

Nippondenso Co., Ltd.



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## **Nippondenso Co., Ltd.**

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Kariya City, Aichi 448

[Japan \(/places/asia/japanese-political-geography/japan\)](#)

(0566) 25-5511

*Public Company*

*Incorporated:* 1949

*Employees:* 39,252

*Sales:* ¥1.30 trillion (US\$9.06 billion)

*Stock Exchanges:* [Tokyo \(/places/asia/japanese-political-geography/tokyo\)](#) Osaka Nagoya

Nippondenso Company is Japan's leading producer of automobile components and one of the larger international components manufacturers, recognized primarily for its compact and lightweight electronic and electrical parts of innovative design. As the second-largest member of the Toyota Group, more than half of Nippondenso's products go to Toyota Motor Corporation (TMC), which owns better than 20% of Nippondenso stock. Nippondenso also supplies nearly all other major Japanese automakers except Nissan; numerous U.S. manufacturers including the Big Three, Ford, General Motors, and Chrysler; and major European auto manufacturers such as Volvo, BMW, and Fiat.

Nippondenso produces more than 3,000 component parts in eight separate product areas,

and nonautomotive products. The company's emphasis on quality control and improved manufacturing efficiency throughout its history, its aggressive international expansion program, and its well-funded research-and-development activities since the 1960s have produced steady sales growth and allowed Nippondenso to capture dominant positions in many of its world markets.

Nippondenso rose to its international presence from TMC's in-house electrical and radiator operations, which began after Toyota Automatic Loom Works formed an automobile division in 1933. In 1936 the Japanese government passed legislation to promote domestic production of automobiles. Loom Works separated its automobile division from the rest of the company, and the motor division developed an in-house electrical-parts factory.

The inability of Loom Works to fund adequately automobile production on its own and the fact that legislation had made automobile production potentially profitable led to the 1937 establishment of Toyota Motor Corporation. Soon afterwards, the Toyota Group was reorganized around TMC rather than Loom Works. The limited number of Japanese independent parts manufacturers in the late 1930s, especially those that produced electrical parts, led to the development of parts makers with close ties to automobile manufacturers.

Shortly after Toyota Motor Corporation was formed, it built a factory in Kariya to produce starters and coils. In 1943 a radiator plant was added, and the two factories eventually became the basis for Nippondenso.

Japan's involvement in [World War II](/history/modern-europe/wars-and-battles/world-war-ii) contributed heavily to the development of Toyota and its affiliates through wartime contracts. After Japan surrendered to the Allies in 1945, the [automobile industry](/social-sciences-and-law/economics-business-and-labor/businesses-and-occupations/automobile-industry) was reshaped by the Supreme Command for the Allied Powers, and TMC was compelled to spin off Nippondenso as an independent company.

Nippondenso Company was incorporated on December 16, 1949, as an automotive electrical-equipment maker with ¥15 million in capital and 1,445 employees. Torao Hayashi was named president. Nippondenso's first products as an independent company included starters, ignition

In March 1950 Nippondenso announced it would cut personnel in response to recession. A two-month strike resulted and was resolved after Toyota president Kiichiro Toyoda and the company's managing director and executive vice president resigned. Shortly thereafter, 1,760 employees retired voluntarily.

In the 1950s Nippondenso used standardization and quality control to rise to the top of its field. Hayashi and other top executives initially viewed quality control as a means to standardize and to procure U.S. military contracts. Nippondenso also looked to foreign cooperative agreements during the decade as a way of improving standardization techniques, gaining technological knowledge, and expanding product lines.

Following the recommendations of U.S. and Japanese quality-control experts, Nippondenso established a program that combined design, processing, and cost controls. In 1950 Nippondenso formed an inspection department that learned statistical quality-control methods. The following year use of control charts was initiated, and in 1952 random sampling and other testing methods were adopted. In 1954 the company embarked on a five-year quality control program, which included compiling an inhouse training manual for employees and subcontractors. The program initially targeted improvements in standardization and inspections. In 1956 Nippondenso established a quality-control staff office and an independent committee to oversee quality-control programs.

Beginning in 1953 Nippondenso entered a three-year technical agreement with Robert Bosch of West Germany for the production of electronic parts, fuel injection (/science-and-technology/technology/technology-terms-and-concepts/fuel-injection) pumps, and spark plugs. As a result of the Bosch tie-up, Nippondenso's product line was expanded in the latter part of the decade to include car air conditioners, engine regulating equipment, fuel injection (/science-and-technology/technology/technology-terms-and-concepts/fuel-injection) systems, and diesel engines.

In 1957 and 1958 Nippondenso deemphasized finished product inspection and focused quality-control efforts on improved process-control methods. At the same time, it extended quality-control techniques into design and prototype-manufacturing areas. In 1958 Nippondenso purchased precision measuring equipment and automatic inspection devices to help workers control quality themselves. By the end of the decade sales had grown 23 times from 1950 levels and surpassed ¥10 billion.

In 1960 Nippondenso began working with integrated-circuit (IC) technology and developed an electromagnetic fuel pump fitted with a diode transistor. Two years later the company created an IC device that dims headlights automatically.

In 1961 Nippondenso implemented a second five-year quality control plan that was designed to strengthen the company's management. Later that year, long-range planning efforts of the Quality Control Committee, established in 1956, along with supervisors for planning, development, and production-line activity, were recognized when Nippondenso received the prestigious Deming quality-control award.

Beginning in the latter half of the 1960s Nippondenso expanded in a number of areas; in 1965 new domestic plants were established in [Hiroshima \(/places/asia/japanese-political-geography/hiroshima\)](#) and Ikeda to manufacture radiators, radiator-fan motors, and oil coolers. Two years later Nippondenso's fourth plant, a starter and alternator production facility, was opened in Anjo.

Between 1965 and 1966 three new domestic manufacturing and sales subsidiaries were formed: Nippon Wiper Blade Co., Ltd. in Saitama Prefecture, GAC Corporation in Nagano Prefecture, and Asahi Manufacturing in Aichi Prefecture. These companies produce windshield-wiper parts, small motors for automobiles, bus air conditioners, lead wires for automobile components, and central [air conditioning \(/science-and-technology/technology/technology-terms-and-concepts/air-conditioning\)](#) systems. In the following year Nippondenso also began exporting automotive components in order to supply the growing number of Japanese automakers assembling automobiles in East and Southwest Asian countries.

Nippondenso's interest in marketing supplies to major U.S. automakers and an increase in Japanese-made cars exported to the [United States \(/places/united-states-and-canada/us-political-geography/united-states\)](#) led to the 1966 establishment of the company's first overseas facilities, which were branch offices in [Chicago \(/places/united-states-and-canada/us-political-geography/chicago\)](#) and [Los Angeles \(/places/united-states-and-canada/us-political-geography/los-angeles\)](#). About the same time, liaison offices were opened in [New York \(/places/united-states-and-canada/us-political-geography/new-york\)](#) and [Montreal \(/places/united-states-and-canada/canadian-political-geography/montreal\)](#). New products featuring increased automation were also introduced by Nippondenso during the mid-1960s. These included power seat and power window motors, automatic door locks, and a mechanical cruise-control system.

In 1967 Hayashi became the company's first chairman of the board. Tatsuo Iwatsuki, a former vice president and managing director who had been with the company since its incorporation, became president.

The company made a commitment to integrated-circuit technology in 1968 with the opening of its IC Research Center, the first of its type in the automotive industry. That same year it set up the Electronics Product Division to assemble [printed circuit \(/science-and-technology/computers-and-electrical-engineering/electrical-engineering/printed-circuit\)](#) boards. The rapid growth of Nippondenso, especially in the latter half of the 1960s, resulted in eightfold sales increase from 1960 to 1969. By the end of the decade the company recorded annual sales in excess of ¥90 billion.

In the 1970s Nippondenso stepped up the pace of its international expansion, research, and product development. In 1970 Nippondenso established Nippon Soken near the Nishio plant for basic automotive-component research. Also in that year the new Nishio plant in Japan began manufacturing a number of the company's principal products, including car heaters and air conditioners, radiators, radiator-fan motors, fuel injection pumps, and electronic fuel injection components. Four years later another domestic plant opened in Takatana to produce meters, oil filters, machinery, and tools.

Between 1971 and 1976 the company bolstered its worldwide presence by establishing nine

assemble and sell air conditioners and import and sell rebuilt electrical automotive equipment and spark plugs. From 1972 onward, Nippondenso formed subsidiaries in [Australia \(/places/australia-and-oceania/australian-and-new-zealand-political-geography/australia\)](#) and Asian nations in response to more stringent domestic content regulations.

As business with U.S. automakers expanded in the early 1970s, Nippondenso established additional import and sales subsidiaries in [North America \(/places/oceans-continents-and-polar-regions/oceans-and-continents/north-america\)](#). In 1972 Nippondenso Canada was established in [Toronto \(/places/united-states-and-canada/canadian-political-geography/toronto\)](#). Three years later, Nippondenso Sales, Inc. was set up in [Detroit \(/places/united-states-and-canada/us-political-geography/detroit\)](#). In 1973 Nippondenso's first European subsidiary, Nippondenso ([Europe \(/places/oceans-continents-and-polar-regions/oceans-and-continents/europe\)](#)) B.V., was established in [Amsterdam \(/places/britain-ireland-france-and-low-countries/benelux-political-geography/amsterdam\)](#) to import and sell air conditioners and air conditioner compressors. Also in 1973, Iwatsuki was named chairman of the board. Takaaki Shirai, another former vice president and managing director, was named president.

Nippondenso responded quickly to changing market needs in the 1970s. After the 1973 oil crisis struck and fuel economy became an international issue, Nippondenso refocused its research-and-development programs and produced an engine control system; and after [air pollution \(/science-and-technology/biology-and-genetics/environmental-studies/air-pollution\)](#) became a growing concern later in that decade, Nippondenso produced an electronic fuel injection system that regulated exhaust emissions. The two developments enhanced the company's reputation and boosted sales. So did the push toward smaller, fuel-conserving cars, which increased demand for the compact Nippondenso-made components.

Other Nippondenso innovations during the decade included an electronically controlled automatic transmission developed in conjunction with Toyota in 1970. More electronically controlled systems followed, including a spark advance system, knock control system, and idle speed control system. IC-based technology produced an electronic fuel injection system, new igniters, regulators, and speed sensors. The decade's innovations also included an antiskid device, electronic cruise control, a power-trunk-opening computer, and such nonautomotive

and a portable refrigerator. The 1975 introduction of a new spark plug with a patented U-groove electrode, marketed by Nippondenso of [Los Angeles \(/places/united-states-and-canada/us-political-geography/los-angeles\)](#), boosted U.S. sales and contributed to Nippondenso's firm establishment in the spark plug market.

Also in 1977, Takaaki Shirai became chairman of the board, and was succeeded as president by Fubito Hirano. Hirano, like other presidents before him, had climbed the corporate ladder via the offices of managing director and vice president. By the end of the decade 8.4% of net sales were coming from overseas operations. Sales over the previous ten years had grown by 500%, to better than ¥500 billion. The sale of automobile air conditioners and heaters continued to pace earnings, followed by growing sales of electrical components.

Sales continued to climb throughout the 1980s, although earnings slipped mid-decade due to the high value of the yen. During the decade, the company focused on product diversification, international expansion, and construction and automation of factories.

In 1980 Nippondenso formed its first South American subsidiary, in [Brazil \(/places/latin-america-and-caribbean/south-american-political-geography/brazil\)](#). That same year, the company entered [Malaysia \(/places/asia/malaysia-and-singapore-political-geography/malaysia\)](#) with the formation of Nippondenso (Malaysia) SDN./BHD. Three years later a second Malaysian subsidiary was established. Products of the three new sales and manufacturing subsidiaries included air conditioners, air conditioner compressors, windshield washers, alternators, starters, and radiators.

In 1982 Hirano was named chairman of the board and Kengo Toda, a former vice president and managing director, was named president. That same year Nippondenso opened a domestic plant in Daian to produce distributors, spark plugs, magnetos, sensors, and actuators.

Nippondenso bolstered its European presence in 1984 with the formation of Nippondenso (Deutschland) GmbH, an import and sales subsidiary established for air conditioners, [air conditioning \(/science-and-technology/technology/technology-terms-and-concepts/air-conditioning\)](#) compressors, sensors, emission devices, and actuators. Another import and sales subsidiary, Nippondenso (U.K.) Ltd., was formed in 1984 to handle windshield washers, emission control products, and air conditioner parts.

Nippondenso's new products during the first half of the 1980s focused on automobile components emphasizing comfort, safety, and improved driving capabilities. Comfort-related items included a knee warmer, a seat heater, and a mosquito killer. Expanded electronics technology produced an electronically controlled diesel injection system, an electronic suspension control system, and a traction-control system. Nippondenso, which had a history of producing a majority of its specialized manufacturing equipment itself, also entered the automation business during the early 1980s, with the introduction of a magnetic stripe card reader recognition system and a bar-code scanner.

In 1985 Nippondenso posted its fifth consecutive year of increased sales and earnings, reaching all-time highs of ¥954 billion and ¥42.8 billion, respectively. Company officials attributed financial gains largely to increases in overseas production and domestic sales. Nippondenso's strongest push in overseas expansion during the decade was in the [United States \(/places/united-states-and-canada/us-political-geography/united-states\)](#). In 1984 the marketing and service joint venture A-B Nippondenso was formed when Nippondenso and Allen-Bradley Company of the [United States \(/places/united-states-and-canada/us-political-geography/united-states\)](#) agreed to cooperate on factory automation. The agreement called for cooperation in the development and sales and service of electronics products, and was designed to help Nippondenso advance in factory automation and to help Allen-Bradley, a major manufacturer of control devices and factory automation systems, to enter the Japanese market.

In 1984 the wholly owned subsidiary Nippondenso Manufacturing U.S.A. was formed in Battle Creek, [Michigan \(/places/united-states-and-canada/us-political-geography/michigan\)](#), for the manufacture and sale of radiators, car heaters, refrigerators, cooling units, condensers, and



Michigan, was also established in 1985. The center's goal was to provide engineering services for U.S. customers, test product designs, and perform other research-and-development activities. That same year Nippondenso developed its second comprehensive domestic testing facility at its corporate headquarters. The new Kariya facility was equipped with laboratories to simulate weather for visibility evaluation, and to simulate driving.

Net sales continued to grow in 1986 and 1987 and passed ¥1 trillion, but net profits declined as a result of the rapidly appreciating value of the yen. Net earnings fell better than ¥10.4 billion in 1986 and ¥1 billion the following year. In 1987 Toda was promoted to chairman, and Taro Tanaka assumed the duties of president. Two domestic plants in Toyohashi and Kota ([/places/asia/indian-political-geography/kota](#)) were also opened in 1987.

In the late 1980s rapid expansion continued, accompanied by increased net earnings. Between 1987 and 1989 five major U.S. subsidiaries were formed, including three joint ventures. In January 1989 Michigan Automotive Compressor, Inc. was formed as a joint venture between Nippondenso and Toyoda Automatic Loom Works, for the manufacture and sale of air conditioning compressors and magnetic clutches. In September of that year, Nippondenso established Purodenso Company in Jackson, Tennessee ([/places/united-states-and-canada/us-political-geography/tennessee](#)), as a 50-50 joint venture with Purolator Products Company ([/social-sciences-and-law/economics-business-and-labor/businesses-and-occupations/purolator-products](#)) of Tulsa ([/places/united-states-and-canada/us-political-geography/tulsa](#)), Oklahoma ([/places/united-states-and-canada/us-political-geography/oklahoma](#)), to produce and sell air cleaners and oil filters for Toyota, Saturn Corporation, and others. Two months later Nippondenso and Robert Bosch GmbH ([/social-sciences-and-law/economics-business-and-labor/businesses-and-occupations/robert-bosch-gmbh](#)) founded Associated Fuel Pump Systems Corporation as a 50-50 joint venture to produce fuel pumps for Big Three and Japanese automakers operating in the United States.

Nippondenso also continued expansion outside of North America ([/places/oceans-continent-and-polar-regions/oceans-and-continent/north-america](#)) in the late 1980s. In 1987 manufacturing and sales subsidiaries were established in Taiwan ([/places/asia/taiwan-political-geography/taiwan](#)) and Thailand ([/places/asia/thai-political-geography/thailand](#)). Nippondenso

Tool and Die (Thailand) Co., Ltd. was Nippondenso's first offshore producer of dies, and Nippondenso Taiwan Company was set up to produce electrical automotive equipment, radiators, and automotive heaters and air conditioners for TMC's subsidiaries in Taiwan.

In the first broad-based cooperation agreement among Japanese auto-parts makers belonging to different groups, Nippondenso agreed in 1987 to help an Isuzu Motors affiliate with radiator production techniques. Nippondenso Finance (Holland) B.V. was also established in 1987. This subsidiary was to carry out group finance and fund-raising activities in the European market. In 1988 Nippondenso struck a deal with Champion Spark Plugs to produce 20 million spark plugs annually under the Nippondenso brand name.

In 1989 Nippondenso and Japan's Shinwa Tsushinki Company agreed to cooperate on the development of mobile communications. That same year, Nippondenso and Valeo, the largest French automotive components manufacturer, together established VND in [Spain \(/places/spain-portugal-italy-greece-and-balkans/spanish-and-portuguese-political-geography/spain\)](#), to produce and sell distributorless ignition coils.

In 1989 Nippondenso also acquired IMI Radiators of the [United Kingdom \(/history/modern-europe/british-and-irish-history/united-kingdom-great-britain-and-northern-ireland\)](#). The new subsidiary, which specializes in production of oil coolers, intercoolers, and radiators for European automakers, was renamed ND Marston. Nippondenso also formed Australian Automotive Air, Pty. Ltd. in 1989 to manufacture condensers, cooling units, and electric fans for car air conditioners.

Nippondenso's growing interest in the home, office, and factory automation markets resulted in a number of new products in the latter half of the 1980s, including a programmable controller for manufacturing equipment, marketed through A-B Nippondenso. Nippondenso also introduced new factory automation products, including a compact bar-code handy scanner, marketed as the world's smallest and lightest, and a bar-code handy terminal, which combines scanning, storing, and transmission functions. Security systems that make use of finger print-reading devices and a hands-free automobile telephone, and an automobile facsimile transceiver, a combined transmitter and receiver, were also introduced. Other new automobile components included a navigation system and a traction-control system.

After a profit decline in 1986 and 1987, Nippondenso closed the decade with a rebound in earnings, which climbed to a high of ¥48.3 billion in 1989, while net sales reached ¥1.3 trillion. Sales continued to be paced by car air conditioners and heaters, which accounted for about 36% of revenues, and electrical automotive equipment, which represented about 20% of sales.

Nippondenso entered the 1990s by breaking into the Italian market with the January 1990 formation of Nippondenso (Italia), for the import and sale of starters and alternators. In

Nippondenso's plans for the future are represented in the company's motto "to be pioneering, innovative and creative." Further international expansion is planned with the goal of establishing a comprehensive global presence and a leading share in at least 15 of its major product markets, concentrating on improvement of electronic components; communications systems; ceramics actuators and heaters; factory-automation systems; information devices; environmental cooling [control systems \(/science-and-technology/technology/technology-terms-and-concepts/control-systems\)](/science-and-technology/technology/technology-terms-and-concepts/control-systems) for factories, offices, and trains; and refrigeration systems for perishable-food delivery trucks.

## Principal Subsidiaries

Asmo Company Ltd. (73.4%); Anjo Electric Company Ltd. (99.8%); Hamanakodenso Company Ltd. (75.8%); Nippondenso America, Inc. (U.S.A.); Nippondenso (Europe) B.V. ([Netherlands \(/places/britain-ireland-france-and-low-countries/benelux-political-geography/netherlands\)](/places/britain-ireland-france-and-low-countries/benelux-political-geography/netherlands))).

Encyclopedia 1080



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Kamiya, Shotaro, *My Life With Toyota*, Toyota City, Toyota Motor Sales Company, 1976; Cusumano, Michael A., *The Japanese Automobile Industry: Technology and Management at Nissan and Toyota*, Cambridge, The Council on East Asian Studies, [Harvard University \(/social-sciences-and-law/education/colleges-us/harvard-university\)](/social-sciences-and-law/education/colleges-us/harvard-university), 1985; Toyoda, Eiji, *Toyota: Fifty Years In Motion*, Tokyo, Toyota Motor Company, 1987; *Toyota: A History of the First 50 Years*, Toyota City, Toyota Motor Corporation, 1988.

—Roger W. Rouland

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