

## PRODUCTS AND SERVICES FOR FORESTRY AND SAWMILLS



Rolling Bearings, Linear Motion Products  
and Technical Services

# INNOVATION. PERFORMANCE. **RELIABILITY.**

## **A GLOBAL LEADING SOLUTION PROVIDER**

NSK is a global leader in the development of advanced rolling bearing and linear motion products. With a focus on improved bearing life and increased operating performance in the most demanding conditions, NSK supports customers as a genuine solution provider - committed to innovative research and development and unrivalled technical excellence.

NSK bearing solutions for forestry and sawmill applications are engineered to accommodate and deliver with high loads, high speeds, and precision accuracy required at every stage of application

from felling trees to stacking finished lumber. Advanced products such as our HPS™ series of ball and roller bearings are designed to boost robust performance with increased load, speed and operating life ratings. NSK precision bearings and machine components deliver on the promise of high rotational accuracy, optimal movement and precise positioning.

For innovative product solutions that deliver reliability and performance, Think NSK.

## **EXTREME LOADS AND EXTENDED LIFE**

Durability and reliability under the most arduous and challenging operating conditions are of utmost importance for forestry and sawmill machinery and equipment, where the failure of a single component can impact the productivity throughout the entire operation.

NSK roller bearings are designed with optimized internal geometry, robust roller/cage complements and high performance steel to provide the utmost load-carrying capacity, operating speeds and service life at every stage of handling, processing and moving material.

Solutions including:

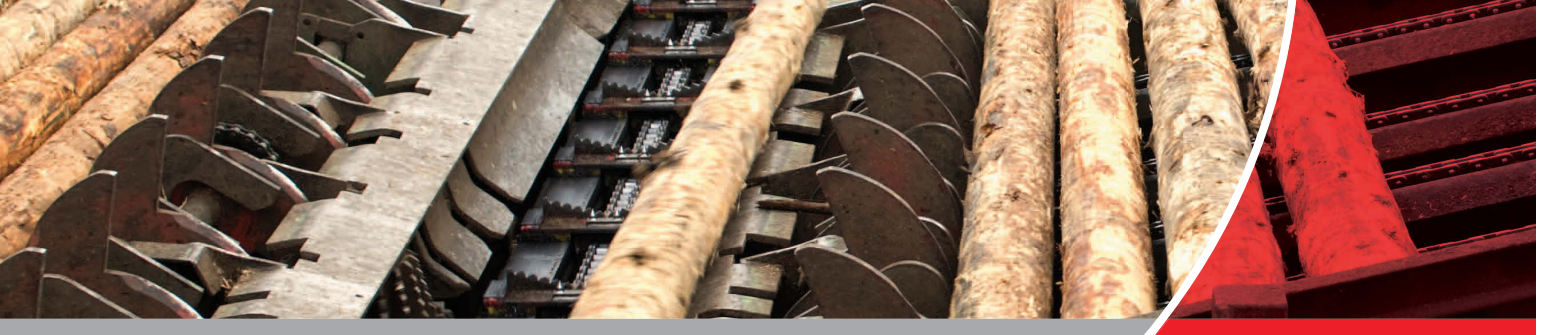
- › HPS™ Spherical Roller Bearings
- › HPS™ Cylindrical Roller Bearings
- › Tapered Roller Bearings.

**Left:**

NSKHPS Spherical Roller Bearings – designed to outperform and outlast conventional designs in the toughest conditions.



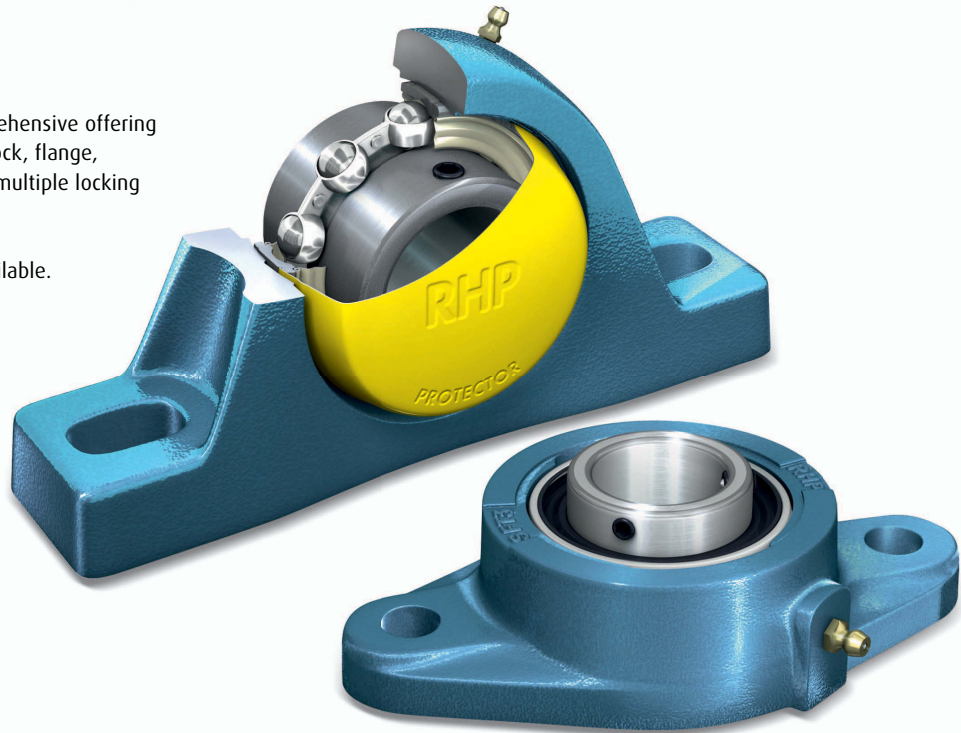


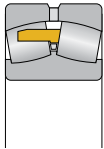




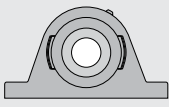



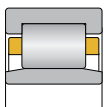


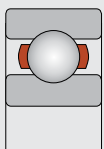



**Right:**

NSK Mounted Ball Bearing Units - a comprehensive offering of cast iron and/or pressed steel pillow block, flange, take-up, cartridge and hanger units. With multiple locking arrangements and seal options.

Spherical Roller Bearing Units are also available. Contact your NSK representative.



NSK PRODUCT SOLUTIONS	› FELLING › LIMBING › DEBARKING	› CONVEYORS › FEEDERS › SORTERS › STACKERS	› HEADRIGGS › BANDMILLS › GANG SAWS	› CHIPPERS › EDGERS › DRYERS › PLANERS	› MOTORS › PUMPS › GEARBOXES › BLOWERS
<b>SPHERICAL ROLLER BEARINGS</b> › NSKHPS optimized internal design promotes higher loads, higher speeds and longer service life › Available with high strength steel or machined brass cage					
<b>MOUNTED UNITS</b> › Cast / pressed steel pillow blocks, flange, take-up, cartridge, hanger units › Inserts - 3 locking arrangements and 2 inner ring length options › 3 seal options - standard, with flinger, and triple lip					
<b>CYLINDRICAL ROLLER BEARINGS</b> › NSKHPS extra capacity internal design for higher loads, higher speeds and longer service life › With high strength steel or machined brass cage					
<b>SUPER PRECISION DEEP GROOVE BALL BEARINGS</b> › Ideally suited for high speeds, with low noise and low vibration › Phenolic cage offers superior wear resistance › P2, P4, P5 accuracy › Seal / shield options available					

## CONTAMINATION AND LUBRICANT STRESS

In the severely dust-laden atmospheres encountered throughout sawmill operations, bearings are exposed to the possibility of premature failure as a result of contaminated lubricant or lubricant starvation.

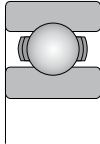




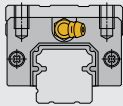


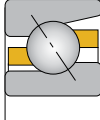


With solutions ranging from self-lubricating bearings for reduced maintenance to sealing / housing solutions to prevent contamination ingress, NSK offers every possible opportunity to maximize the performance of machinery and equipment.

Solutions including:

- › Sealed Deep Groove Ball Bearings
- › Molded-Oil™
- › Pillow Block Housings and Mounted Units
- › Linear Guides with K1 Lubrication Units

Left:

NSK Deep Groove Ball Bearings offer smooth, quiet, high-speed operation. Sealed, shielded and Molded-Oil™ options available for protection against contamination and lubricant stress.

NSK PRODUCT SOLUTIONS		› FELLING › LIMBING › DEBARKING	› CONVEYORS › FEEDERS › SORTERS › STACKERS	› HEADRIGS › BANDMILLS › GANG SAWS	› CHIPPERS › EDGERS › DRYERS › PLANERS	› MOTORS › PUMPS › GEARBOXES › BLOWERS
<b>DEEP GROOVE BALL BEARINGS</b> <ul style="list-style-type: none"> <li>› Ultra clean steel for extended bearing fatigue life</li> <li>› Smooth and quiet operation at high speeds</li> <li>› Seal / shield options for protection against contamination</li> </ul>						
<b>LINEAR GUIDES</b> <ul style="list-style-type: none"> <li>› NH/NS series for high speeds and high loads with maximum precision</li> <li>› RA series roller guides for high capacity performance</li> <li>› Options: K1 lubrication units, seals, protectors and surface treatments</li> </ul>						
<b>ANGULAR CONTACT BALL BEARINGS - SINGLE ROW</b> <ul style="list-style-type: none"> <li>› Available with NSKHPS optimized internal design with high dimensional and running accuracy</li> <li>› Increased loads and limiting speeds</li> </ul>						

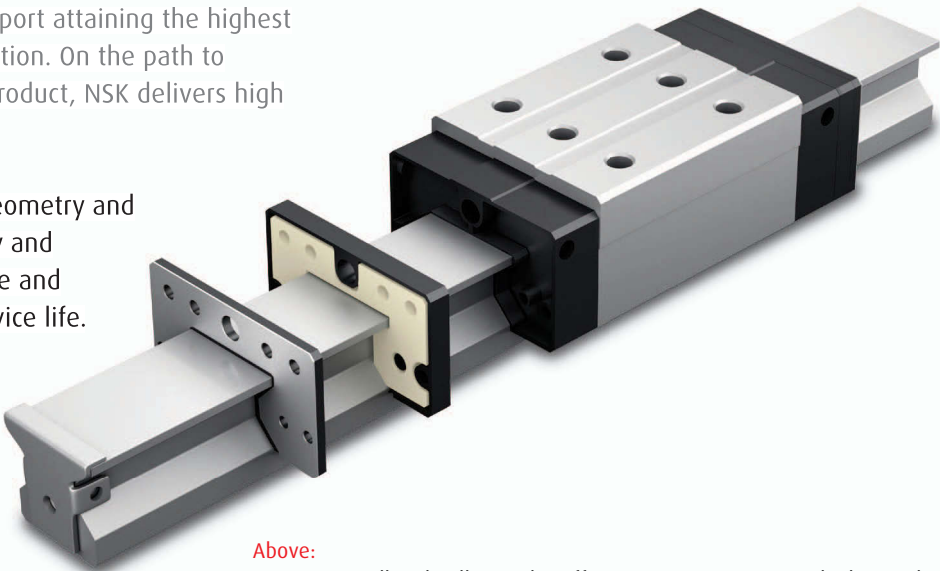


### HIGH ACCURACY AT HIGH SPEEDS

Sustaining optimum material utilization and finished product quality is paramount throughout the sawmill process. From the outset, NSK products ideally support attaining the highest feed rates with lowest sawing deviation. On the path to planing a superior quality finished product, NSK delivers high accuracy at the highest of speeds.

Advanced rolling / sliding surface geometry and precision tolerances provide stability and strength, and ensure smooth, precise and quiet operation for an extended service life.

- Solutions including:
- › NH/NS Linear Ball Guides
  - › RA Linear Roller Guides
  - › Super Precision Ball Bearings



**Above:**  
NSK Linear Ball and Roller Guides offer maximum precision at high speeds with extremely high load ratings. Optional extras include K1 lubrication units, seals, and surface treatments for harsh environments.

NSK PRODUCT SOLUTIONS		› FELLING › LIMBING › DEBARKING	› CONVEYORS › FEEDERS › SORTERS › STACKERS	› HEADRIGGS › BANDMILLS › GANG SAWS	› CHIPPERS › EDGERS › DRYERS › PLANERS	› MOTORS › PUMPS › GEARBOXES › BLOWERS
<b>TAPERED ROLLER BEARINGS</b> › Advanced material and design for increased loads and operating life › Metric and inch dimension		■	■		■	■
<b>ANGULAR CONTACT BALL BEARINGS - DOUBLE ROW</b> › High-grade balls and super finished raceways for quiet and smooth operation with improved lubricant distribution › Seal / shield options for protection against contamination		■	■			■
<b>PILLOW BLOCK HOUSINGS</b> › Standard series, large size and special design › Cast iron, ductile iron and cast steel available › Sealing options for protection against contamination			■	■	■	■

## ASSET IMPROVEMENT PROGRAM -AIP

NSK promotes the synergy of customer process knowledge with NSK technical resources and product solutions to produce increased efficiencies and measurable results. From application engineering to industry specialists and field services, NSK provides expertise and support to deliver advanced design and service solutions.

With our Asset Improvement Program (AIP) we work collaboratively with customers through a Value Cycle that begins with a thorough situational analysis, leads to the trial of a solution proposal, and ends with a quantifiable improvement in productivity and profitability. Our solutions are quantifiable and measurable in terms of lowered costs, increased output, and reduced downtime.

Services including:

- › design / application review
- › bearing selection
- › inspection and diagnostics
- › failure analysis
- › installation and removal
- › maintenance programs
- › training
- › bearing repair / modification



## NOTES



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