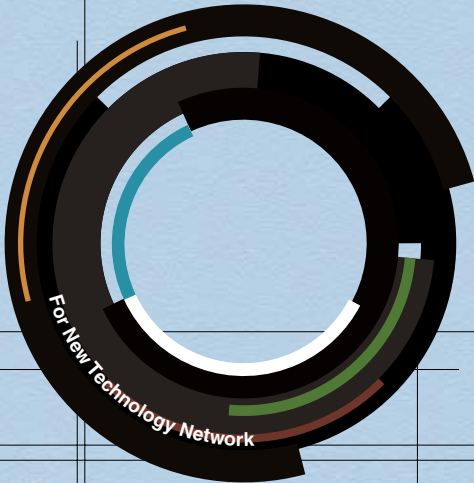


For New Technology Network



Corporate Profile

# Global Network Connecting The World Through New Technology

Globalization, advancement of information communication technology, and rapid technological innovation are transforming daily life, social systems, and global trends. NTN began to globalize business operations in 1961, with a network that now spans the globe. We hope to contribute to the international society by developing new technology, products, and services, sensitive to the epic changes sweeping the globe. We believe creating original technology and promoting globalization will make NTN worthy to be called an international company.

**Solution**

Global

Ecology

# For New Technology Network





For New Technology Network

**NTN**®

Network

Contribution

Development

High-Quality

### **New Value Through New Technology**

The precision processing technology and exclusive expertise that we have fostered over the years by developing bearings has led us to a wide range of precision equipment.

Continuing this evolution requires that we disseminate our technology around the world. Our motto therefore is "For a New Technology Network: Linking the world with new technology". We will move forward as a global manufacturer of precision equipment that meets the standards of a demanding world.

# All divisions work for one to ensure an ever higher level of customer satisfaction

NTN's manufacturing, sales and service, and technology span throughout the world. They are organically linked, which enhances performance while pursuing their fields of specialty.

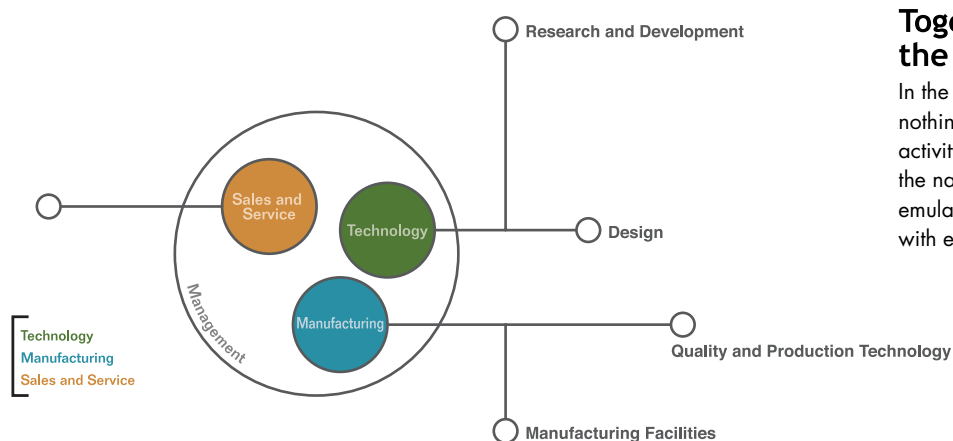
For example, the technology division forwards its research results to the production and sales divisions to analyze what products to be supplied for what customer in which sector. Also, feedback with production and sales divisions enhances our pinpoint accuracy in supplying products.

One division works for all divisions, and all divisions work for one. The end result is better products for our customers.



Network





## Together, aiming for the ideal organization

In the natural ecosystem of plants and animals nothing is wasted. Every color, shape and activity is invested with meaning. NTN studies the natural world to discern ideal forms to emulate as a company then share our vitality with everyone.



Outline

Product

Activities

## A solution company with global perspective

NTN combines all of its manufacturing, sales, and technological expertise to create quality products for customers worldwide.

NTN is a global organization with sales, engineering, production and service networks throughout Japan, the Americas, Europe, Asia and China.

NTN tackles each new challenge with a global perspective.

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Technology	5 _ 6
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Sales and Service	9 _ 10
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# Technology

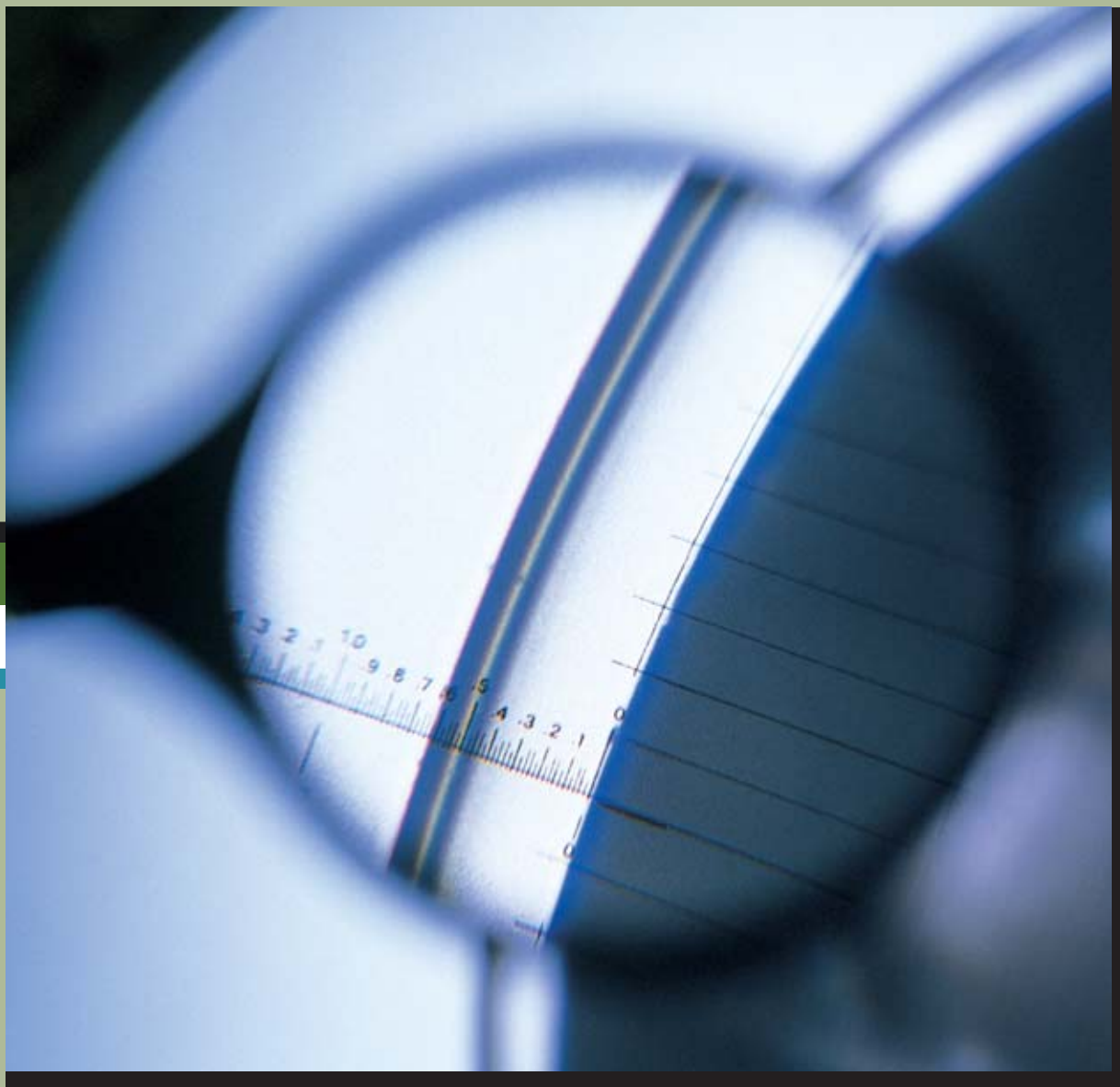
## NTN's diversified research continues to expand its business arena

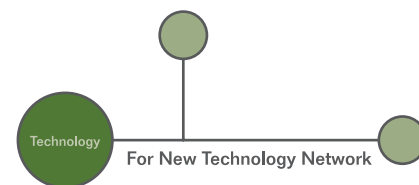
NTN began as a bearing manufacturer. Since our founding in 1918, we have conducted research into tribology, new materials, and the measurement technology, indispensable for the precision processing of bearings.

We have also utilized our basic research results and expertise gained through the years to evolve from a manufacturer of bearings to advanced precision equipment.

In addition, we are conducting research and developing production facilities to create a wide range of precision equipment at home and abroad.

NTN's R&D divisions put out a constant stream of new products to meet customer needs.





### NTN spirit of development tackling new challenges as a leading manufacturer

NTN's research and development centers do more than merely exchange information and form relationships with other divisions. They actively go outside the company to meet and talk with R&D divisions of customers and conduct joint research with universities. For example, we have solved problems by using needle bearings in extremely narrow spaces where conventional ball bearings cannot be used. We have affirmed our position as the leading manufacturers of needle bearings. We are also involved with new product development and trials conducted by customers, and continually meet new challenges in a wide range of sectors, including automobiles, computers, medical equipment, aerospace, and industrial robots.

### Continually developing new technology in new fields...

#### Original technology drawing intense interest

Spindle motors employed in computer hard disc drives commonly use conventional ball bearings, but recently the trend has shifted toward the use of more advanced fluid dynamic bearings. In a fluid dynamic bearing, a set of grooves is created along the inner bore and end face of the bearing. Lubricating oil or a similar type of fluid is enclosed between the shaft and the bearing to enable the shaft to rotate without contacting the bearing. As a result, this type of bearing can achieve much steadier and quieter operation than that of a ball bearing. NTN fluid dynamic bearing units are based on an oil-impregnated sintered bearing, which contains lubricating oil within the actual bearing. This prevents sudden seizure and problems that can arise while reading data stored in a hard disc. NTN's product has a competitive advantage over others in this area. Amid a rapid surge in the demand for compact HDDs that can be mounted into mobile telephones, audio players and GPS systems, NTN's fluid dynamic bearing units are establishing a reliable reputation.



# Technology

## For New Technology Network



# Manufacturing

## NTN continues to strengthen its global manufacturing capabilities

U.S. manufacturers of automobiles, and electric equipment, and parts are forming ties with international companies to produce products in suitable regions for use worldwide.

In response to this shift in manufacturing, NTN quickly opened overseas production facilities and enhanced its global production system.

The objective of NTN's production division is to quickly provide needed parts to any location in the world. We will continue to self-assess with a critical eye to assure stable production at the highest level of quality.

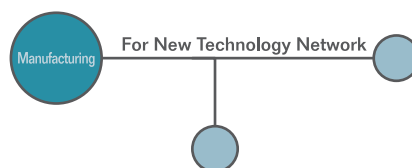




# Manufacturing

## Strengthening competitiveness through a devotion to the fundamentals of manufacturing

The competitiveness and true value of NTN's products are visible strengths. However, this competitiveness is supported by the productivity, quality assurance and production technology of our production facilities. All of our employees are expected to return to the basics and to review their current work practices in order to improve our fundamental manufacturing capabilities. In addition, we have developed and introduced next-generation facilities. Current trends ask for more efficient use of space and investment capital, together with the ability to manufacture small quantities of a wide range of different products. The new facilities assist in meeting these demands, allowing us to cut facility costs by half, cut electrical consumption to one-third, reduce the length of production lines by half, and drastically reduce production line turnover times. By strengthening and accumulating NTN's unique know-how, we have increased skill levels and productivity. With this foundation, we are committed to providing higher added value and establishing NTN as a true world-leader in manufacturing competitiveness.

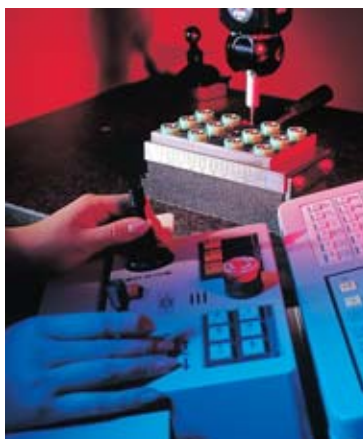


## For New Technology Network

### Technology and system creating high quality products acclaimed around the world

NTN was early in systematizing production lines to strengthen production technology.

Now, most of our production lines are automated, contributing to standardized quality and reduced costs. Our quality control efforts have received ISO9001 International Standard certification, as well as the ISO/TS16949 certifications for the automobile sector. NTN's superior quality products are earning the high acclaim and the trust of customers everywhere.

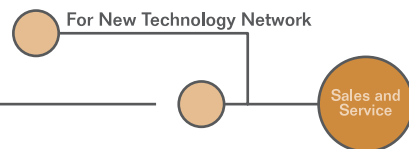


## Sales and Service

### **Sales activities that place the customer first have earned us great trust**

NTN has established branch offices and distributorships as close as possible to our customers both in Japan and overseas to quickly respond to customer requests. In addition to maintaining relations with our customers, we provide information that will be useful to the customer in the future through regular participation in activities and exhibits closely connected to customer interests, while actively offering proposals for new technology and new products. We offer support to our sales personnel and strive to respond quickly to current trends in the industry as well as customer requests.





# Sales and Service

## Quickly responding to our customers' worldwide

NTN is a pioneer in globalization. In an environment that demands effective global sales and marketing, NTN has introduced the "GAM" System\* to overseas sales by automotive customer group and sales by industrial sector. Efficient use of this system enables us to provide quick solutions to our global customers, while ensuring smooth internal development. We have also established research centers and production facilities closely connected with sales in all major countries to not only promote the efficient transfer of technological know-how and localization of procurement, but also to optimize the entire global organization.

\*GAM: Global Account Manager for automotive product sales  
Global Application Manager for industrial products sales

## Accurately and promptly responding to customer requests

NTN gathers development proposals for new products from a wide range of industries, such as the automobile, office equipment, digital appliance, information technology, construction equipment, aerospace, and railway industries. This is not simply a result of our long history and outstanding record, but of our ceaseless efforts to cater to the needs of our clients through personal attention and efficient responses.

Ever more rapid development capabilities are increasingly in demand, and adapting to this challenge is our mission. NTN places much emphasis on assisting customers to develop new products, and expends enormous efforts through finely tuned sales activities to obtain a firm grasp of our customers' future requirements. Our development department operates on a twenty-four hour basis in order to ensure that all requests are dealt with as quickly and expediently as possible.



For New Technology Network





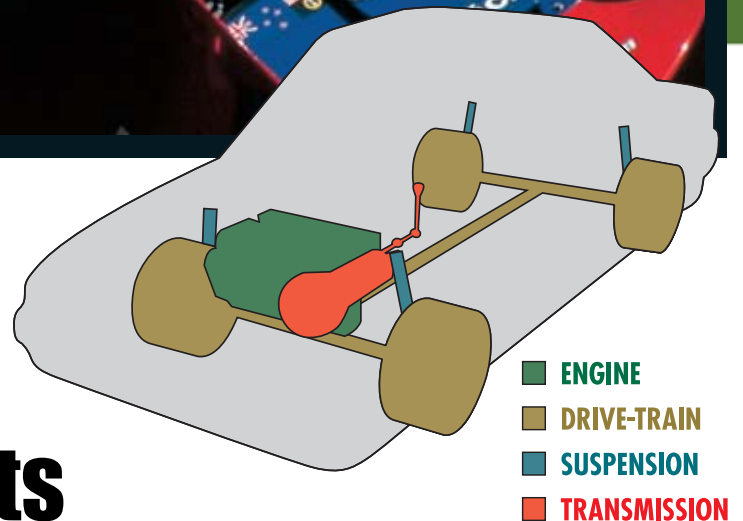
# Automotive Products

## Pushing technology forward for the automobiles of tomorrow

Environmentally sensitive, energy saving, safe, comfortable, high-performance, computer networked...

Automobiles are advancing down a road that knows no limits.

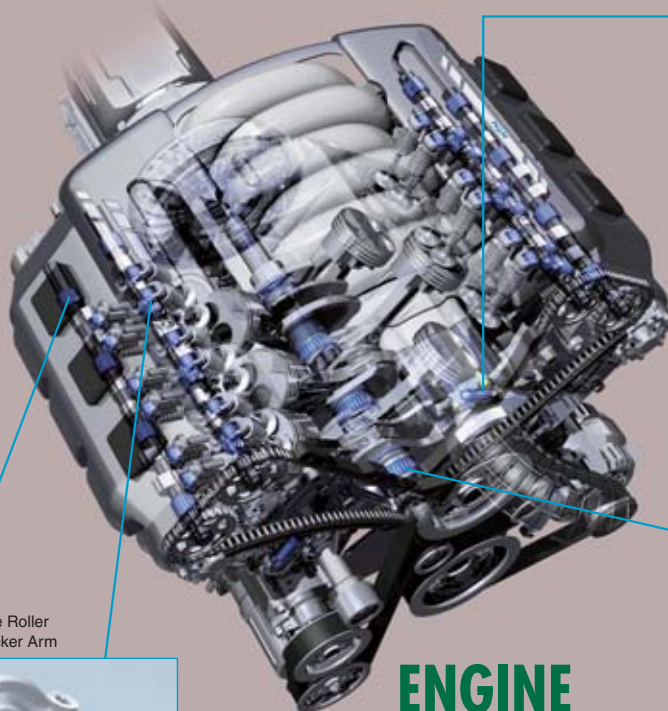
NTN is meeting industry demands as a creative axle on the leading edge of tomorrow's breakthroughs.



# Automotive Products

### Earning the praise from automotive companies worldwide

NTN auto parts are highly regarded around the world. In particular, NTN has contributed widely to the spread and development of FWD & 4WD vehicles by constant velocity joints that convey engine torque to the drive axle, and realize high performance and stability for such vehicles. NTN's CVJ cumulative production volume has already become one of the largest in scale globally, while domestically NTN boasts top market share. We are giving full support to the development and the manufacture of an extraordinary array of essential automotive parts from engines to suspension, transmissions, chassis and auxiliary electrical equipment; winning the support of customers everywhere.



Butress Thread Type Chain Tensioner



Split Type Needle Roller Bearings for Crankshaft



Split Type Drawn-cup Needle Roller Bearings for Camshaft

Cageless Needle Roller Bearings for Rocker Arm

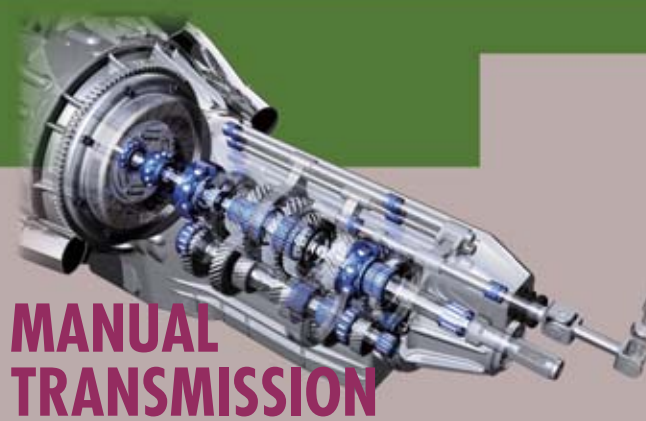


## ENGINE

## For New Technology Network



BEAREE Seal Rings



## MANUAL TRANSMISSION



## AUTOMATIC TRANSMISSION



Compact Clutch Release Bearings



Needle Roller Bearings for Idler Gear



Thrust Needle Roller Bearings



Deep Groove Ball Bearings



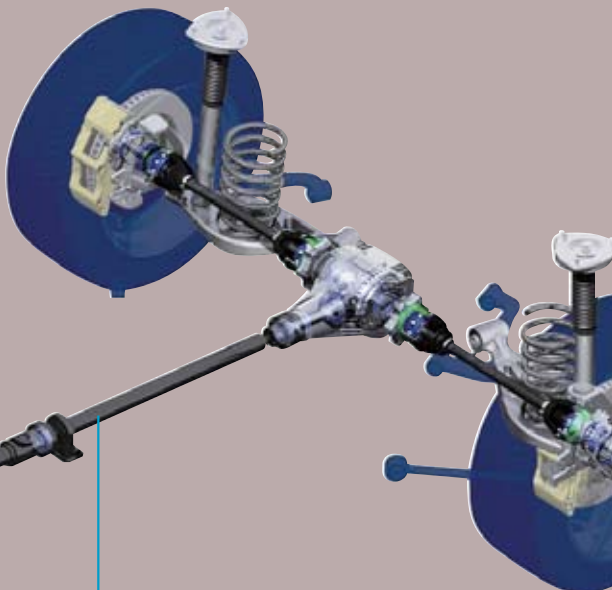
# Automotive Products

## DRIVE-TRAIN

Constant Velocity Joints for Halfshaft



Constant Velocity Joints for Steering

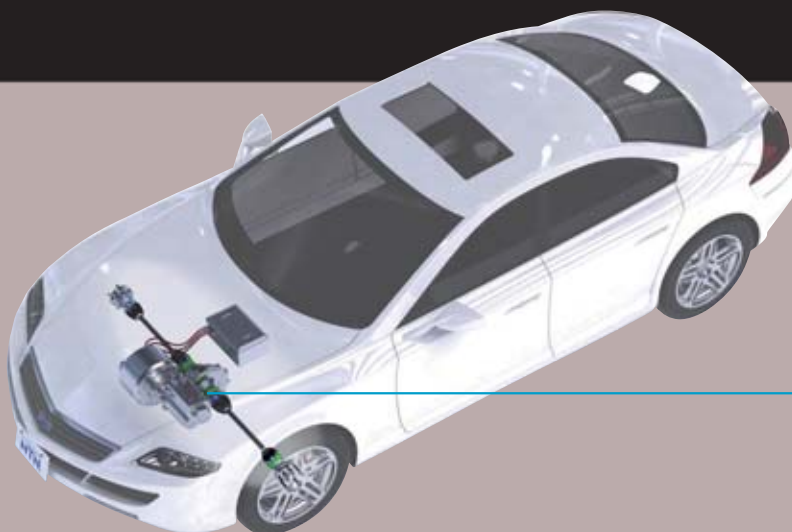


Constant Velocity Joints for Propeller Shaft

## For New Technology Network

### Meeting the demands for next-generation automobiles

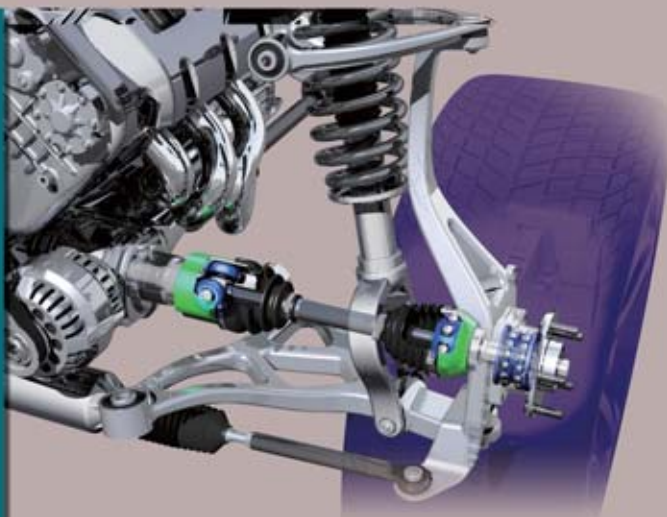
It could be said the 21st century is a time to correct the excesses of the previous era. Taking care of the environment is naturally at the top of the list. NTN is actively engaged in the development of automobile parts that will raise driving efficiency and fuel consumption. Given the reality of finite resources and only one world in which to live, we have a vital responsibility to develop environmentally sound systems. To enable automobiles to exist in closer harmony with the environment, we are pouring energy into merging technologies to develop systems that provide high performance, weight savings and new processing techniques. We are also working hard to develop components that will enhance safety and driving comfort.



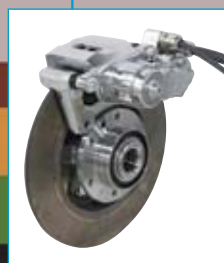




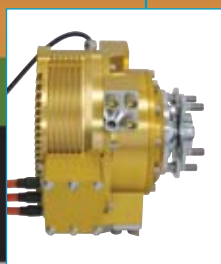
## AXLE UNITS



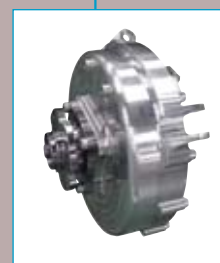
## SUSPENSION



Electromechanical Brake System  
with Parking Brake



In-Wheel Motor System



In-Wheel Motor System  
for Electric Commuters



One Motor Type EV Drive System



Steering System for Steer-by-Wire

## EV SYSTEM

# Automotive Products

# General Industrial Products

## Precision not limited to bearing technology... Serving industries everywhere

How far can we lower friction coefficients and raise energy efficiency? NTN's bearing technology demands precision measured in nanometers. That is, in a word, only one-millionth of a millimeter wide.

This out-of-sight precision is now finding applications in all manner of industries, from orbiting satellites, aircraft, railway cars and paper making equipment to office equipment and food processing machinery.

# General Industrial Products

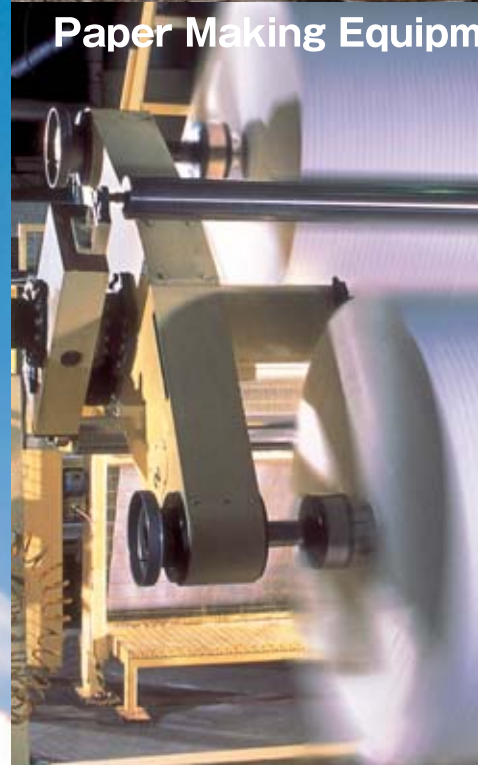
**Wind Power Generation**



**Railways**



**Paper Making Equipment**



**Aerospace**



Photos: JAXA





**Construction Equipment**

**Machine Tools**



**Commanding high precision processing and measurement technology to develop a steady stream of advanced components**

The key to bearing technology usefulness in each industry is summed up by the word "precision". For example, with air bearings the essential factor is how small and uniform the space between the shaft and bearing can be made. The closer the roller cross-section approaches a perfect circle, and the smoother the inner and outer rings that make contact with the roller are, the greater the precision and performance will be. Thus, making components with higher precision translates into products with higher reliability. At NTN we are pursuing high precision processing and measurement technology beyond conventional limits to diligently provide customers with a steady stream of advanced components.

**Steel Industry**



**No matter how severe the environment or frequent the use... Responding to the demand for modular units**

Ball bearings given added performance can now operate more stable under severe conditions, thus, meeting demands for durability. Demands on bearings have great diversity: from functionality with cryogenic rocket fuel, to the ability to withstand high temperature jet engines, water corrosion from food processing equipment, heat from the drying process of paper making equipment and beyond. At NTN we examine each condition demanded for each area of use and deliver durable bearings that will get the job done. We are also developing modular units that integrate peripheral components, and a clutch unit with a secure lock function that can operate under high temperatures.



# General Industrial Products



Bearings for Special Environments



Precision Bearings

## Semiconductor Block Processing

## Machine Tools



Main Shaft Bearings of Jet Engine

## Aerospace



Cryogenic Bearings of Rocket Engine



Precision Miniature Ball Bearings



Hydrodynamic BEARPHITE™ Unit

## Information Equipment



Torque Diode™ (reverse-input shutoff clutch)



Bearing Integrated with the Rotation Sensor

## Office Equipment



NCZ One-Way Clutch Units



Torque Limiter Units

## Electrical Equipment



Ball Bearings

# General Industrial Products



Bearings for Bullet Train Rolling Stock



RCT Bearings



Automatic Alignment Rotary Bearing

## Railways



Insulated Bearings



Rotary-type Circular Bearing

## Wind Power Generation

## Food Machinery



BEAREE® (precision engineering plastics)



Bearing Units Stainless Steel Series



Thin Section Type Bearing for Construction Machines

## Construction Machines

## Paper Making Equipment



Spherical Roller Bearings LH Series



Extra Large Split Type Roller Bearings



Bearings for Steel Mill Roll Neck



Constant Velocity Joint for Continuous Casting

## Steel Making Equipment



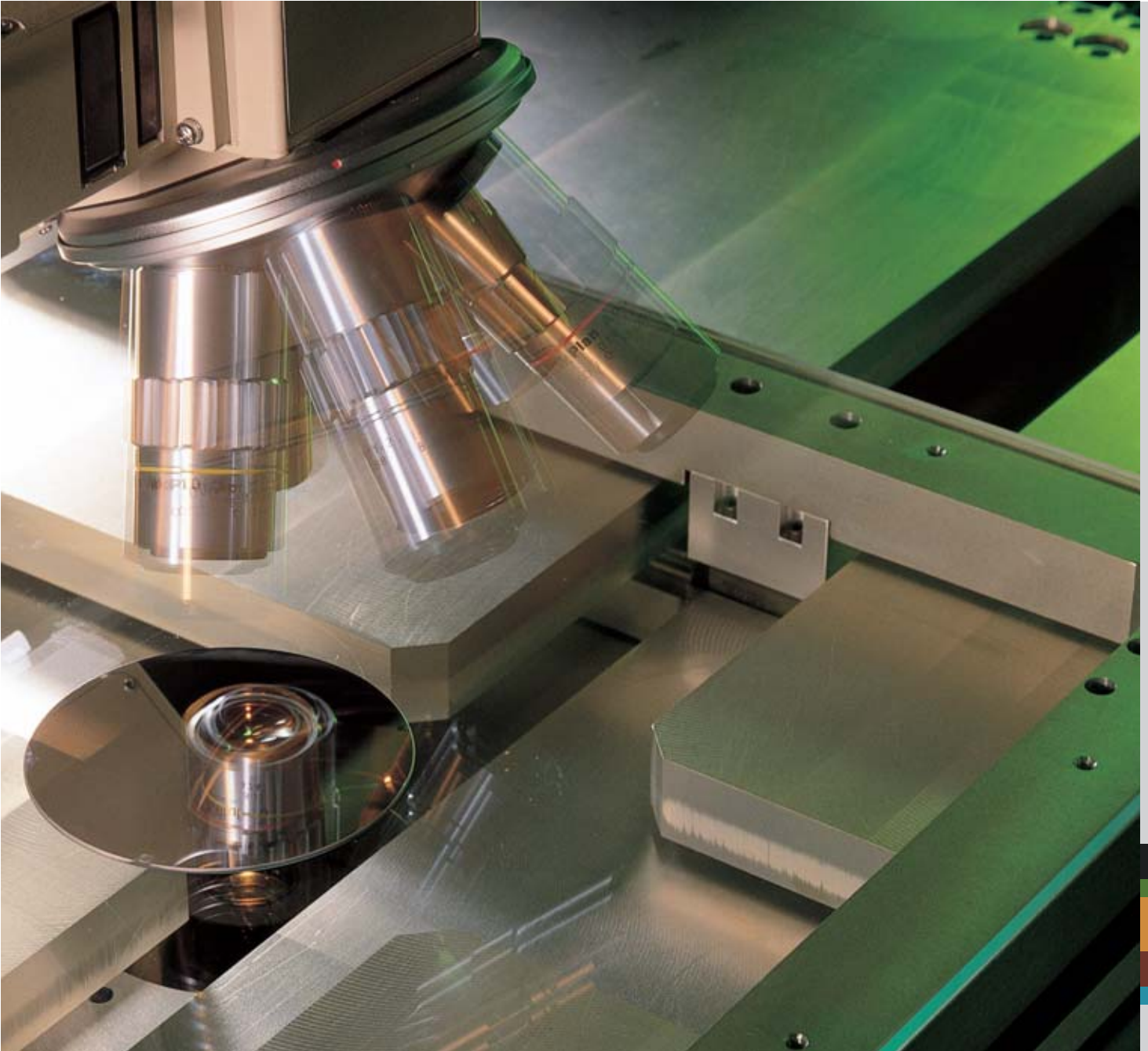
Bearings with Solid Grease



Constant Velocity Joints



# General Industrial Products



## Challenging the state-of-the-art frontiers, bounding into the future

Remarkable advances in hi-tech industries...

At NTN we are using our know-how in precision bearings to pursue precision engineering that can be applied in other fields like electronics, semiconductors and computers.

**Precision Equipment**



## Precision Equipment

**Raising the bar on precision to levels of accuracy never seen before....**

**Gearing up for tomorrow's technology**

NTN's technology and expertise developed through the years is being put to good use in hi-tech industries across the board. As we raise the bar on precision from micro to nano in scale, our technological know-how is finding a variety of next generation applications.

For example, in manufacturing equipment for magnetic disks where the memory density is increasing rapidly, NTN's precision air spindle rotates with less than 5 nanometers of run-out error. NTN's endless pursuit of zero error is achieving remarkable levels of precision and helping the high technology industry open new frontiers.

**Providing the fast-paced hi-tech industry with practical applications**

From origins of making steel balls as flawlessly spherical as possible, NTN's precision engineering has matured to a level of unlimited accuracy that is approaching zero.

At production plants where technologists are making plasma display panels and liquid crystal displays with bigger screens and higher resolutions, NTN's unrivaled know-how in ultra precision technology, LCD repair equipment and pattern correction equipment is helping to raise production efficiency. In other fields where the race is on for ever-higher levels of density such as in semiconductors and memory storage, NTN continues to supply vital high-precision units.



Air Slides/Air Spindles



Gantry-type XY Table



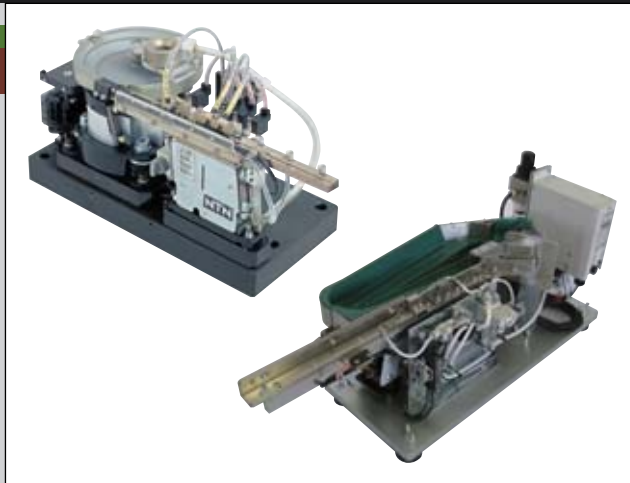
Linear Modules



Air Spindle for Ultra High-precision Machine Tools



Desktop Type Microscopic Coating Applicator



SMD Feeder/Monodrive Two-way Feeder with Spring Separation Mechanism

## JAPAN



**Kuwana Plant**  
(Kuwana, Mie Prefecture)



**Iwata Plant**  
(Iwata, Shizuoka Prefecture)



**Okayama Plant**  
(Bizen, Okayama Prefecture)



**Nagano Plant**  
(Minowa-cho, Kamiina-gun, Nagano Prefecture)



**Mie Corp**  
(Kuwana, Mie Prefecture)



**NTN Co., Ltd.**  
(Osaka, Osaka Prefecture)



- Sales Office
- Research and development center
- Production plant
- Head Office, Controlling Company

## Major Production Facilities

As of end June 2012

Company, Factory Name		Established(*)	Manufactured Products
NTN Corporation			
①	KUWANA WORKS	Nov. 1939	Various size of bearings from small diameter to extra large, Precision bearings
②	IWATA WORKS	Mar. 1960	Small-sized bearings, Needle roller bearings, CVJs, Precision equipment
③	OKAYAMA WORKS	Dec. 1971	Automotive bearings and unit bearings, CVJs
④	NAGANO WORKS	Feb. 1985	Miniature and small diameter bearings, Automotive parts, Parts Feeders
Affiliate Company			
⑤	NTN KONGO CORP.	Apr. 1961	Small-sized bearings, Industrial machinery unit bearings
⑥	NTN POWDER METAL CORP.	Oct. 1965	Oil-impregnated sintered bearings, Sintered machine parts
⑦	NTN CASTING CORP.	Aug. 1966	Plummer blocks, Unit bearing parts for industrial machinery
⑧	NTN ENGINEERING PLASTICS CORP.	Mar. 1967	Engineering plastics bearings
⑨	NTN MIKUMO COMPANY LTD.	Nov. 1988	Automotive parts, Industrial machinery parts
⑩	NTN KINAN CORP.	Jan. 1974	Bearing forging and turning
⑪	NTN OMAEZAKI CORP.	Sep. 1966	Needle roller bearings
⑫	NTN MIE CORP.	Apr. 2004	Small, medium, and large-sized bearings, Needle roller bearings
⑬	NTN KAMIINA CORP.	Dec. 2005	CVJs parts, Bearing parts
⑭	NTN FUKUROI CORP.	Jun. 2006	CVJs
⑮	NTN HOUDATSU SHIMIZU CORP.	Apr. 2008	Extra Large-sized Bearings, Machinery parts
⑯	HIKARI SEIKI INDUSTRY CO., LTD.	Jun. 1975	Adaptors, CVJ parts
⑰	NTN BIZEN CORP.	Sep. 1968	Bearing turning
⑱	NTN TADO CORP.	Nov. 1961	CVJ parts
⑲	NTN HAKUI CORP.	Mar. 2007	Large-sized bearing turning
⑳	NTN SHIKA CORP.	Dec. 2009	Large-sized bearing forging
㉑	NTN NOTO CORP.	Dec. 2010	Industrial machinery bearings
㉒	NTN AKAIWA CORP.	Sep. 2008	Tapered Roller Bearings
㉓	Nippon Kagaku Yakin Co., Ltd.	Oct. 1947	Oil-impregnated sintered bearings, Sintered machine parts

\*Or date of initial investment



## AMERICAS



**NTN-BOWER CORP.**  
Macomb Plant(Macomb, Illinois)



**NTN DRIVESHAFT, INC.**  
(Columbus, Indiana)



**NTN BEARING CORP.  
OF AMERICA**



**NTN-BOWER CORP.**  
Hamilton Plant(Hamilton, Alabama)



**AMERICAN NTN BEARING MFG. CORP.**  
Schiller Park Plant(Schiller Park, Illinois)



**NTN BEARING CORP. OF CANADA LTD.**  
Canada Plant(Mississauga, Ontario)

## Major Production Facilities

As of end June 2012

Company, Factory Name			Established(*)	Manufactured Products
Affiliate Company				
1 2	America	AMERICAN NTN BEARING MFG. CORP.	Jan. 1971	Small-sized bearings, Automotive unit bearings
3 4	America	NTN-BOWER CORP.	Oct. 1985	Small, midium and large-sized bearings, Industrial machinery parts
5	America	NTN DRIVESHAFT INC.	Apr. 1989	CVJs
6	America	NTK PRECISION AXLE CORP	Aug. 2003	CVJ shafts, Turning and heat treatment for automotive unit bearing parts
7	America	ASAHI FORGE OF AMERICA CORP.	Oct. 2003	Forging for automotive unit bearings
8	America	Seohan-NTN Driveshaft USA CORP.	Mar. 2007	CVJs
9	America	NTA PRECISION AXLE CORP.	Dec. 2010	Forging, turning and heat treatment for automotive unit bearing parts
10	America	NTN SNR ROULEMENTS	Apr. 1978	Strut bearings, Inspection and repair of bearing for planes
11	Canada	NTN BEARING MFG. CANADA	Mar. 1973	Small-sized bearings, Automotive bearings
12	Brazil	NTN Driveshaft do Brasil	Jul. 2010	CVJs
13	Brazil	NTN SNR ROULEMENTS	Feb. 1999	GEN1 and GEN3 Hub bearings, Strut bearings

\*Or date of initial investment



# EUROPE and AFRICA



- Sales Office
- Research and development center
- Production plant
- Head Office, Controlling Company



**NTN WÄLZLAGER(EUROPA) GmbH**  
(Düsseldorf)



**NTN-SNR ROULEMENTS**  
(Annecy)



**NTN KUGELLAGERFABRIK(DEUTSCHLAND)**  
(Mettmann, Nordrhein-Westfalen)



**NTN TRANSMISSIONS EUROPE**  
(Allonnes Cedex)



**NTN BEARINGS(UK)LTD.**  
(Lichfield)

## Major Production Facilities

As of end June 2012

Affiliate Company		Company, Factory Name	Established(*)	Manufactured Products
①	Germany	NTN KUGELLAGERFABRIK(DEUTSCHLAND) GmbH	Dec. 1971	Small-sized bearings, Automotive unit bearings, Automotive parts
②	Germany	NTN Antriebstechnik GmbH	Apr. 2006	CVJs
③	Germany	SNR WÄLZLAGER GmbH	Apr. 1960	Linear motion bearings, Ball screws, Bearings units
④	France	NTN TRANSMISSIONS EUROPE	Dec. 1998	CVJs
⑤	France	NTN TRANSMISSIONS EUROPE CRÉZANCY	Jun. 2006	CVJ parts
⑥	France	NTN-SNR ROULEMENTS	Jul. 2006	Small-sized bearings, Needle roller bearings, CVJ parts
⑦	France	NTN-SNR ROULEMENTS	Jan. 1964	Precision bearings, Aerospace Bearings
⑧	France	NTN-SNR ROULEMENTS	Jan. 1967	Automotive bearings, GEN2 and GEN3 hub bearings, Bearings for industrial machinery
⑨	France	NTN-SNR ROULEMENTS	Jan. 1960	Automotive bearings
⑩	France	SNR CEVENNES	Aug. 1973	GEN1 and GEN2 hub bearings, Hub Bearings of the commercial vehicle
⑪	Italy	ICSA INDUSTRIA CUSCINETTI S.P.A.	Jul. 1969	Bearings for industrial equipment
⑫	Romania	NTN-SNR RULMENTI S.R.L.	Apr. 2003	Small-sized bearings, CVJs

\* Or date of initial investment



# ASIA and OCEANIA



**SHANGHAI NTN CORP.**  
(Shanghai)



**GUANGZHOU NTN-YULON DRIVETRAIN**  
(Guangdong)



**NTN MANUFACTURING (THAILAND) CO., LTD.**  
(Pluakdaeng, Rayong)



**NTN NEI MANUFACTURING INDIA PRIVATE LIMITED**  
(Rewari, Haryana)



**NTN-CBC(AUSTRALIA)PTY.LTD.**  
(Sydney, New South Wales)

## Major Production Facilities

As of end June 2012

Company, Factory Name			Established(*)	Manufactured Products
Affiliate Company				
①	China	SHANGHAI NTN CORP.	Aug. 2002	CVJ parts, Automotive unit bearings, Needle roller bearings, Small-sized bearings
②	China	GUANGZHOU NTN-YULON DRIVETRAIN CO.,LTD.	Sep. 2002	CVJs
③	China	NTN-RAB (CHANGZHOU) CORP.	Mar. 2007	Needle roller bearings, Automotive unit bearings, Automotive parts
④	China	BEIJING NTN-SEOHAN DRIVESHAFT CO.,LTD.	Sep. 2003	CVJs
⑤	China	NANJING PUZHEN NTN RAILWAY BEARING CO.,LTD	Dec. 2007	Cylindrical roller bearings and their parts for railroad
⑥	China	SHANGHAI TUNG PEI ENTERPRISE CO.,LTD.	Jan. 2000	Small-sized bearings
⑦	China	NTN-LYC (LUOYANG) BEARING CORP.	Jan. 2011	Automotive unit bearings, Needle roller bearings
⑧	China	Shanghai Laien Machine Tool Parts Corp.	Feb. 2006	Ball screws
⑨	China	NANJING NTN CORPORATION	Sep. 2011	Bearings for industrial machinery, machine tools and related parts
⑩	Korea	Seohan-NTN Bearing Co.,Ltd.	Jan. 2010	Wind turbine bearings
⑪ ⑫	Taiwan	TUNG PEI INDUSTRIAL CO.,LTD.	Aug. 1966	Small-sized bearings, Needle roller bearings
⑬	Taiwan	TAIWAY LTD.	Jun. 1983	CVJs
⑭ ⑮	Thailand	NTN MANUFACTURING (THAILAND) CO.,LTD.	May.1998	CVJs, Needle roller bearings, Automotive parts, Automotive bearings and unit bearings, Fluid dynamic bearing parts
⑯	Thailand	NTPT Company Limited	Feb. 2012	Automotive forging, turning parts
⑰ ⑱	India	NTN NEI MANUFACTURING INDIA PRIVATE LIMITED	Nov. 2005	CVJs, Automotive unit bearings
⑲	Australia	Unidrive. PTY. LTD.	Mar. 2007	CVJs

\* Or date of initial investment



## Saving our irreplaceable global environment to pass on to our descendants

The 21st century has been called “the century of the environment”, and NTN has been enthusiastic in implementing environmental measures on a global scale. We are now expanding our environmental network to include our business partners and encouraging them to strengthen their environmental management systems and achieve ISO 14001 certification.

In the important area of waste reductions, NTN introduced a zero emissions policy in 2002 and by September 2003 all domestic facilities had reached their targets. From now on, to promote responsible use of the earth’s natural resources, NTN will strive to reduce material loss according to the material follow cost method. We hope to work towards a

situation where environmental management and profitable operations can co-exist.

Environmental problems on a global scale are messages from the Earth. As one of our top priorities, we need to listen to these messages and work to create solutions. NTN is committed to working hard to create environmental solutions, and protecting our environment for future generations.



### NTN’s environmentally sensitive products

NTN’s product line, centered on bearings, has always been considerably eco-friendly. Now we are developing new energy-saving and resource efficient products, in line with our environmentally conscious policies. The E series constant velocity joint, and the environmental versions of ULTAGE series bearings for construction equipment, are examples of these products.



### Strengthening and expanding environmental management

All of NTN’s domestic and overseas facilities have received ISO 14001 certification. Although this was expected to be difficult for a company engaged in metal casting, we nonetheless succeeded in achieving certification. NTN’s 3 Chinese factories are expected to have acquired certification by mid-fiscal 2004. Now we are hoping to strengthen and expand our environmental management system by instituting a “NTN Environmental Prize”. The prize is awarded to companies among our business partners whose environmental measures are judged to be outstanding, and several presentations have already been made.





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