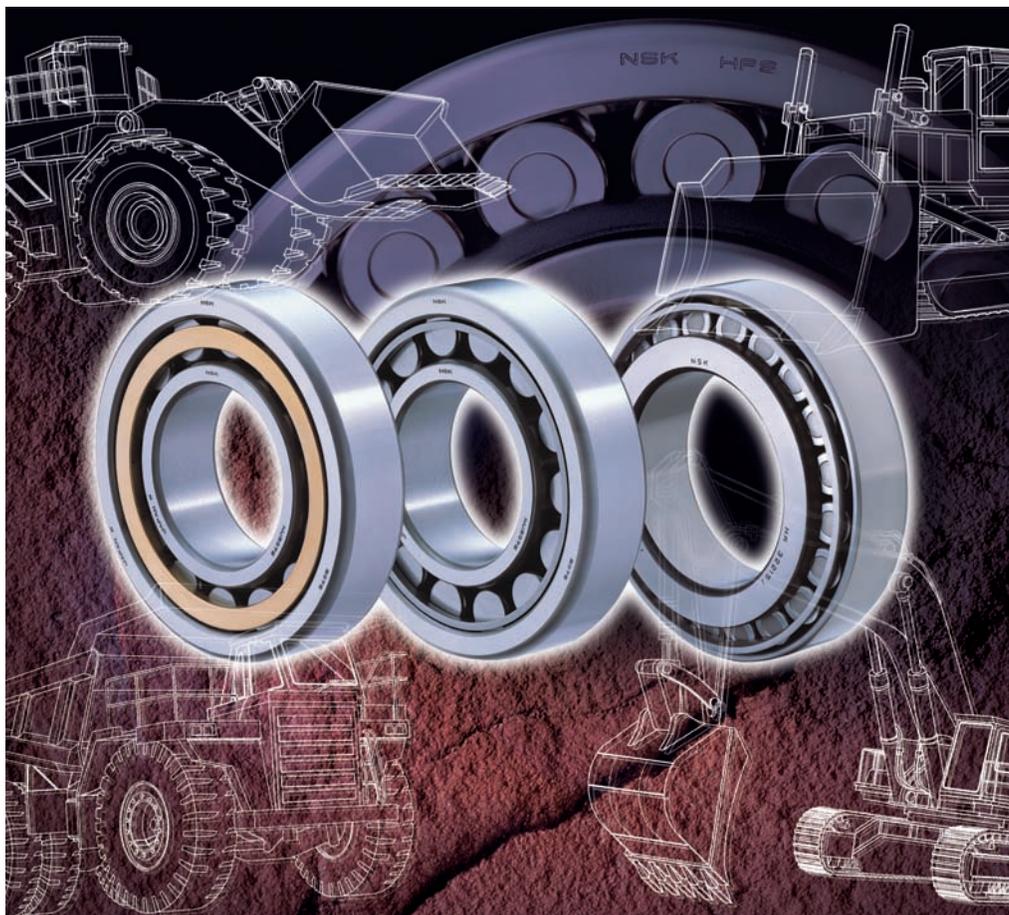


Bearings for Construction Machinery

Tough bearings that provide long service life under harsh conditions reflect NSK's accumulated technological prowess.

Lineup D 036



Air Turbine
Dental
Handpieces

Pumps &
Compressors

Agricultural
Machinery

**Construction
Machinery**

Mining
Machinery

Railway
Rolling Stock

Papermaking
Machines

Wind Power
Industry

Steel Industry

Air Turbine
Dental
Handpieces

Pumps &
Compressors

Agricultural
Machinery

**Construction
Machinery**

Mining
Machinery

Railway
Rolling Stock

Papermaking
Machines

Wind Power
Industry

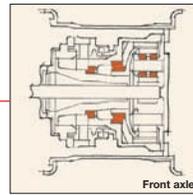
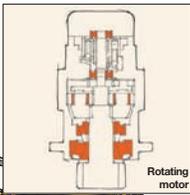
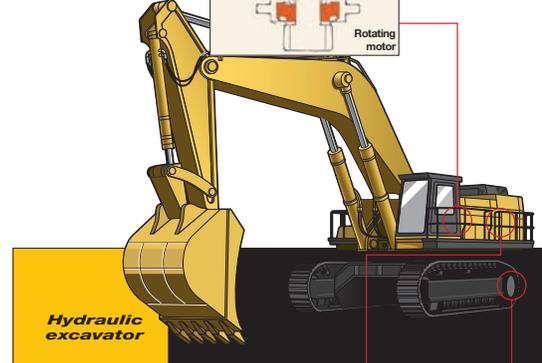
Steel Industry

INDUSTRY
SOLUTIONS

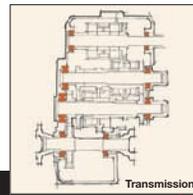
Bearings for Construction Machinery

Lineup

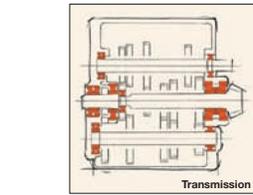
- Bearings typically used:
- Tapered Roller Bearings
 - Deep Groove Ball Bearings
 - Needle Roller Bearings



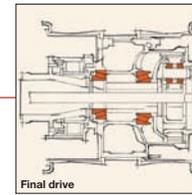
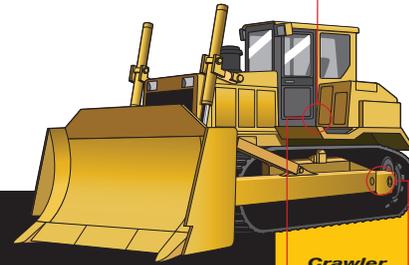
- Bearings typically used:
- Tapered Roller Bearings



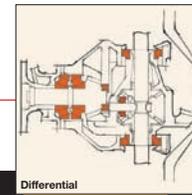
- Bearings typically used:
- Cylindrical Roller Bearings
 - Tapered Roller Bearings
 - Deep Groove Ball Bearings



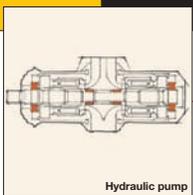
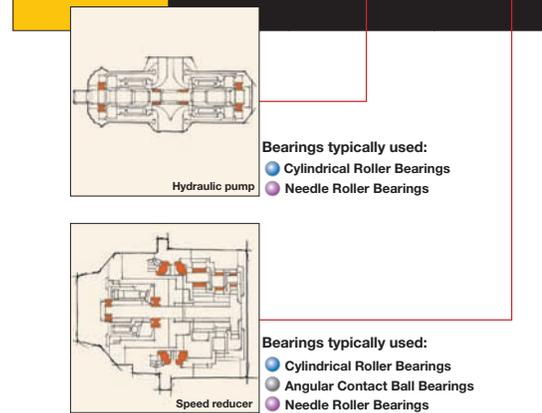
- Bearings typically used:
- Cylindrical Roller Bearings
 - Tapered Roller Bearings
 - Spherical Roller Bearings



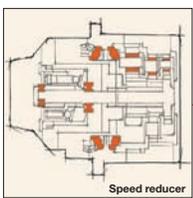
- Bearings typically used:
- Tapered Roller Bearings



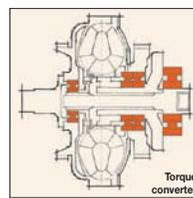
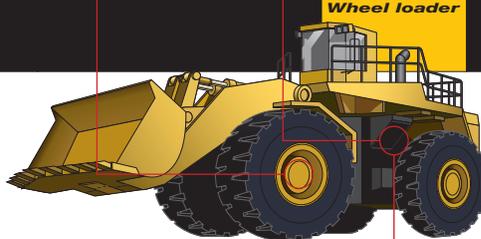
- Bearings typically used:
- Cylindrical Roller Bearings
 - Tapered Roller Bearings



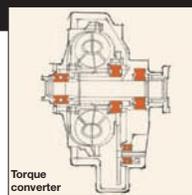
- Bearings typically used:
- Cylindrical Roller Bearings
 - Needle Roller Bearings



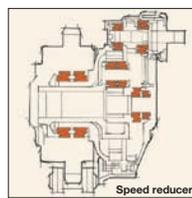
- Bearings typically used:
- Cylindrical Roller Bearings
 - Angular Contact Ball Bearings
 - Needle Roller Bearings



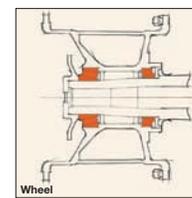
- Bearings typically used:
- Deep Groove Ball Bearings
 - Angular Contact Ball Bearings



- Bearings typically used:
- Cylindrical Roller Bearings
 - Deep Groove Ball Bearings
 - Angular Contact Ball Bearings



- Bearings typically used:
- Tapered Roller Bearings



- Bearings typically used:
- Tapered Roller Bearings



NSKHPS™ Spherical Roller Bearings



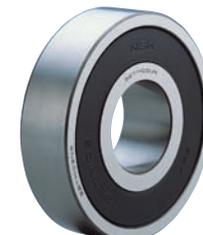
NSKHPS™ Cylindrical Roller Bearings



HR Series Tapered Roller Bearings



Hi-TF Bearings



TM Series Sealed Deep Groove Ball Bearings



Long-Life Pinion Shafts with Cage and Rollers

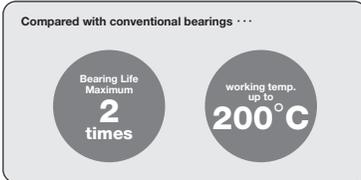
- Air Turbine Dental Handpieces
- Pumps & Compressors
- Agricultural Machinery
- Construction Machinery
- Mining Machinery
- Railway Rolling Stock
- Papermaking Machines
- Wind Power Industry
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■ Bearings for Construction Machinery

NSKHPS™ Spherical Roller Bearings

Features Compared to the conventional bearing :



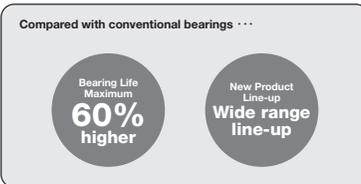
1. Improved reliability
Bearing life is up to twice that of conventional bearings thanks to optimization of the bearing's internal design and improvement of processing technology.

2. High-temperature dimensional stabilizing treatment as standard
NSK's proprietary heat treatment technology enables high temperature dimensional stabilization up to 200 °C.



NSKHPS™ Cylindrical Roller Bearings

Features Compared to the conventional bearing :



1. Improved reliability
Bearing life is up to 60% longer compared to conventional bearings thanks to an optimized internal design and improvement of processing technology.

2. Wide product lineup
NSK offers a wide lineup of NSKHPS bearings with four types of cages and a range of sizes for a high degree of versatility across general-purpose applications.
 - Pressed-steel cage with high cost performance
 - Highly reliable machined-brass cage
 - Polyamide-resin cage with excellent heat resistance and chemical resistance.

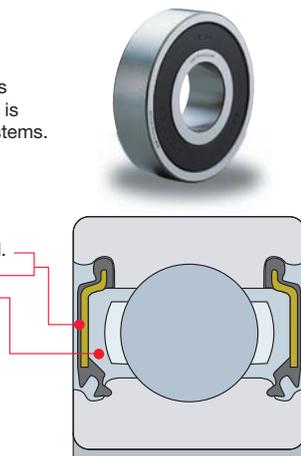


TM Series Sealed Deep Groove Ball Bearings

The TM Series delivers longer operating life under contaminated environments by incorporating a special seal that prevents the entry of foreign particles and is especially effective in agricultural machinery and automobile transmission systems.

Features

- Seal lip structure prevents entry of foreign matter while allowing entry of oil.
- Lower torque than conventional contact seal bearings.
- Sealed-in grease with a high affinity for gear oil aids initial lubrication.



HR Series Tapered Roller Bearings

HR Series high-load capacity, standard-sized tapered roller bearings offer boosted performance in diverse applications.

Features

- Optimized cage design allows increased size and number of rollers
- Higher load-carrying capacity and longer operating life



Long-Life Pinion Shafts With Cage and Rollers

These bearings have improved durability and reliability to achieve long service life under harsh operating conditions, such as extended continuous operation, by utilizing a pinion shaft with a cage and rollers as a single assembly.

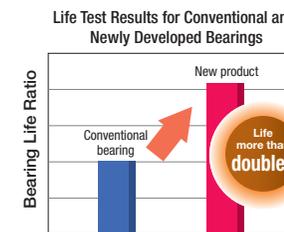
Features



- Pinion shaft
- The raceway is polished to a mirror-smooth finish to ensure a sufficiently thick oil film.
 - A special heat treatment is applied to the pinion shaft as a measure against contaminated-lubricant conditions.
- Cage and rollers
- The roller surface is polished to a mirror-smooth finish to ensure a sufficiently thick oil film.
 - A special heat treatment is applied to the rollers as a measure against contaminated-lubricant conditions.



Corresponding size:
Inscribed circle diameter up to 32 mm



Hi-TF Bearings

Bearings manufactured with NSK's Hi-TF material have been specifically designed for outstanding toughness under harsh operating conditions, surpassing even NSK's earlier TF bearings. Hi-TF bearings incorporate this new material and a new heat-treatment technology to provide long service life under contaminated lubrication conditions with superior resistance to wear, seizure, and heat. Hi-TF bearings meet the rigorous requirements of bearings now and into the future.

Features

- Longer bearing life even under harsh conditions with excellent resistance to wear, seizure, and heat



Bearing Series	TM302-TM314 / TM203-TM214	Major dimensions are identical to Series 62 and Series 63 deep groove ball bearings.
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- Air Turbine Dental Handpieces
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- Agricultural Machinery
- Construction Machinery
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- Railway Rolling Stock
- Papermaking Machines
- Wind Power Industry
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