NSK Product Lineup for Machine Tools
NSK TOTAL SOLUTION

NSK is the only manufacturer to offer a complete development and supply service for the essential parts required for machine tools.

Ball Screws that have achieved top global brand status as a result of the cutting-edge technologies used, NSK Linear Guides™ that are manufactured using production technologies guaranteeing high precision and product quality, Spindles that offer easily the fastest rotation speed capability available, and are of the highest standard in their class worldwide, as well as our trademark Bearings, which represent the core technology and capability for all NSK products with an unshakeable, global product strength.

Our “Comprehensive Technical Capability” includes 4 key features.

We provide a “Solution” that best fits the needs of our clients.

Our “Global” support service provided with our products always considers a worldwide view.

Our “Development” capabilities allow us to achieve next generation products that are one step ahead.

And of course, NSK “Quality” wins the approval and trust of clients all over the world.

As the only manufacturer to offer a comprehensive development and supply service for machinery parts, NSK is able to meet the increasingly sophisticated needs of our clients, and we can assist with both a speedy commencement of operations for machine tools, as well as optimal overall operation.

We have two general catalogs on “Super Precision Bearings” and “Precision Machine Components” available, which contain detailed information related to our bearings and linear products.
Super Precision Bearings & Spindles

Grease lubrication for machine tools serving the Green generation.

NSK Super Precision Bearings and Spindles use a Grease Replenishing System that enables grease lubrication in high-speed applications, an area where previously only oil lubrication was possible.

Greatly cutting down on the amount of lubricant and air used contributes to reduced energy requirements, and also helps to improve the operating environment by eliminating oil-mist and wind noise.

NSK’s low torque products offer an environmentally friendly specification to reduce energy loss.

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Provided with seals that prevent grease leakage, plus greater enclosed grease capacity due to a wide design. The grease performance has an extended service life that is 1.7 times longer than open types.

**Benefits:**
1. Long operating life
2. Low heat generation
3. Reduced assembly time

Cat.No.E1277

Sealed Angular Contact Ball Bearings

Sealed Angular Contact Thrust Ball Bearings for Ball Screw Support

Robustslim Cylindrical High Precision Angular Contact Ball Bearings for Robotics/THK Applications

High-speed Integrated Motor Spindle

For machining centers

Grease Replenishing System

For Machining Centers with Grease Lubrication

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Achieved the world’s highest speed performance of 25,000 min⁻¹ in Class ISO-40 high-speed machining centers, with quiet, energy-efficient operation through grease lubrication.

**Benefits:**
1. High speed
2. Maintenance-free operation
3. Wide-range heavy cutting performance

Cat.No.E2514

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Cat.No.E1257

Ultra High-Speed Angular Contact Ball Bearings

Ultra High-Speed Angular Contact Ball Bearings with Oil-Air Lubrication

Spin-Shot™ II

Ultra High-Speed rotation and low-noise performance has been achieved through focusing efforts on optimizing the oil-air lubrication system of this bearing.

**Benefits:**
1. Achieves 40,000 min⁻¹ with ISO-40 equivalent taper using oil-air lubrication
2. Lower noise levels, approximately 3 dB to 5 dB
3. Half the air volume of conventional oil-air lubrication

Cat.No.E1257

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Ultra High-Speed Single Row Cylindrical Roller Bearings

The highly heat-resistant PEEK cage with excellent heat and wear resistant SHX steel helps the bearing achieve a dₘn value of 2.00 x 10⁶.

**Benefits:**
1. Low heat generation
2. Improved seizure resistance
3. High-speed performance

Cat.No.E1275
Ball Screws & NSK Linear Guides™

NSK has been contributing to industrial growth globally with the world’s leading Ball Screws and an extensive product lineup of NSK Linear Guides.

NSK Ball Screws were developed through cutting-edge tribology (friction control technology), and NSK manufactures the largest volume in the world with its outstanding production and quality control techniques. In addition, the manufacturing process for NSK Linear Guides incorporates production technologies that ensure high precision and outstanding quality. We offer an extensive product lineup with high load capacities and excellent dust-resistant performance to meet the needs of a variety of industries. Furthermore, NSK continues to contribute to industrial growth on a global scale.

**Benefits:**

1. High speed
2. Low noise
3. High load capacity

**TW Series Ball Screws:**

Upgraded version of the highly regarded HMC Series, featuring a middle-deflector recirculation system that enables high speed, low-noise operation.

**Benefits:**

1. High rigidity and long operating life
2. High accuracy
3. Excellent responsiveness

**BSL™ Series Ball Screws**

We provide a unified component design to facilitate short-term delivery. In addition, we have achieved high-speed and low-noise operation by adopting a new lubrication system.

**RA Series Linear Guides**

The RA Series represents the culmination of NSK’s analysis technology and tribology, offering high load capacity and high rigidity. Our product lineup also includes the ultra-low-profile RB Series, which enables a smaller machine footprint.

**Benefits:**

1. High rigidity and high load capacity
2. Impact load resistant
3. High accuracy

**LA Series NSK High-Rigidity Linear Guides**

NSK S1™ Series ensures quiet, non-obtrusive sound and low dust emission while exhibiting smooth operation.

**Benefits:**

1. Quiet, non-obtrusive sound emission
2. Smooth motion
3. Low dust emission
4. Wide variety

**LA Series NSK Low-Noise Linear Guides**

NSK S1™ Series ensures quiet, non-obtrusive sound and low dust emission while exhibiting smooth operation.

**Benefits:**

1. High rigidity and high load capacity
2. Impact load resistant
3. High accuracy

**RA Series® RB Series Lubrication Unit**

Ensures the long term maintenance-free operation and long operating life of components under tough lubrication conditions. This clean lubrication method is more environmentally-friendly.

**Benefits:**

1. Long term maintenance-free operation
2. Long operating life
3. NSK K™ for food processing or medical equipment also available

**RA Series® RB Series High Performance Seals**

NSK’s most advanced high-performance seals deliver more than four times longer operating life in contaminated environments than conventional models.

**Benefits:**

1. High dust-resistance (multi-lip structure seal)
2. Long operating life

**RA Series® RB Series NSK K™**

Ensures the long term maintenance-free operation and long operating life of components under tough lubrication conditions. This clean lubrication method is more environmentally-friendly.

**Benefits:**

1. Long term maintenance-free operation
2. Long operating life
3. NSK K™ for food processing or medical equipment also available

**RA Series® RB Series High Performance Seals**

NSK’s most advanced high-performance seals deliver more than four times longer operating life in contaminated environments than conventional models.

**Benefits:**

1. High dust-resistance (multi-lip structure seal)
2. Long operating life