Always There, Supporting Your Life

Nabtesco operates a wide range of businesses in the industrial, daily life-related, and environmental fields, capitalizing on its motion control technology, which moves and stops objects in a precise manner. Although most of our products are not immediately visible, they are hard at work behind the scenes, fulfilling high-performance functions to enhance the safety and comfort of individuals as well as supporting the infrastructure that supports society over the world.

We deliver these products and technologies based on our “moving it. stopping it.” technology, which moves and stops objects in a precise and flexible manner. You might not see us, but we are always somewhere there in the background, supporting your life in a myriad of ways with this technology.

Nabtesco makes a significant contribution to society with its world-class, leading-edge technologies and high-quality products.

Overview of the recurring sections contained in this corporate brochure

- Products introduces the features of our major products.
- Motion Control Report explains our core “moving it. stopping it.” technology.
- Market Share outlines our domestic and overseas market shares (based on internal investigation) and future market strategies.
- Our Promises explains our core “moving it. stopping it.” technology.
- Action Guidelines clarify Nabtesco’s values, unique strengths, and strong commitment to manufacturing, all of which each employee is expected to embrace, cultivate, and pass on to future generations.

Action Guidelines for Top Management

Based on these guidelines, top executives will manage the Nabtesco Group by focusing on the four important points to ensure its sustainable growth as a global corporate group.

Action Guidelines for All Group Members

As a common set of principles applying to all employees in the performance of their duties and decision-making, these guidelines clearly indicate the appropriate directions of individual actions and decisions and clarify important corporate values and unique strengths.

Corporate Philosophy

Our Promises

Action Guidelines

Life

Transport equipment, industrial robots, car society will drive it forward,
which helps to move and stop objects, thereby supporting applications ranging from behind the scenes at home to societies all over the world.
Nabtesco Corporation was established by two companies with a long history, Teijin Seiki Co., Ltd. and NABCO, Ltd., which together founded a holding company in 2003 to give birth to Nabtesco. The two companies decided to merge to become one firm based on the belief that the integration of their products, core technologies, corporate strategies, and corporate cultures would help them increase their corporate value and achieve long-term growth.

Over the course of the 10-plus years since the integration, Nabtesco has been steadily expanding its business into a broader range of fields based on its motion control technology. Meanwhile, the manufacturing DNA of the two founding firms has been passed down from generation to generation to be incorporated into the highly reliable Nabtesco brand.

As an Honorable Company (Shinise) Established in the 21st Century

Nabtesco Corporation was established. Listed on the first section of the Tokyo Stock Exchange.

Established Nabtesco Automotive Corporation as a Group company for commercial vehicle equipment.

Established Nabtesco Automotive Corporation in China (Railroad vehicle equipment).

Established Shanghai Nekto Co., Ltd. (presently Shanghai Teijin Nekto Co., Ltd.) as a joint company with Murata Machinery, Ltd. and transferred the synthetic fiber machinery business to the new company.

Established TMT Machinery Co., Ltd. (TSTM Ltd.) and transferred the textile machinery business to the new company.

Established CMET INC. (stereolithography equipment).

Established Teijin Seiki Textile Machinery Co., Ltd.) and transferred the synthetic fiber machinery business to the new company.

Established Nabtesco Automotive Products (Thailand) Co., Ltd. in Thailand (Commercial vehicle equipment).

Established Nabtesco Oclap S.r.l. in Italy (Railroad vehicle equipment).

Established Gilgen Door Systems AG through M&A (Automatic doors, platform doors).

Established Jiangsu Nabtesco KTR Railroad Products Co., Ltd in China (Railroad vehicle equipment).

Established Nabtesco Automotive Corporation in America Inc. (presently Nabtesco America Inc.) in Washington, the United States (Pneumatic equipment).

Established Teijin Seiki Co., Ltd. and NABCO and became an operating holding company.

Established Nabtesco Automotive Corporation (presently Nabtesco NABCO, Ltd.) to manufacture and sell packaging machines and launched the packaging machine and reduction gear business.

Established Toyo Jidoki Co., Ltd. to manufacture and sell packaging machines and began manufacture and sale of machine tools.

Established Nippon Brake Systems Co., Ltd. to become the company (presently Teijin Nippon Brake Systems Co., Ltd.) to manufacture and manufacture hydraulic equipment.

Established Tokyo Gas Electric Industrial Manufacturing Co., Ltd., and Steel, Ltd., Engine and was established in Kobe City (in Nishi-ku, Kobe City) to develop the Komatsu Plant.

Established Nippon Air Brake Co., Ltd. and changed corporate name to Nippon Air Brake Co., Ltd.

Established Teijin Seiki Co., Ltd. and relocated the Osaka Securities Exchange section of) the Osaka Listed on the (present first section of) the Osaka Listed on the first section of the Tokyo Stock Exchange.

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Nabtesco’s precision reduction gears are key components of industrial robots used in a variety of industries. These gears enable robots to perform tasks with high accuracy and rigidity while maintaining compactness. Nabtesco’s precision reduction gears maintain high levels of technological innovation consistently for over 30 years, and as a specialist in the field, has expanded the use of precision reduction gears in a variety of industries worldwide. They are used not only in industrial robots but also in various other areas.

In 1985, when Nabtesco released its very first precision reduction gear, users of industrial robots were facing problems, such as the robots’ vulnerability to shocks and the excessive vibration of machines. It was recognized that precision reduction gears were indispensable for ensuring accurate positioning. For example, in the automotive industry, reduction gears are used in automatic tool changers (ATCs) for machine tools and semiconductor production equipment.

These technologies support the smooth and accurate movements of industrial robots while contributing to increasing their resistance to shocks and also helping reduce transmission errors in the field of robots and CNC (Computer Numerical Control) machines. These technologies have supported smooth and accurate movements of industrial robots while contributing to increasing their resistance to shocks and also helping reduce transmission errors in the field of robots and CNC machines.

Further, Nabtesco’s precision reduction gears are compact and lightweight with high output density. Because of these features, our gears are becoming more widely used in a number of sectors, ranging from medical to food to semiconductor industries, in addition to their use in industrial robots and automotive plants.

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If looked at from a distance, wind turbines appear to be driven solely by the wind. Wind turbines used for power generation, however, are actually rotated using a range of technologies for optimum performance. Although wind strength and direction constantly change, wind turbines must be rotated at a specific speed. Also, because wind strength and wind pressure differ between higher and lower altitudes, the position of the wind turbine blades has a tremendous impact on rotation speed. Nabtesco provides drives units for wind turbines that respond quickly to changes in wind conditions to control turbine rotation.

Specifically, we provide yaw drives, which are rotating drives installed behind the wind turbine blades. These drives keep the turbine facing the wind as the wind changes direction and are designed to rotate to catch as much wind as possible even on days when wind speed is low. We also provide pitch drives, which adjust the angles of the wind turbine blades according to changes in wind velocity for optimal power generation.

Wind turbines need to be as light as possible but also have to withstand storms, to which they are prone. Thanks to the use of the gear mechanism developed independently by Nabtesco, our wind turbine drive units provide excellent rigidity and low backlash while also being light and compact, making them highly evaluated in the domestic and global markets.

Wind power generation has been fostered and expanded across the world. In particular, European countries such as Denmark and Germany have advanced technologies for wind power generation. The last few years have seen a growth in the number of offshore wind farms, which allows wind turbines to be installed in areas with more consistent wind patterns and can provide a more effective power generation. The use of wind power in large mobile factories further means as much as possible can be produced on-site. Specifically, we provide yaw drives, which are rotating drives installed behind the wind turbine blades. These drives keep the turbine facing the wind as the wind changes direction and are designed to rotate to catch as much wind as possible even on days when wind speed is low. We also provide pitch drives, which adjust the angles of the wind turbine blades according to changes in wind velocity for optimal power generation. We have developed these products based on our technologies accumulated in the design of reduction gears used in industrial robots. Wind turbines need to be light but also have to withstand storms, to which they are prone. Thanks to the use of the gear mechanism developed independently by Nabtesco, our wind turbine drive units provide excellent rigidity and low backlash while also being light and compact, making them highly evaluated in the domestic and global markets.

Optimal Control of Wind Turbines

- **Yaw Drive**: This drive unit has high rigidity and high load performance based on the Rotor Vector (RV) reduction gear technology. It is suitable for low- and high-temperature areas as well as areas prone to salt damage. The high backlash feature helps prevent the load from shifting.

- **Pitch Drive**: This drive unit provides the orientation of the wind turbine blades with high precision. It is suitable for areas prone to salt damage or high-temperature areas and allows easy oil replenishment. It is the main drive for wind power generation in global markets.

- **Solar Tracking Equipment**: Highly matched to systems, including power units, it has high performance and can be used in the solar power generation part. It is suitable for large-scale solar power generation.

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Wind Power Generation

Nabtesco Corporate Profile

Core Technologies for People- and Earth-Friendly Energy

New Energy Equipment

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Wind Power Generation

Nabtesco Corporate Profile

Core Technologies for People- and Earth-Friendly Energy

New Energy Equipment
Enhancing Safety Technologies in Line with the Increasing Speeds of Rail Transportation

As a world-class high-speed railway system, the Shinkansen represents Japanese know-how at its best. Because the speed of these trains exceeds 300 kilometers per hour, the technology used to control them needs to ensure absolute safety and reliability. As part of our commitment to making technological contributions to the safety of high-speed rail transportation, Nabtesco has been developing Shinkansen brake systems and door operating units, both of which are core components of the trains. Not only in the Shinkansen but also in local trains and new transportation systems, including those for service and emergency air braking and regenerative braking, Nabtesco’s brake operating units calculate the train speed, weight, and braking. As a result, the brakes are applied in an optimal manner by giving out electric command signals. Moreover, we have modularized all brake systems to save space.

Throughout the Shinkansen in other ways, too. For example, unlike ordinary trains, Shinkansen trains must be fitted with special highly airtight doors. On all Shinkansen trains currently under operation, these airtight doors are equipped with door operating units made by Nabtesco. Moreover, Nabtesco’s tilting valve units have been adopted for the Series N700 Shinkansen. These units are modularized the air brake systems to save space.

Nabtesco has been advancing its technologies while supporting the development of the Shinkansen in other ways, too. For example, unlike ordinary trains, Shinkansen trains must be fitted with special highly airtight doors. On all Shinkansen trains currently under operation, these airtight doors are equipped with door operating units made by Nabtesco. Moreover, Nabtesco’s tilting valve units have been adopted for the Series N700 Shinkansen. These units are used to communicate data on railroad angularities and other elements to the body control system of each train so, which regulates the supply of compressed air to the air springs, enabling the cars to tilt into curves and thereby increase their curving speed. Our tilting valve units contribute to shortening the travel time between Tokyo and Shinkansen trains, especially in curves. With these advanced technologies and proven expertise, we are expanding our business beyond national borders. For instance, we are supplying our brake systems and door operators to high-speed railway, subway, and new transportation system companies in China and Taiwan, which have recently been featuring the establishment of new railroad routes. Meanwhile, in Europe, we are expanding our sales channels, starting with the sale of door operators. Through our efforts, we will continue to support the advancement of rail transportation across the world.

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Commercial Vehicle Equipment

By applying the know-how that it has accumulated through the development and manufacturing of brakes, suspension, and other systems, Nabtesco has been developing air brakes that provide high safety and comfort of our motorized society.

As for private cars, we provide an improved air brake system for passenger vehicles. On the other hand, for commercial vehicles such as trucks and buses, which are used for distribution services and public transportation, are indispensable for the smooth functioning of both our society and the economy. Recently, it has become more important to develop technologies for these commercial vehicles to make them friendlier to urban and natural environments alike, in addition to ensuring their safety.

Supporting the smooth running of commercial vehicles helps realize the safety and environmental friendliness for trucks and buses. Also, in line with the public environmental awareness, we have developed an "oil catcher" to resolutely remove oil contained in the water collected by the air dryer before expelling it back into the atmosphere. We have thus helped make air compression systems cleaner and greener.

Air dryers for commercial vehicles, which we have been producing as a core product, recover oil with an efficiency of 95% and an oil content of 1 mg/l or less, thereby meeting the standards set for Japanese automobiles.

We, Nabtesco, are contributing to the safety and performance of the system and are indispensable for trucks and buses. In response to an increase in public environmental awareness, we have developed an "oil catcher" to resolutely remove oil contained in the water collected by the air dryer before expelling it back into the atmosphere. We have thus helped make air compression systems cleaner and greener. Air dryers for commercial vehicles, which we have been producing as a core product, recover oil with an efficiency of 95% and an oil content of 1 mg/l or less, thereby meeting the standards set for Japanese automobiles.

Since 1937, Nabtesco was the first company to develop an air brake in Japan. Our air brakes are used in almost all Japanese made heavy-duty commercial vehicles. In particular, our wedge brake chambers, which are one of our major products, are outstanding in terms of brake feeling and control and also help improve fuel economy because of their lightweight design.

Moreover, Nabtesco supplies hydraulic clutch master cylinders for automobiles as well as other products that highlight the best performance of automobiles. With a view to making further contributions to the safety and environmental friendliness of transportation services, we are also currently focusing on the global marketing of our product items that have met the high quality standards set for Japanese automobiles.

Through these products, we are contributing to the safety and environmental friendliness of transportation services.
Contributing to Safety and Comfort of Passenger and Freight Vessels

Large marine vessels transport a range of goods and people across the world. To ensure safety, comfort, and fuel efficiency, and reduce environmental impacts, it is necessary to maintain a high level of onboard operation. Nabtesco is assisting in these efforts by supplying main engine remote control systems, contributing to the safe navigation of marine vessels. The main control system to diesel engines, which are the core components of vessels, is equipped on large marine vessels in recent years. In particular, due to the emission regulations on NOx and other pollutants, technological innovations have also been fostered in the area of marine vessels. Under these circumstances, Nabtesco is focusing on the development of electronic engine control systems. These systems will enable the remote control of the diesel engine, where speed is controlled, and the exhaust valve optimizes fuel injection and the exhaust valve opening/closing timing of the exhaust valve. This technology is the electronically controlled high-speed hydraulic valve developed by Nabtesco. This valve optimizes fuel injection and the exhaust valve opening/closing timing, increasing the reliability of electronic diesel engine control systems. For engine remote control systems for vessels, we have about a 60% share in the domestic market and maintain about 10% share in overseas markets based on our after-sale service business. In addition to engineers stationed at our major bases in Japan, Singapore, the Netherlands, China, and South Korea, we also have a global network of service engineers with excellent technical skills to support the safe navigation of vessels 24 hours a day, 365 days a year.

Our Technologies and Well-Trained Staff Bring More Safety, Efficiency, and Eco-Friendliness to Vessels around the World

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Supporting Safe Air Transportation

Aircraft Equipment

For Safer and More Comfortable Air Travel

Core Technology to Control the Attitude of Aircraft

It is expected that the world civil aviation market will expand in the future.
Nabtesco promotes the development and manufacture of a variety of quality aircraft equipment, and is actively involved in a broad range of flight control components and systems, which are the core components of aircraft control. We also provide comprehensive design, technical support, and customer service to our customers. Capitalizing on the wealth of expertise and years of experience acquired through domestic and international programs of the latest and high-quality production technologies, we are supporting manufacturers with a variety of quality aircraft equipment, and is known to be a global leader of flight control components and systems.

In the world's leading aerospace firms, contributing to the renaissance and improvement of the reliability of these aircraft in particular, our leading-edge fly-by-wire flight control actuation system is adopted for the most reliable 777 aircraft, an example for the next-generation of the 777 family, 777X, which is expected to be the bestselling aircraft on the market. These airplanes introduce an innovative technology to transmit information in the form of electrical signals from the cockpit to the hydraulic actuation system.

In recognition of our achievements, which include a reliable supply system, advanced quality management, proactive problem solving attitude, and continuous improvement, Nabtesco was named the “Supplier of the Year” by Boeing Commercial Airplanes. In the world of aviation, where safety must come first, we have accumulated the world’s best production technologies and expertise, both of which are incorporated into our flight control actuation systems.

Nabtesco’s flight control actuation system is applied to various aircrafts, i.e. 737, 747-8, 757, 767, and 777, made by The Boeing Company, one of the world’s leading aerospace firms, contributing to the renaissance and improvement of the reliability of these aircraft in particular, our leading-edge fly-by-wire flight control actuation system is adopted for the most reliable 777 aircraft, an example for the next-generation of the 777 family, 777X, which is expected to be the bestselling aircraft on the market. These airplanes introduce an innovative technology to transmit information in the form of electrical signals from the cockpit to the hydraulic actuation system.

Nabtesco continues to develop core aircraft technology.

Products

Flight Control Actuation System

Nabtesco is in the leading, Japanese manufacturer of this system, which controls the flight attitude of the aircraft. The system in which we have been involved is the main control of the main control surface of the aircraft, and is equipped with high-performance hydraulic equipment. In addition, we are also engaged in research and development of next-generation technology, such as “fly-by-wire” flight control actuation system, which is an actuation system in which the pilot has control over the attitude of the aircraft in the sky. In addition, the lack of this technology would also adversely affect the comfort of passengers, thus the system is essential for flight control actuation system.

Specifically, the hydraulically-operated system controls the movements of the rudder, the ailerons, and the elevators, whereas the fly-by-wire system is required to control the attitude of the aircraft in the sky. In addition, the lack of this technology would also adversely affect the comfort of passengers, thus the system is essential for flight control actuation system.

High Voltage Electric Power Distribution Unit

The Rack and Panel is an electric power distribution unit for Boeing 787 aircraft that supplies DC power to motors through motor controllers installed in the Rack and Panel. This product contributes to not only aircraft weight reduction but also the improvement of aircraft maintenance by reducing electric wires in the aircraft significantly.

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Nabtesco continues to develop core aircraft technology.

Market Share

Nabtesco is the leading Japanese manufacturer of this system, which controls the flight attitude of the aircraft. The system in which we have been involved is the main control of the main control surface of the aircraft, and is equipped with high-performance hydraulic equipment. In addition, we are also engaged in research and development of next-generation technology, such as “fly-by-wire” flight control actuation system, which is an actuation system in which the pilot has control over the attitude of the aircraft in the sky. In addition, the lack of this technology would also adversely affect the comfort of passengers, thus the system is essential for flight control actuation system.

Nabtesco’s flight control actuation system is applied to various aircrafts, i.e. 737, 747-8, 757, 767, and 777, made by The Boeing Company, one of the world’s leading aerospace firms, contributing to the renaissance and improvement of the reliability of these aircraft in particular, our leading-edge fly-by-wire flight control actuation system is adopted for the most reliable 777 aircraft, an example for the next-generation of the 777 family, 777X, which is expected to be the bestselling aircraft on the market. These airplanes introduce an innovative technology to transmit information in the form of electrical signals from the cockpit to the hydraulic actuation system.

In recognition of our achievements, which include a reliable supply system, advanced quality management, proactive problem solving attitude, and continuous improvement, Nabtesco was named the “Supplier of the Year” by Boeing Commercial Airplanes. In the world of aviation, where safety must come first, we have accumulated the world’s best production technologies and expertise, both of which are incorporated into our flight control actuation systems.

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Technology: moving it. stopping it.

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Technology: moving it. stopping it.
Powerfully Supporting Excavation, Construction, and Mining All Over the World

Hydraulic Equipment

Enabling Powerful Yet Exquisite Movement

As kids, many of us enjoyed playing with “work vehicles.” In particular, hydraulic excavators and cranes that can be moved like human arms and legs seem to be perennial favorites among children. Nabtesco is a leading manufacturer of traveling units for hydraulic excavators, having a 30% share of the global market. A traveling unit is equipment comprised of a traction gear, hydraulic motor, parking brakes, and other components. It rotates the crawler* and wheels to drive the excavator or crane. Great power is required to drive a vehicle that weighs anything from several tons to more than 100 (such as a large crane). Despite their compact size, Nabtesco’s traveling units can generate tremendous amounts of power in an efficient manner. Their energy-saving performance, durability, and reliability even under extremely challenging conditions have been widely recognized both in Japan and abroad.

Nabtesco’s traveling units are capable of generating tremendous amounts of power in an efficient manner. Their energy-saving performance, durability, and reliability even under extremely challenging conditions have been widely recognized both in Japan and abroad. The swing unit used in hydraulic excavators consists of a high-speed motor and planetary reduction gear unit. Its compact design allows the unit to have fewer components and to excel in quietness. In addition to units for hydraulic excavators, swing units are also used in small-sized cranes and winch motors for aerial working platforms.

Products

Traveling Unit for Crawlers

The traveling unit used in a crawler is a type of unit that can be used for various purposes such as climbing, working platforms, and aerial work. The unit is equipped with a lifting mechanism and an automatic speed control system, which enables it to move horizontally with high precision and stability. It has a variety of applications such as loading platforms of a vehicle transportation vehicle, rough terrain crane, asphalt finisher (traveling unit), etc.

Control Valve for Mini Excavators

This product is a sectional type multi-control valve designed specifically for mini excavators, and it is used for accurate work such as an action control of excavators. The entire assembly for its valve body, piping, and safety valves, etc., is compactly mounted in a single unit, and can be easily connected to the main unit.

Swing Unit for Hydraulic Excavator

The swing unit used in hydraulic excavators consists of a high-speed motor and planetary reduction gear unit. Its compact design allows it to have fewer components and to excel in quietness. In addition to units for hydraulic excavators, swing units are also used in small-sized cranes and winch motors for aerial working platforms.

Supporting Work on Construction Sites

Hydraulic equipment

Powerfully Supporting Excavation, Construction, and Mining All Over the World

Enabling Powerful Yet Exquisite Movement

- Motion Control Report
  - Providing high-performance equipment to be used in various work vehicles
- Technology: moving it, stopping it.
- Supporting Work on Construction Sites
- Hydraulic Equipment

- Powerfully Supporting Excavation, Construction, and Mining All Over the World
- Enabling Powerful Yet Exquisite Movement
- Nabtesco

Market Share

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Corporate Profile

Technology: moving it. stopping it.

Automatic doors provide barrier-free, eco-friendly, comfortable and safe environment to the daily lives of people. Nabtesco operates globally as a premium automatic door supplier for various applications, and is the top supplier in Japan and Switzerland with over 50% and 40% market shares respectively. Our automatic doors are installed in such landmark buildings as Tokyo Skytree in Japan, the new Swisscom Data Center, and the World Financial Center in Hong Kong, among many others. The activity of Nabtesco extends much further than just sales. We provide the entire value chain services to our customers extending from manufacturing, sales, installations and after-sale services.

In the field of automatic platform doors for railway stations, Nabtesco is the global pioneer and market leader, and our automatic platform doors are adopted on such major metro lines as the Mass Transit Railway in Hong Kong and Paris Metro, as well as on numerous other lines in Japan and Asia. In the business we are meeting customers’ needs to help create ideal living environments, and are taking a unique position as the world’s only manufacturer covering all four of the world’s leading automatic door/platform door markets. We will develop and supply more advanced products and services while further expanding our business in the global market.

Nabtesco provides innovative and high-quality Pedestrian Flow Solutions that create a circulatory, smooth and barrier-free environment for everyday life. We uniquely serve all the four major global markets: Japan, Europe, North America and Asia, under the well established brand names of NABCO and GILGEN, and are the top supplier in Japan and Switzerland. Nabtesco also provides global products for automatic platform doors for railway stations to provide safe environment to travelers.

The Premium Global Supplier of Automatic and Platform Doors

Providing Pedestrian Flow Solutions over Half a Century

Automatic Doors and Platform Doors

Supporting Smooth Traffic Flow in Buildings and Stations

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Helping People Stay Mobile through Unique Technologies

As an important part of our drive to have the freedom to do so, care for each other as simply as being a walk in your local neighborhood or doing the shopping on your own schedule, we at Nabtesco believe that it is essential for people to have the freedom to move around in the area of health and welfare through the application of the “moving it. stopping it.” technology, which we are delivering and expanding daily to support, and coordinate human mobility.

In Nabtesco’s health and welfare equipment, technologies are originally developed and various products designed. Our technologies are developed and brought to the market under the slogan, “All for your life,” and a sense of freedom and satisfaction is conveyed to users. We are working hard to contribute to the advancement of health and welfare.

Nabtesco’s products have been developed and designed to support the movement of people. In the health and welfare sector, we have manufactured various products to support and facilitate movement in ways that help keep people mobile.

In the field of elderly care, for example, Nabtesco has developed electric wheelchairs designed to reduce the burden on caregivers, the world’s first rollator with a speed control system, and other devices that help people move about safely. We have also developed products, such as orthoses and knee joint prostheses, and have manufactured the world’s first prosthetic knee joint, which is controlled by a microprocessor and can be used only during sudden acceleration. This feature makes it much easier to maintain balance on an incline.

The microprocessor detects the walking speed, adjusts the pneumatic cylinder, and automatically controls the swing speed of the knee joint.

We have also developed the world’s first rollator with a speed control system, which reduces the physical effort required to control the wheelchair. The system starts with our independently developed gait sensor, which detects a change in the force applied to operate the chair, for example, on an uphill slope. The signal the motor to automatically apply the brakes if the brake remains in neutral. This is the result of our unique motion control technology.

Nabtesco continues to develop new products in the health and welfare field, generating new product ideas by listening to user feedback and further sophisticating our unique motion control technology.

Products

- Electric wheelchair
  - Pneumatic system controls the braking force
  - The electric wheelchair features a power-assisted steering system
  - The wheelchair is designed to move a person sitting in a wheelchair up and down stairs and from falling forward

- Rollator
  - Electric wheelchair
  - The wheels are not dependent on an external power source, such as built-in batteries.
  - The speed control system is activated by detecting the physical effort being applied to control the wheelchair.
  - The system starts with our independently developed gait sensor, which detects a change in the force applied to operate the chair, such as on an uphill slope.

Contact: Accessibility Innovations Company
Tel.: +81-78-413-2724  http://welfare.nabtesco.com (Welfare equipment)
Packaging Machines: Meeting Modern Needs through Continuous Technological Evolution

Despite its relatively short history, Nabtesco has been leading the establishment of Japan’s “retort pouch food culture” through its outstanding technologies. In addition to retort pouch products, Nabtesco’s automatic fillers/sealers have gained the trust of food processors as evidenced by our 85% share of the domestic market and a 50% share of the global market for automatic fillers and sealers. Our technologies are highly stable and reliable pouch sealing technologies which are responsible alternatives to rigid containers. Increasingly stringent recycling laws are encouraging manufacturers to provide refillable container options. Indeed in some countries, rigid containers are being replaced entirely with packs with spouts.

As a result of our experience in providing automated weighing equipment, packaging machines, packaging systems, and input products containing food products of different shapes, we have developed highly stable and reliable pouch sealing technologies which are essential to ensure food safety. It is no exaggeration to say that Nabtesco has been leading the establishment of Japan’s “retort pouch food culture” through its outstanding technologies. Our unique technologies include not only retort pouch products but also for soups, sauces, and other food products as well as chemical products.

Packaging machines are used for a wide range of products to meet contemporary needs. Since being founded in 1960, Nabtesco has been working to innovate and develop more advanced technologies. These elements are critical in order to provide a packaging system that can perform a series of processes that may seem simple but in reality are quite difficult, namely, to pick up the bags into which products will be placed at the predefined speed, place each bag at the predefined position, deaeration using steam, and input products containing food products of different shapes.

Products

Super High-Speed Automatic Filler/Sealer

Super high-speed automatic retort pouch fillers that deliver high-speed performance in an extremely compact space. This ten-process rotary filler/sealer can be used to pack a range of foods, including not only liquids but also products containing both liquid and solid substances. Moreover, this machine allows the filling and sealing of two bags at the same time, which means that it has the production capacity equivalent to that of the global market for automatic fillers and sealers. The secret to winning this trust lies in our advanced technologies along with the wealth of expertise and know-how we have gained through hands-on experience. These elements are critical in order to provide a packaging machine that can perform a series of processes that may seem simple but in reality are quite difficult, namely, to pick up the bags into which products will be placed at the predefined speed, place each bag at the predefined position, deaeration using steam, and input products containing food products of different shapes.

Further, a range of test equipment can be mounted on the machine. The filler/sealer also supports deaeration using steam.

Contact: Toyo Jidoki Co., Ltd.
Manufacturing Network to Achieve “Local Production for Local Consumption”
Production at facilities close to markets

Nabtesco supplies products not only to the domestic market but also to markets across the globe. It has established a manufacturing network to achieve “local production for local consumption.” This means we manufacture products that support our way of life at facilities located close to markets. These products are delivered to their respective destinations through our sales bases.

For other domestic and overseas Group companies, please refer to the attachment.
**Corporate Profile**

**Management Structure (Non-consolidated)**

- **Consolidated**: 7,162 (As of December 2016)
- **Capital**: 10 billion yen
- **Established**: 29th September 2003

**Audit & Supervisory Board Members**
- Takemi NAGASAKA
- Audit & Supervisory Board Member (Independent)
- Audit & Supervisory Board Member (Independent)
- Naoko YAMAZAKI
- Norio UCHIDA

**Auditors**
- **Outside Director**
  - T.S. Nakamura, Co., Ltd.
  - Kinnosuke Kurohashi
  - Kenichi Kajiyama
  - Toshiyuki Tanaka
  - Takaaki Matsumura

**Chairman of the Board**
- Kazuaki KOTANI

**Corporate Profile**

**Chairman of the Board**
- KAZUAKI KOTANI
**Corporate Planning Department**
- President, Corporate Planning, Engineering and Support

**Remuneration Committee**
- Chairman: Goro HASHIMOTO
**Technology and Railroad Products Company Division**
- President, Group Technology Center

**Operating Income (Million Yen)**

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**Business Performance Data (Consolidated)**

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**Net Sales**

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<th>Fiscal Year</th>
<th>Net Sales (Million Yen)</th>
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**Corporate Profile**

**Chairman of the Board**
- KAZUAKI KOTANI

**Corporate Planning Department**
- President, Corporate Planning, Engineering and Support

**Remuneration Committee**
- Chairman: Goro HASHIMOTO

**Technology and Railroad Products Company Division**
- President, Group Technology Center

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