an anti-shock mechanism (protection) by molding rubber or resin to FPCs.



Main applications

HDDs, smartphones, automobiles, etc.



SYNZTEC CO., LTD. (SZT) manufactures and supplies highly functional rollers for office machinery such as copiers and printers, as well as products for textile and financial equipment. SZT contribute to a wide range of industries with advanced technologies and outstanding know-how.



The Only Company in the Industry that Provides All Types of Parts for Office Machinery

Aiming at Being the Number One Supplier as the Only Company in the Industry

SZT was established in 2007 by the merger of Hokushin Corporation and Nitto Kogyo Co., Ltd., both manufacturers of functional parts for office machinery. As a result of combining the companies' technologies, SZT has become the only company in the industry that can provide all types of functional parts for office machinery.

SZT will continue to be actively engaged in the research and development of next generation technologies based on the combined technologies of NOK Group companies including NOK, and pursue the goal of becoming the number one and only industry-leading supplier.

Leading the Industry with Products Developed through Unique Technologies

SZT's rollers are commonly used around the photoreceptor, which determines the performance of copiers, and these products require extremely high precision.

They are also used at fixing parts, which also require high performance and durability. Particularly in the field of the environmentally friendly IH fixation method, SZT is leading the industry with its Mini Cell® rollers developed through its unique technologies.

SZT offers a number of products and contributes to the technological innovation of machinery through its expertise in material development, planning and designing of unique products, and production technologies.

Continuing to be the Best Global Partner

In the ever-changing office machinery market, the quality of products and services that customers expect is becoming higher and higher, year after year. SZT delivers innovative products and services by combining its unique technologies to meet such needs. It has achieved its business development in an unrivaled manner by building overseas production and support systems to enable local procurement.

The company will continue in its efforts as the best global partner for its customers and contribute even more to the advancement of related technologies.

Main Products

Development rollers and charge rollers

The developing roller feeds a specified quantity of toner to the photoreceptor, and the charging roller applies a certain charge to the photoreceptor. The electric conductivity of these products is controlled with high precision.



Main applications

Peripheral area around photoconductors of office automation equipment

Fixing belts and pressure rollers

Fixing belts, whose attributes include high heat conductivity and pyrogenicity, are made by combining metal and rubber. Pressure rollers are used to provide evenly distributed pressure when fixing toner. Stable fixing performance is maintained for a long time.



Main applications

Fixing parts of office machinery

Cleaning blades

These products are used to remove toner residue and other foreign particles that adhere to the surface of photoreceptors, rollers, and belts. They are highly abrasion-resistant, tolerant to temperature changes, and provide stable cleaning performance during environmental changes.



Main applications

Surrounding area of the office machinery photoreceptors

Products for financial terminals

These products are used for financial terminal devices such as ATMs and therefore require high reliability. Products include bill-conveying belts that combine high performance urethane rubber with threads and textiles, and bill beater rubber with excellent durability.



Main applications

ATMs, cash dispensers, etc.

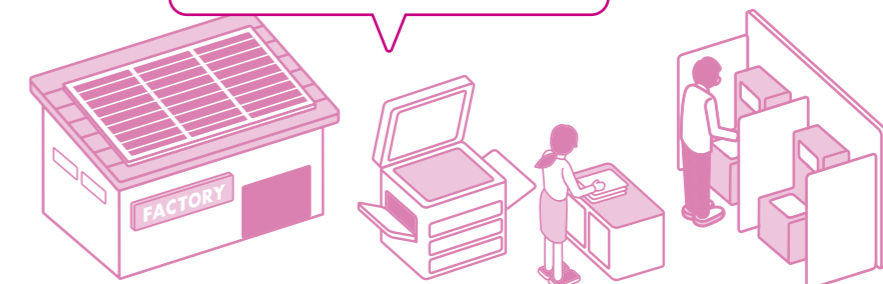
Products for textile machinery

These rollers and belts are used for textile machinery. We offer a variety of products, including apron bands for high-quality spinning of fine yet strong threads, friction PU-DISCS to achieve the plummy feeling of finished yarns, and DTY apron bands.



Main applications

Various friction PU-DISCs, spinning machines, etc.



NOK KLUEBER CO., LTD.

Special lubricants

NOK KLÜBER CO., LTD. (NKL) was founded as a joint venture between NOK and Klüber Lubrication München SE & Co. KG (Klüber), a German manufacturer of special lubricants. Based on the idea that lubricants are not consumables but important functional parts, NKL provides a range of products that have high performance even in severe operating conditions such as extremes in temperature, high speed, and high load.

Main Products

Oils

Our high-performance oil excels in lubricating performance, heat-resistance, and oxidation resistance, leading to longer machine operating life and improved efficiency. NKL provides products suitable for various fields, including for large plants, precision machines, food processing machinery, and semiconductor manufacturing equipment.



Coatings

Our coating products offer beneficial effects such as excellent lubrication performance, resistance to wear, non-adhesiveness, and insulation performance, through their application on the surface of metal parts, including environments where grease and oil cannot be used. They are employed in various fields such as automobiles, electric appliances, and office machinery.



Greases

Our grease features high-reliability and long-operating life even in severe environments such as extremes in temperature, high-speed, and high-load. It is used in various fields such as automobiles, industrial machinery, electric appliances, office machinery, food machinery, and semiconductor manufacturing equipment.



Lubricants are not Consumables, but Important Functional Parts

Meeting a Wide Range of Market Needs with the Proprietary Technologies Developed over Many Years

NKL has grown in line with Japan's industrial development since its establishment. Based on NOK's and Klüber's extensive experience and proprietary technologies, NKL has developed a range of products that meet respective market needs, including in the fields of industrial machinery (including machine tools), automobiles, electric appliances, and semiconductor manufacturing equipment, and has gained a good reputation for both performance and quality.

NKL also develops a variety of highly functional lubricants, including those for food processing machinery that requires high safety, as well as environmentally friendly lubricants for wind-power generation facilities and ecologically friendly

cars. NKL is thus contributing to the safety and reliability of society in addition to pursuing greater efficiency and better performance.

Furthermore, NKL provides comprehensive services that help enhance the reliability of facilities and machinery, improve their productivity, and reduce maintenance cost, thereby offering solutions to customers' lubrication-related concerns.

Based on the knowledge, experience, and technology related to lubrication that have been accumulated until now, NKL will continue to address various difficult challenges in the lubrication field and develop products with features that anticipate market needs.

UNIMATEC CO., LTD.

Synthetic chemical products

UNIMATEC CO., LTD. (UMT) started with a mission to play a leading role in the research and product development of rubber materials. Synthetic chemical products produced with unique materials and technologies are widely used in a range of fields such as automobiles and industrial goods.

Main Products

NOXTITE

The NOXTITE acrylic elastomer has a number of well-balanced functions, including oil resistance, heat resistance, high strength, and resistance to permanent compression set. In addition to use as a material for oil seals and O-rings, it is used in devices that require heat resistance and oil resistance, such as those adjacent to automobile engines.



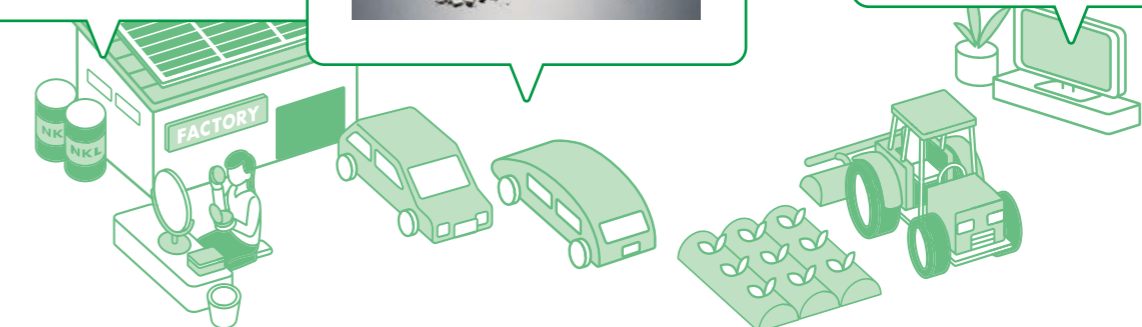
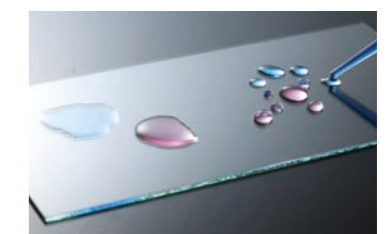
CHEMINOX

This is a unique chemical compound with rubber additive, available in various forms such as powder, liquid, and gas. It is used as a material and a modifier for rubbers and resins, and provides new possibilities for materials.



NOXBARRIER & NOXFREE

These surface treatment agents can prevent fats, oils, or water from adhering to and spreading over metal, resin, or glass surfaces treated with them, and provide water and oil repellency, corrosion resistance, and release properties.



Opening the Door to the Future with Unique Materials and Unique Technologies

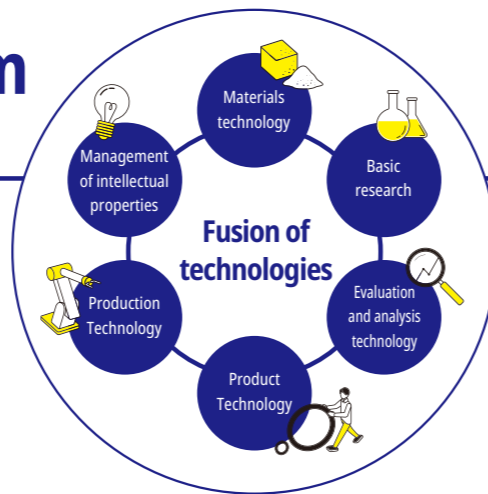
Superior Research and Development Capabilities to Lead the World Market of High-Molecular Materials

UMT manufactures a wide range of environmentally friendly synthetic chemical products, inheriting the excellent R&D-based DNA of NOK. In particular, the NOXTITE acrylic elastomer is still continuing in its evolution 50 years after its initial production in Japan, and is responding to every need of various industries, including automobiles.

Also, CHEMINOX, a chemical product, was developed through highly unique technologies. UMT offers a number of original products, including polymerizable monomers, crosslinking agents, and surface treatment agents such as NOXBARRIER and NOXFREE.

UMT will continue to provide special synthetic rubbers for seal products, which represent the core business of NOK. It will also work on research and development of new products by using its special chemistry and high-molecular material technologies, and continue to provide the entire world with products that demonstrate high performance and stable quality. UMT will strive to develop quality products through its untiring exploration of market needs, unique ideas, and technologies.

Research and Development System



Since its foundation, the NOK Group products have been greatly supported by a variety of industries because of the high level of technology that has constantly improved the functions and quality of our products.

The NOK Group will continue to work on further technological development in order to contribute to the realization of a more convenient society and the resolution of environmental problems while responding to customer requests.

Fostering Technological Development in a Forward-Looking Manner

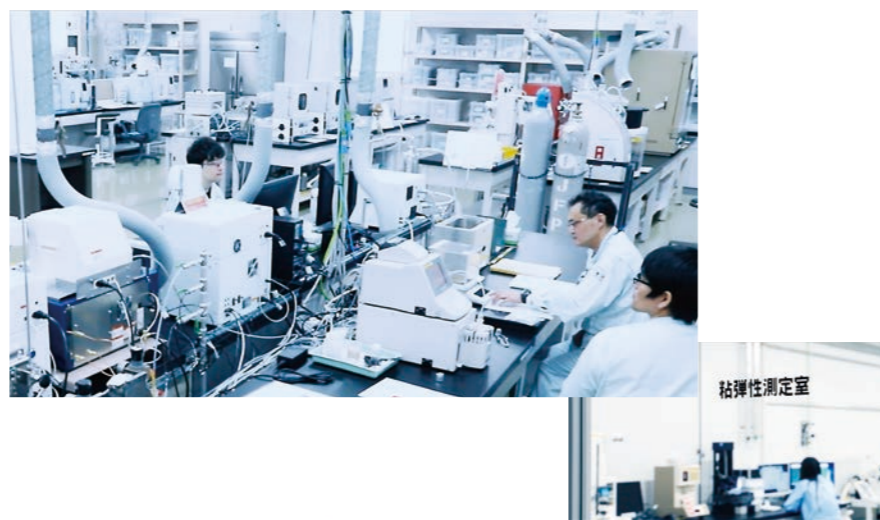
NOK began producing oil seals, O-rings and rubber packings in the 1940s. Since then, we have been engaged in research on lubrication and sealing mechanisms of seal products, and have used the results of this research in product design technology to consistently produce industry-leading products.

In addition, material technology has become one of NOK's core technologies as we have been working on material compounding and chemical analysis technologies necessary for the development of rubber and adhesives used in sealing products.

Focusing the NOK Group's Strengths on the Development of More Advanced Technologies

In recent years, there has been increasing interest in environmental measures for automobiles. One of these trends, electrification, has brought about a major change in the way NOK products are used. The NOK Group continues to develop and supply components for next-generation vehicles such as hybrid vehicles (HEV), electric vehicles (EV), and fuel cell vehicles (FCV), and is highly regarded and trusted by customers.

The NOK Group will continue to provide products and services that satisfy customers not only in automobiles, but also in a wide range of fields, including construction machinery, agricultural machinery, electronic equipment, aerospace equipment, ships, office equipment, home appliances, and health-care equipment, through further advanced research and development.



SHONAN R&D CENTER

It was established in 2005 as the core of the NOK Group technology. We conduct basic research on the Group's products, study advanced evaluation technologies including CAD and CAE, develop new materials, and develop inspection and molding machines that will play an active role in manufacturing.



NOK CORPORATION / NOK (Seals) Base Technology for Seals

NOK, in its long history of technological development, has engaged in persistent prediction and verification of various phenomena. For example, by establishing our own quantitative evaluation technology to check the status of an oil film that is created when an oil seal is used on a rotating shaft, we succeeded for the first time in the world in visualizing the oil flow on and near the sliding surface of the seal, and dramatically improved our understanding of the theory of lubrication mechanism and sealing mechanism.

In addition, we are working to provide safer and more reliable products through the development of material analysis and NOK's own evaluation technologies that always incorporate advanced technologies, such as visualization technology developed to verify the dynamic deformation behavior of the sealing member mounted inside the metal pressure vessel, flow analysis (CFD) to verify the flow of rubber in the mold during molding, and sound vibration analysis of products.

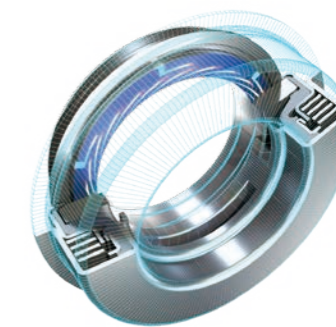


Oil membrane visualization equipment for oil seals used on rotating shafts

EAGLE INDUSTRY CO., LTD. / EKK (Seals) Development and application of surface texture technology

EKK products are components that prevent liquids, gases, and other fluids from leaking to the outside of the operating section of rotating equipment, contributing to environmental conservation and energy conservation.

In particular, we have recently developed GlideX™, a mechanical seal with low friction and high sealing using surface texture technology, which has been highly evaluated. GlideX™ is the world's first seal that has cleared the contradictory conditions of "low torque and high sealing" even under high-speed rotation conditions, and has achieved a friction reduction of more than 90% compared with conventional mechanical seals. This technology and product contribute to improving the range of electric vehicles in order to reduce CO₂ emissions.



GlideX™

NIPPON MEKTRON, LTD. / MEK (Electronic components) Technological Development Corresponding to Cutting-Edge Devices

In the 1960s, FPCs were used in the United States for aircraft, rockets, and military supplies. They spread rapidly in the 1970s as they began to be used for general purposes such as optical single-lens reflex cameras requiring components with small-size and thin specifications. Today, FPCs are widely used as electronic components essential for cutting-edge devices such as smartphones.

In order to support such downsizing and high functionality of electronic devices, MEK has been promoting the technological development of FPCs, such as making them thinner, more heat resistant, higher density and for high-speed transmission. MEK intends to expand its FPC technology into various fields where progress is expected in the future, including automobiles, wearable devices, medical equipment, and robots.



Stretchable FPC for a sensor to monitor biological signals

SYNZTEC CO., LTD. / SZT (Rollers) High Functional Roller Technology

Copiers require a variety of environmental technologies, including charging and developing technology that achieves high-quality images at high speed, high-precision transport, and reduction of thermal energy loss during fixing.

SZT uses a variety of independently developed technologies. For example, it has developed highly functional materials and technologies for copiers, such as charge rollers and blades, by the use of electric resistance control rubber and abrasion-resistant urethane materials, respectively. Other examples include electroformed sleeves, Mini Cell fixing rollers, and paper pick-up rollers. The company develops highly functional, durable, and also environmentally friendly products.



Urethane injection molding

NOK Group's History

■ NOK NOK CORPORATION [Seals]
 ■ MEK NIPPON MEKTRON, LTD. [Electronic components]
 ■ NKL NOK KLUEBER CO., LTD. [Special lubricants]
■ EKK EAGLE INDUSTRY CO., LTD. [Seals]
 ■ SZT SYNZTEC CO., LTD. [Rollers]
 ■ UMT UNIMATEC CO., LTD. [Synthetic chemical products]

- 1939 ■ NOK Edogawa Seiki Co., Ltd. is established in Tokyo (capital: 150,000 yen)
(The company name was changed to Tokyo Yushi Industry Co., Ltd. in 1942,
and to Tokyo Oil Seal Industry Co., Ltd. in 1948)
- 1941 ■ NOK Japan Bearing Production Co., Ltd. is established in Kobe (capital: 180,000 yen)
(Renamed Nippon Yushi Industry Co., Ltd. in 1944) ①
- 1951 ■ NOK Tokyo Oil Seal Industry Co., Ltd. merges with Nippon Yushi Industry Co., Ltd. and the company
name is changed to Nippon Oil Seal Industry Co., Ltd. (capital: 7 million yen)
- 1954 ■ NOK Head office and Tokyo Plant relocated to Ota-ku, Tokyo



- 1970 ■ NOK Kumamoto Plant established in Aso-cho (presently Aso City), Kumamoto Prefecture
- 1971 ■ EKK Okayama Plant established in Takahashi City, Okayama Prefecture
- MEK Minamiibaraki Plant established in Kukizaki-mura, Inashiki-gun (presently Tsukuba City),
Ibaraki Prefecture ⑥
- UMT Kitaibaraki Plant established as a factory of Nippon Oil Seal Industry Co., Ltd.
(presently NOK CORPORATION) ⑦
- 1973 ■ NOK Singapore Oil Seal Co., Pte. Ltd. established jointly with local capital in Singapore ⑧
- UMT Seiwa Chemical Co., Ltd. established by Nippon Oil Seal Industry Co., Ltd. as its
subsidiary for the research, development, and manufacture of synthetic chemical
products; acquires Kitaibaraki Plant
- 1974 ■ NOK Tokai Plant established in Ogasa-cho (presently Kikukawa City), Shizuoka Prefecture
- 1976 ■ NKL Nippon Oil Seal Industry Co., Ltd. establishes a subsidiary named
NOK KLUEBER CO., LTD., which starts importing and selling special lubricants made
by Klueber Lubrication Muenchen KG in West Germany
- 1978 ■ NOK Equity stake taken in Pyung Hwa Oil Seal Industry Co., Ltd. in South Korea
- EKK Company name changed from Nippon Sealol Co., Ltd. to EAGLE INDUSTRY CO., LTD.
- MEK Subsidiary named Kashima Kinzoku Kogyo K.K. established in Hasaki-machi,
Kashima-gun (presently Kamisu City), Ibaraki Prefecture
- 1979 ■ EKK EagleBurgmann Taiwan Co., Ltd. and Eagle Industry Taiwan Corporation established
as an affiliated company in Taiwan
- UMT Nippon Mektron, Ltd. merges with Seiwa Chemical Co., Ltd.

1960

1970

1980

1990

2000

2010

2020

- 1960 ■ NOK Capital participation agreement concluded with
Carl Freudenberg KG in West Germany ②
- NOK Fujisawa Plant established in Fujisawa City, Kanagawa Prefecture
- 1961 ■ NOK Listed on the Tokyo and Nagoya Stock Exchanges
- NOK Head office moved to Chuo-ku, Tokyo
- 1963 ■ NOK Saga Plant established in Nakabaru-cho (presently Miyaki-cho), Saga Prefecture
- 1964 ■ EKK Nippon Oil Seal Industry Co., Ltd. concluded an agreement for a joint venture in
mechanical seals with Sealol Corporation in U.S.A., and established
Nippon Sealol Co., Ltd. (presently EAGLE INDUSTRY CO., LTD.) ③
- 1965 ■ EKK Saitama Plant established in Sakado-cho, Iruma-gun (presently Sakado City),
Saitama Prefecture ④
- 1966 ■ NOK Head office moved to Minato-ku, Tokyo
- 1967 ■ NOK Shizuoka Plant established in Sagara-cho, (presently Makinohara City),
Shizuoka Prefecture
- 1968 ■ NOK NOK-USA, Inc. established in U.S.A. (changes its name to NOK Inc. in 1980)
- NOK Fukushima Plant established in Fukushima City, Fukushima Prefecture ⑤
- 1969 ■ MEK Nippon Oil Seal Industry Co., Ltd. concludes a technological partnership
agreement with Rogers Corporation in U.S.A. and establishes a subsidiary
named NIPPON MEKTRON, LTD.



- 1980 ■ NOK Capital increased to 7,599 million yen
- 1981 ■ NKL Kitaibaraki Plant established in Kitaibaraki City, Ibaraki Prefecture;
starts producing and developing Klueber products in Japan ⑨
- 1982 ■ EKK Listed on the Tokyo Stock Exchange ⑩
- 1984 ■ NKL Start of manufacturing of coating paints for automobile parts and
processing and selling coatings using technologies from
Klueber Lubrication Muenchen in West Company
- 1985 ■ NOK Company name changed from Nippon Oil Seal Industry Co., Ltd.
to NOK CORPORATION
- 1986 ■ MEK Subsidiary named Mektec Corporation established in Taiwan ⑪
- 1987 ■ NOK Nihonmatsu Business Office established in Nihonmatsu City,
Fukushima Prefecture
- EKK Subsidiary named PT. Eagle Industry Indonesia established in Indonesia
- EKK NOK Eagle Korea Co., Ltd. (presently NEK Co., Ltd.) established as
an affiliated company in South Korea
- 1988 ■ NOK Subsidiary named Thai NOK Co., Ltd. established in Thailand
- EKK Subsidiary named Eagle Industry (Thailand) Co., Ltd.
(presently EKK Eagle Thailand Co., Ltd.) established in Thailand
- 1989 ■ NOK Freudenberg-NOK G.P. established as an affiliated company in U.S.A. ⑫
- NOK Capital increased to 15,911 million yen



- 1994 ■ MEK Mektec Manufacturing Corporation (Thailand) Ltd.
established in Thailand
- 1995 ■ NOK Wuxi NOK-Freudenberg Oilseal Co., Ltd.
established as an affiliated company in China
- NOK Equity stake taken in Changchun
NOK-Freudenberg Oilseal Co., Ltd. in China
- 1996 ■ NOK Subsidiary named PT. NOK Indonesia
established in Indonesia
- NOK Subsidiary named NOK Asia Company Pte. Ltd.
established in Singapore
- 1997 ■ MEK Subsidiary named Mektec Manufacturing Corporation (Zhuohai) Ltd.
established in China
- MEK Kashima Kinzoku Kogyo K.K. merged
- 1998 ■ EKK Eagle Machine Works Co., Ltd. and Eagle Precision Co., Ltd. are merged to
establish Niigata Eagle Co., Ltd. (presently Eagle Burgmann Japan Co., Ltd.)
- EKK Eagle-Witzenmann S.A.S. (presently Eagle Industry France S.A.S.)
established as an affiliated company in France



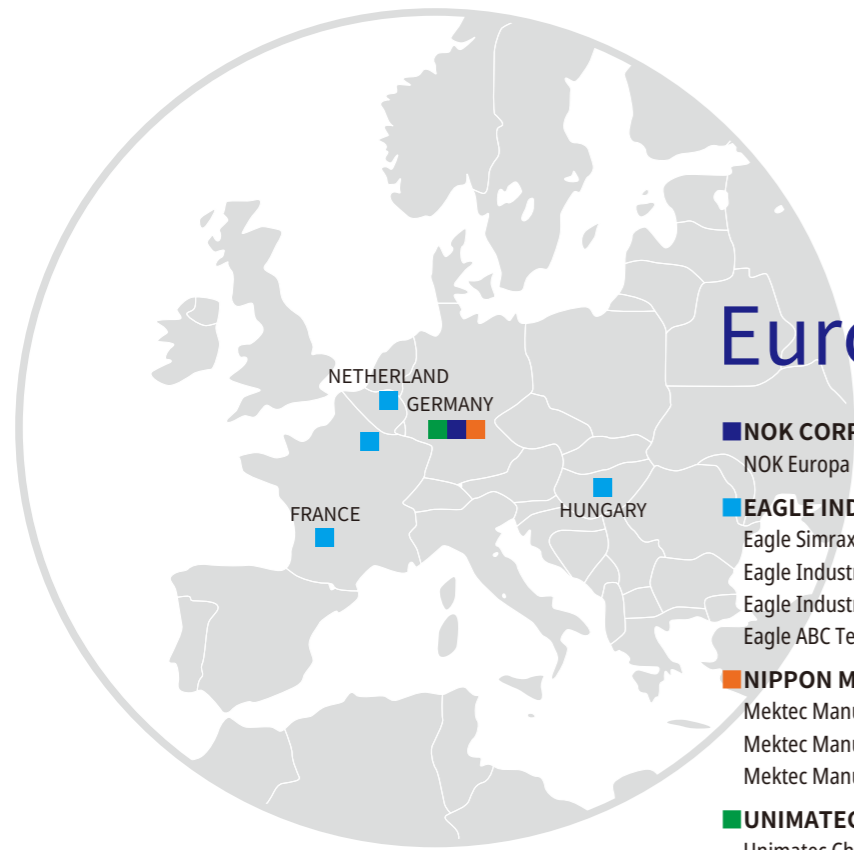
- 2000 ■ NOK Sigma Freudenberg NOK Pvt. Ltd.
established as an affiliated company in India
- 2001 ■ MEK Subsidiary named NOK Precision Component Thailand, Ltd.
established in Thailand
(presently Mektec Precision Component Thailand, Ltd.)
- 2002 ■ NOK Subsidiary named NOK (Wuxi) Vibracoustic China Co., Ltd.
established in China
- EKK Subsidiary named Eagle Industry Wuxi Co., Ltd. established in China
- MEK Subsidiary named Mektec Manufacturing Corporation (Suzhou) Ltd.
established in China
- UMT Established UNIMATEC CO., LTD., a subsidiary of NOK CORPORATION,
breaking independence from NIPPON MEKTRON, LTD.
- 2003 ■ NOK Acquisition of Ishino Gasket Manufacturing Co., Ltd.,
making it a 100%-owned subsidiary
- NOK Capital increased to 23,335 million yen
- MEK Okuhara Plant (presently Ushiku Business Office) established in Ushiku City, Ibaraki Prefecture
- 2004 ■ NOK Subsidiary named Vietnam NOK Co., Ltd. established in Vietnam
- EKK Acquisition Kobelco Marine Engineering Co., Ltd. (presently Marine Division),
making it a 100%-owned subsidiary
- SZT NOK CORPORATION acquires Hokushin Corporation
- 2005 ■ NOK Shonan R&D Center established in Fujisawa City, Kanagawa Prefecture ⑬
- EKK Joint venture agreement concluded with Burgmann International GmbH in Germany
for mechanical seals to be used in the general industrial machinery industry
- SZT NOK CORPORATION acquires Nitto Kogyo Co., Ltd.
- 2006 ■ SZT Hokushin Corporation establishes a subsidiary named Hokushin Vietnam Co., Ltd. in Vietnam
- UMT Subsidiary named Unimatec Singapore Pte., Ltd. established in Singapore ⑭
- 2007 ■ SZT Hokushin Corporation and Nitto Kogyo Co., Ltd. are merged to establish Synztec Co., Ltd.
as a subsidiary of NOK CORPORATION
- 2009 ■ EKK Eagle Seals and Systems India Ltd. merges with Burgmann India Pvt. Ltd. and the company name is
changed to EagleBurgmann India Pvt. Ltd.
- EKK Acquisition of Simrax B.V. (presently Eagle Simrax B.V.), making it a 100%-owned subsidiary

- 2010 ■ MEK Acquisition of Freudenberg Mektec Europa GmbH,
making it a subsidiary named Mektec Europe GmbH
- UMT Processed product business transferred to NOK CORPORATION
- 2011 ■ MEK Precision Components business for HDDs and Mobile Devices
transferred from NOK CORPORATION
- 2012 ■ NOK TVD manufacturing company, a joint venture together with
Pyung Hwa Holdings Co., Ltd. established in Korea ⑮
- EKK EAGLE INDUSTRY CO., LTD. merges with a subsidiary named
KEMEL Co., Ltd. (presently Marine Division)
- EKK EKK Eagle Industry Mexico S.A.de C.V. established in Mexico
- 2015 ■ EKK Acquisition of ABC Technology S.A.S. (presently Eagle ABC Technology S.A.S.),
making it a 100%-owned subsidiary
- 2016 ■ MEK Subsidiary named Mektec Manufacturing Corporation Vietnam Ltd.
established in Vietnam ⑯
- 2019 ■ EKK Subsidiary named Eagle Sealing Research & Development (Wuxi) Co., Ltd.
established as an R&D base in China



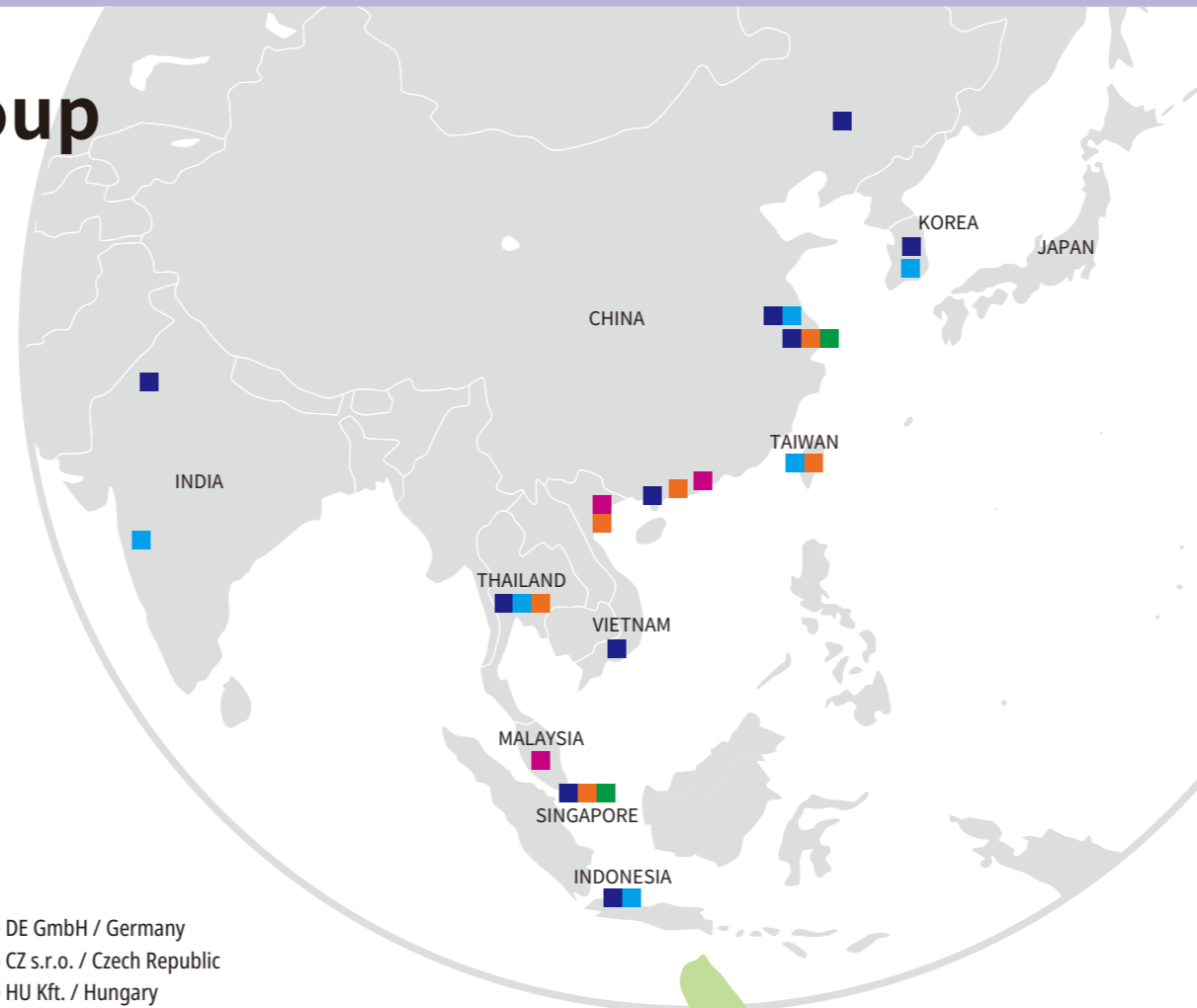
- 2020 ■ NOK Head Office Building established in Minato-ku, Tokyo ⑰
- 2021 ■ MEK Tokyo Office opened in Taito-ku, Tokyo
- 2023 ■ NOK Formulation of Our Purpose and Our Values

Global Deployment of NOK Group



Europe

- **NOK CORPORATION**
NOK Europa GmbH / Germany
- **EAGLE INDUSTRY CO., LTD.**
Eagle Simrax B.V. / Netherland
Eagle Industry France S.A.S. / France
Eagle Industry Hungary Kft. / Hungary
Eagle ABC Technology S.A.S. / France
- **NIPPON MEKTRON, LTD.**
Mektec Manufacturing Corporation Europe DE GmbH / Germany
Mektec Manufacturing Corporation Europe CZ s.r.o. / Czech Republic
Mektec Manufacturing Corporation Europe HU Kft. / Hungary
- **UNIMATEC CO., LTD.**
Unimatec Chemicals Europe GmbH / Germany

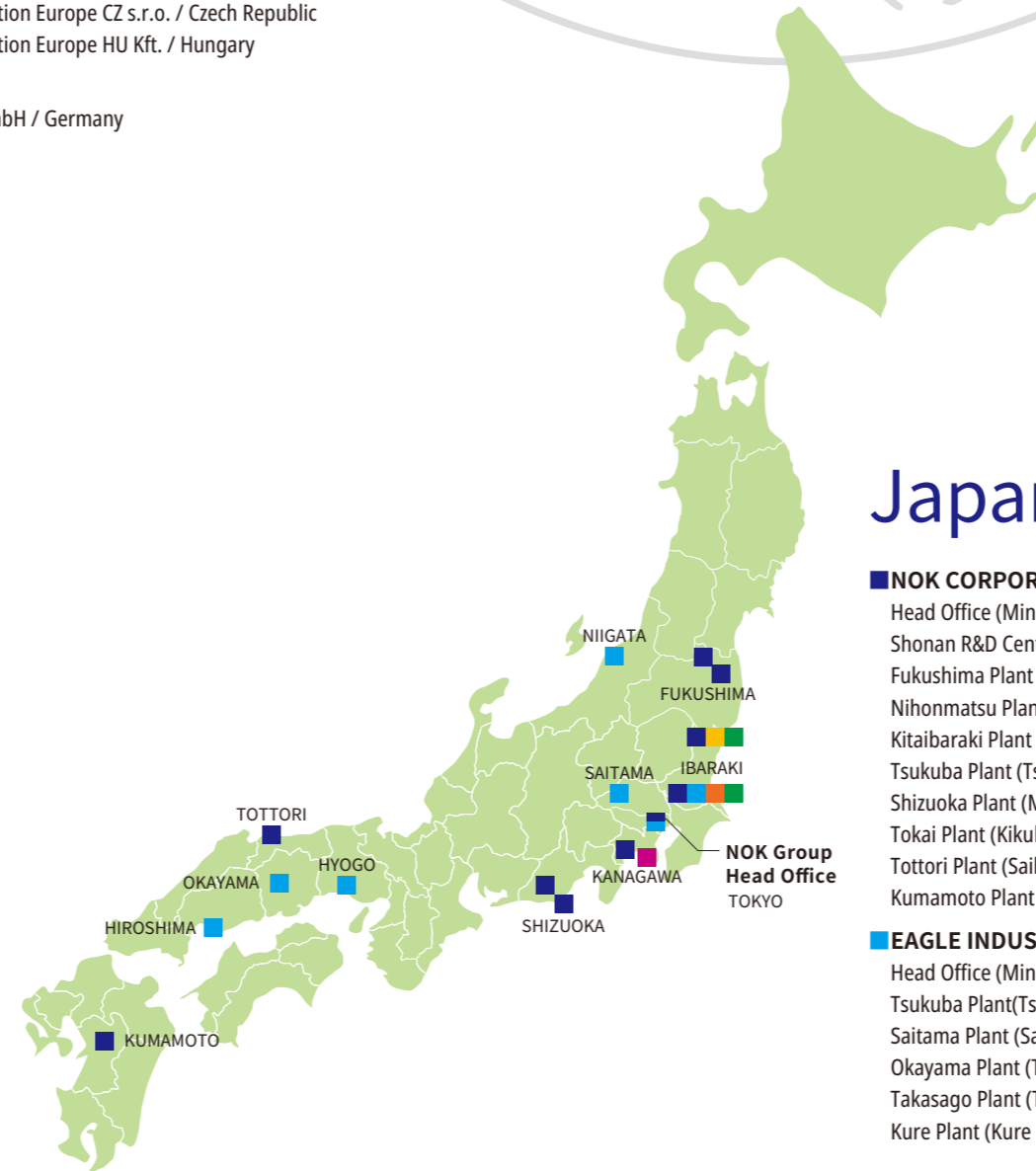
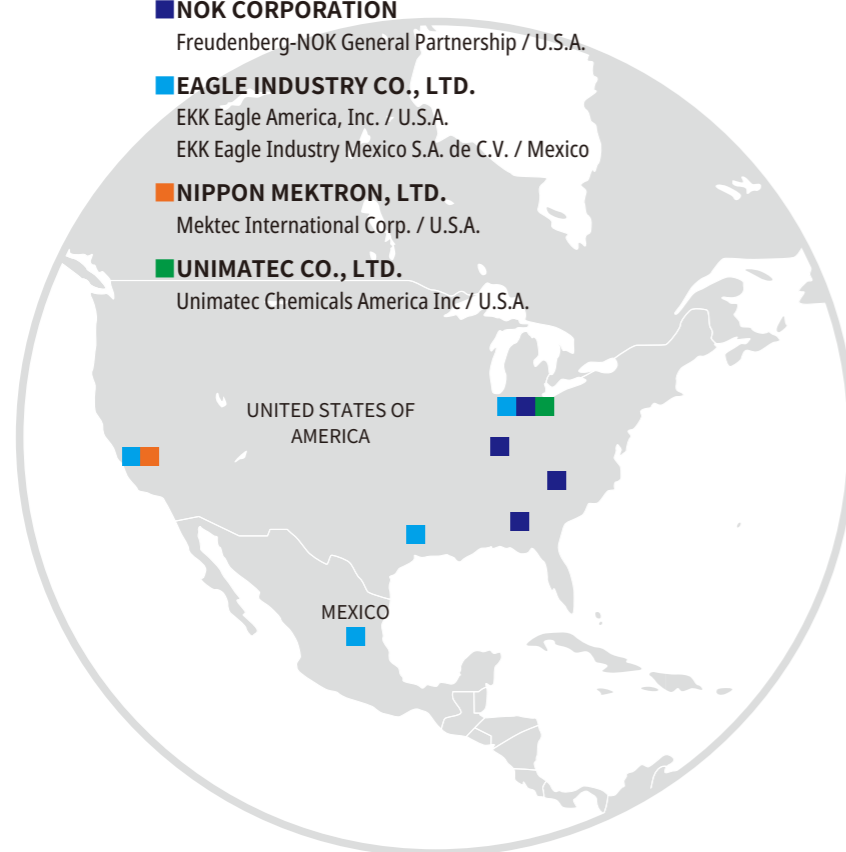


Asia

- **NOK CORPORATION**
Freudenberg-NOK Private Limited / India
Thai NOK Co.,Ltd. / Thailand
NOK Asia Company Pte. Ltd. / Singapore
PT. NOK Indonesia / Indonesia
PT. NOK Freudenberg Sealing Technologies / Indonesia
Vietnam NOK Co.,Ltd. / Vietnam
Wuxi NOK-Freudenberg Oil Seal Co., Ltd. / China
NOK(Wuxi) Vibration Control China Co.,Ltd. / China
Changchun NOK-Freudenberg Oil Seal Co., Ltd. / China
NOK-Freudenberg Group Sales (China) Co., Ltd. / China
NOK-Freudenberg Hong-Kong LTD. / China
Pyung Hwa Oil Seal Industry Co., Ltd. / South Korea
- **EAGLE INDUSTRY CO., LTD.**
EagleBurgmann India Pvt. Ltd. / India
EKK Eagle Products India Pvt. Ltd. / India
EKK Eagle (Thailand) Co., Ltd. / Thailand
PT. Eagle Industry Indonesia / Indonesia
Eagle Industry (Wuxi) Co., Ltd. / China
Eagle Industry Taiwan Corporation / Taiwan
NEK Co., Ltd. / South Korea
- **NIPPON MEKTRON, LTD.**
Mektec Manufacturing Corporation (Thailand) Ltd. / Thailand
Mektec Precision Component (Thailand) Ltd. / Thailand
NOK Precision Component Singapore Pte. Ltd. / Singapore
Mektec Manufacturing Corporation (Zhuhai) Ltd. / China
Mektec Manufacturing Corporation (Suzhou) Ltd. / China
Mektec Corporation / Taiwan
Mektec Manufacturing Corporation Vietnam Ltd. / Vietnam
- **SYNZTEC CO., LTD.**
Synztec (Malaysia) Sdn. Bhd. / Malaysia
Synztec Vietnam Co., Ltd. / Vietnam
Synztec Precision Parts (Shenzhen) Co., Ltd. / China
Synztec (H.K.) Co., Ltd.
- **UNIMATEC CO., LTD.**
Unimatec Chemicals India Pvt. Ltd. / India
Unimatec Chemicals China Co., Ltd. / China
Unimatec Singapore Pte. Ltd. / Singapore

North America

- **NOK CORPORATION**
Freudenberg-NOK General Partnership / U.S.A.
- **EAGLE INDUSTRY CO., LTD.**
EKK Eagle America, Inc. / U.S.A.
EKK Eagle Industry Mexico S.A. de C.V. / Mexico
- **NIPPON MEKTRON, LTD.**
Mektec International Corp. / U.S.A.
- **UNIMATEC CO., LTD.**
Unimatec Chemicals America Inc / U.S.A.



Japan

- **NOK CORPORATION**
Head Office (Minato-ku, Tokyo)
Shonan R&D Center (Fujisawa City, Kanagawa Prefecture)
Fukushima Plant (Fukushima City, Fukushima Prefecture)
Nihonmatsu Plant (Nihonmatsu City, Fukushima Prefecture)
Kitaibaraki Plant (Kitaibaraki City, Ibaraki Prefecture)
Tsukuba Plant (Tsukuba City, Ibaraki Prefecture)
Shizuoka Plant (Makinohara City, Shizuoka Prefecture)
Tokai Plant (Kikukawa City, Shizuoka Prefecture)
Tottori Plant (Saihaku-gun, Tottori Prefecture)
Kumamoto Plant (Aso City, Kumamoto Prefecture)
- **EAGLE INDUSTRY CO., LTD.**
Head Office (Minato-ku, Tokyo)
Tsukuba Plant(Tsukuba City, Ibaraki Prefecture)
Saitama Plant (Sakado City, Saitama Prefecture)
Okayama Plant (Takahashi City, Okayama Prefecture)
Takasago Plant (Takasago City, Hyogo Prefecture)
Kure Plant (Kure City, Hiroshima Prefecture)
- **EagleBurgmann Japan Co., Ltd.**
Head Office (Minato-ku, Tokyo)
Niigata Plant (Gosen City, Niigata Prefecture)
Saitama Plant (Sakado City, Saitama Prefecture)
- **NIPPON MEKTRON, LTD.**
Head Office (Minato-ku, Tokyo)
Ushiku Plant (Ushiku City, Ibaraki Prefecture)
Tokyo Office (Taito-ku, Tokyo)
- **SYNZTEC CO., LTD.**
Head Office (Minato-ku, Tokyo)
Yokosuka Plant (Yokosuka City, Kanagawa Prefecture)
- **NOK KLUEBER CO., LTD.**
Head Office (Minato-ku, Tokyo)
Kitaibaraki Plant (Kitaibaraki City, Ibaraki Prefecture)
- **UNIMATEC CO., LTD.**
Head Office and Tokyo Office (Minato-ku, Tokyo)
Plant No. 1 (Kitaibaraki City, Ibaraki Prefecture)
Ushiku Office (Ushiku City, Ibaraki Prefecture)



Company Profile

Company Name:

NOK CORPORATION

Established:

December 2, 1939

Founded:

July 9, 1941

Head Office:

1-12-15 Shiba Daimon, Minato-ku, Tokyo 105-8585, Japan

Website:

<https://www.nok.co.jp/en/>

Capital:

23,335 million yen

Total number of authorized shares:

600,000,000

Total number of outstanding shares:

173,138,537

Public Listing:

Tokyo Stock Exchange

Prime Market NOK(Securities Code Number:7240)

Business Details:

Manufacture, purchase, import, and sale of seals, industrial functional parts, hydraulic equipment, plant machinery, nuclear power equipment, synthetic chemical products, electronic products, and various other products; and the provision of associated services such as the installation of machinery and devices