

The background of the entire advertisement is a dense, overlapping pile of various NTN bearings. The bearings are shown in different sizes and orientations, creating a complex, metallic texture. The lighting highlights the smooth surfaces and the internal ball structure of the bearings.

**Everything  
you need  
to keep on  
rolling.**



**FB** FOOD & BEVERAGE



**CO** CONSTRUCTION



**MM** METALS MANUFACTURING



**MI** MINING



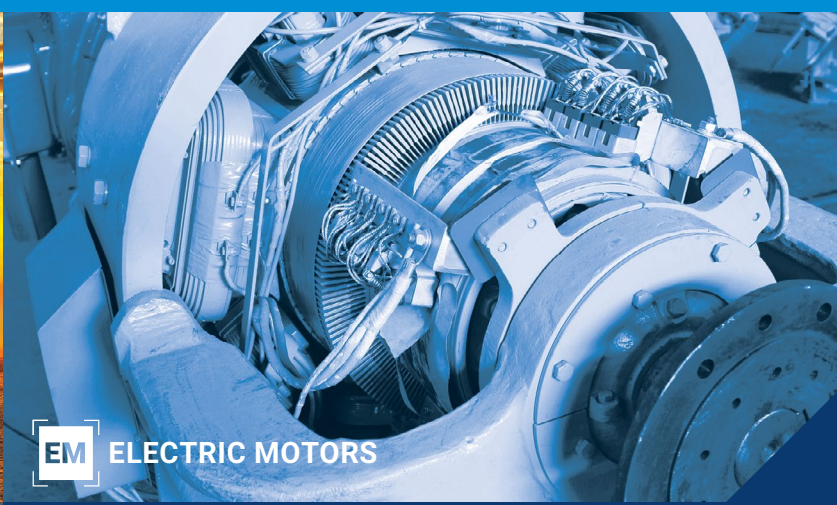
**AG** AGRICULTURE



**PF** PAPER & FORESTRY



**OG** OIL & GAS

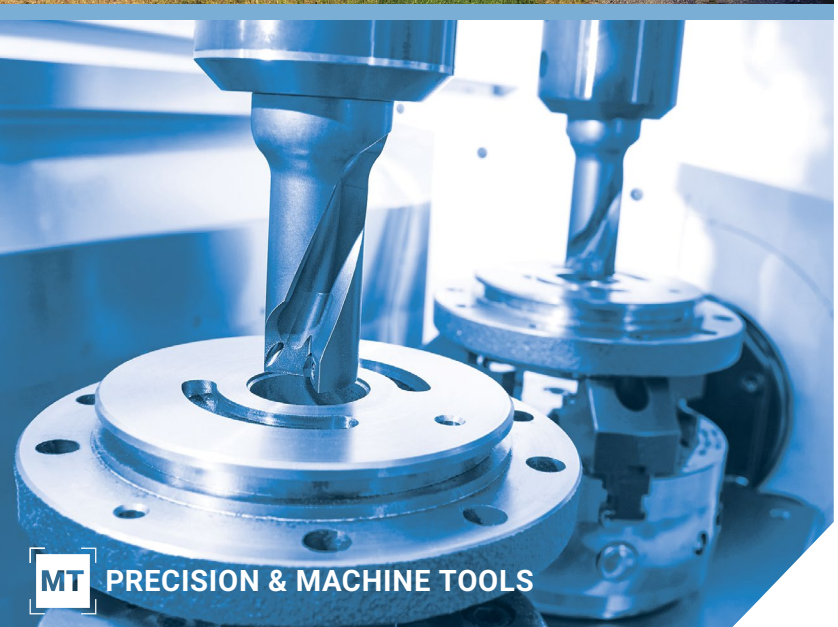


**EM** ELECTRIC MOTORS

# NTN's got you covered.



**WE** WIND ENERGY



**MT** PRECISION & MACHINE TOOLS

## Deep Groove Ball Bearings

### SUPERIOR SILENCE

Nobody matches NTN for silent operation. Our DGBBs are recognized globally for quality and precision engineering designed to minimize downtime.

- **Variety of materials that increase reliability**
  - TMB material doubles bearing life in clean conditions and gives 5x the life in contaminated environments
- **Variety of seals to handle contamination or speed challenges**
  - LU seal eliminates contamination
  - LB seal provides superior protection without heat generation at higher speeds
- **TOPLINE™ bearings operate in extreme temperature ranges**
- **From 6 mm bore to 730 mm O.D.**



## Needle Roller Bearings

### TIME-TESTED BY WORLDWIDE AUTO MAKERS

Automobiles are the highest volume NRB application, and NTN is present in virtually every car on the road today.

- **2-8x the capacity of other bearings for the same shaft size**
  - Highest power density of any bearing type
  - High Lubrication (HL) surface raises bearing life in poor lube conditions
- **From 3 mm bore to 600 mm O.D.**



## Angular Contact Ball Bearings

### OPTIMIZED DESIGNS FOR MOTOR AND PUMP APPLICATIONS

- **Application-specific preloads and contact angles**
  - Extreme, high-precision configurations ensure maximum bearing life and speed capabilities
- **Pressed steel, machine-brass and injection-molded nylon cage options**
- **From 6 mm bore to 670 mm O.D.**



## Ball Bearing Mounted Units

### THE BROADEST LINE IN THE INDUSTRY

From agricultural and food machinery to high performance ULTRA-CLASS™ bearing units, NTN makes the planet's most comprehensive line.

- **Green Line offers an unmatched selection of housing styles and insert types**
  - Durable construction leads to reliable performance in many of the most common applications
  - Shaft sizes from 1/2" (12mm) to 4" (140mm)
- **Sentinel™ Series is complete line of products for the food & beverage industry**
  - Food-grade solid lubrication and standard caps eliminate need to relubricate
  - Shaft sizes from 1/2" (12mm) to 2-7/16" (60mm)
- **ULTRA-CLASS lasts 8x longer than other setscrew mounted units**
  - Made with ball point setscrews resistant to loosening and rust-resisting black oxide inserts
  - ULTRA-CLASS unit insert bearings resist corrosion
  - Shaft sizes from 1/2" to 3"



## Tapered Roller Bearings

### TRUSTED FOR A CENTURY

NTN is the design leader to the world's largest OEMs and end users.

- **NTN supplies 2/3 of the world's Fortune 500 manufacturers**
- **Specialty surface treatment and heat treatment to suit specific applications.**
  - ECO-Top bearings have extended life, reduce operating torque, anti-seizure benefits, and eased assembly specifications
- **Logarithmic crowned rollers support higher operating loads at lower stress levels**
- **From 1/2" (15 mm) bore to 86" (2,180 mm) O.D.**



## Cylindrical Roller Bearings

### PREMIUM IS OUR STANDARD

NTN standard bearings are better than the competition's premium products for noise and capacity performance.

- **NTN's 95+ year history with ISO bearings makes us the industry leader for this center-cut line**
- **Trusted partner for over 100 years supplying the world's largest industrial OEMs with inch-based CRBs**
- **Specialty features to suit specific applications**
  - "X" bar cage option offers higher speeds and greater accuracy
  - Austenite Strengthening (AS) on rollers increases bearing life
  - High Lubrication (HL) surface raises bearing life in poor lube conditions
- **From 17 mm bore to 720 mm O.D.**



## Spherical Roller Bearings

### NTN'S VERY FIRST PRODUCT LINE, INDUSTRY LEADER FOR 100 YEARS

NTN's first bearing was an SRB. They are still designed and made in Japan and Western Europe.

- **Load ratings 20% higher than competitive SRBs**
- **NTN and SNR make the world's broadest range of SRB products**
- **From 25 mm bore to 2,180 mm O.D.**



## Roller Bearing Units—SPAW

### LESS DOWNTIME. MORE PROFITABILITY.

Robust design for the most extreme applications.

- **Longest-lasting SAF dimensional interchange**
  - Sturdy, one-piece ductile iron housing with optional end covers withstands shock and impact, and provides maximum protection from contamination
- **60% faster installation than a standard SAF unit**
  - Unitized bearing insert with heavy contact spring loaded seals
  - Sealed, factory greased, and C3 clearance set allowing for installation right out of the box
- **Easy maintenance**
  - Fixed or floating with single bearing unit
  - Phosphate-coated bearing and adapter for corrosion protection
  - Replacement bearing inserts for quick change out
- **Shaft sizes from 1.15/16" (50 mm) to 5.1/2" (140 mm)**



## Thrust Spherical Roller Bearings

### THE WORLD'S HIGHEST STANDARD LOAD RATING

Delivers the world's highest standard high-load capacity and rotational accuracy.

- **Optimized internal bearing design increases the basic dynamic load rating by up to 70%**
- **Retainer design raises capacity and increases the permitted rotational speed by 20%**
- **Up to 6x longer life over conventional thrust spherical roller bearings**
- **From 60 mm bore to 870 mm O.D.**



## Roller Bearing Units—SAF

### COMPETITORS' PREMIUM IS OUR STANDARD

Design offers the highest application flexibility and temperature range as standard.

- **Broadest temperature range**
  - Ductile iron housings operate at lower temperatures without fracture risk
- **Universal lubrication configuration**
- **Matched cap and base serialization prevents mixed installations across blocks**
- **Temperature and vibration monitoring**
  - Blocks are equipped for thermal or vibration monitoring
- **Shaft sizes from 1.15/16" (50 mm) to 9.1/2" (245 mm)**



## Machine Tool Bearings

### OEMS' FIRST CHOICE

Trusted partner for the most demanding aerospace applications.

- **Brand of choice for 90% of the world's machine tool manufacturers**
- **Ceramic rolling elements for the highest speed, rigidity and temperature applications**
- **From 6 mm bore to 670 mm O.D.**



## Single Point Lubricators

### MORE THAN JUST BEARINGS

NTN single point lubricators ensure continuous, reliable, clean and extremely precise lubrication.

- **Consistent, cost-effective lubrication**
  - Continuous, long-term renewal of lubrication reduces regreasing demand and maintenance costs
- **Predictable service intervals**
  - Discharge periods of 1-12 months
- **Improved workplace safety**
  - Reduction maintenance requirements means less time spent in dangerous areas for your team
- **Environmentally safe**
  - Simple, closed system prevents lubricant from escaping into the environment and is easy to dispose of



## Constant Velocity Joints

### PREFERRED BY STEEL AND MACHINE TOOL USERS AROUND THE WORLD

Coupling, fixed drum, sliding and fixed disk constant velocity joints suit specific applications.

- **Coupling type CVJs install easily because they require no shaft alignment**
- **Sliding type CVJs allow for shaft expansion due to thermal expansion and assembly offset**
- **Fixed disc CVJs can operate at a very high speed, Cup and Drum types operate at a very high offset angle**



## NTN Guardian

### CONDITION MONITORING, BACKED BY EXPERTISE

NTN Guardian empowers facilities to optimize asset performance and minimize disruptions.

- **Simple-to-deploy hardware**
  - Delivers accurate machine insights with minimal installation effort
- **Intuitive, cloud-based software**
  - Feature-rich tools and powerful machine learning analytics allow you to monitor your data anywhere, at any time
- **NTN's expert support at every stage**
  - Ensures a smooth launch, sustained performance, and long-term success of your monitoring program.



**NTN**



Since 1918, NTN has been a trusted OE manufacturer of high-performing bearings that increase productivity and efficiency.

With plants in the United States, Japan and Western Europe, NTN is the world's broad-line bearing manufacturer. We provide the flexibility and responsiveness of a reliable local partner with the expertise of a global brand, offering best-in-class products at competitive prices. We also understand that variety is just as important as quality. We're dedicated to producing the industry's most extensive range of bearing products—all designed to provide you with peace of mind so that you can get the most out of your bearing investments.



◀ NTN was the first bearing manufacturer to be awarded the prestigious Deming Prize for recognition of its quality products and systems.

# Beyond Bearings

**Training. Installation Support.  
Trouble-shooting. And more.**

When you choose NTN, your team is equipped with all the necessary tools and resources to get the job done right. From installation to problem-solving, we'll be there with the hands-on support you need to take on your toughest challenges. This includes extra services such as:



## **Technical Training Unit**

On-site, mobile training unit offering specialized, hands-on instruction from NTN engineers



## **Product Training School**

Three days of in-depth instruction from NTN engineers at NTN headquarters or other regional locations around the country  
([go.ntnamerica.com/trainingschool](http://go.ntnamerica.com/trainingschool))



## **eKnowledge**

**WEB-BASED TRAINING PROGRAM**

Eight online product training modules covering different bearing types and nomenclature  
([www.ntnamerica.com/eknowledge](http://www.ntnamerica.com/eknowledge))



## **NTN Bearing Finder**

Customizable search tool featuring exhaustive data sets, comprehensive part interchanges and interactive CAD drawings  
([bearingfinder.ntnamerica.com](http://bearingfinder.ntnamerica.com))



**Ready to get rolling? Contact us today for full details at  
1-800-323-2358 or [eng@ntnamerica.com](mailto:eng@ntnamerica.com).**

# **NTN**<sup>®</sup>

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