Sealed Self-Aligning Roller Bearing (ULTAGE WA Type)

With an additional seal that prevents the ingress of foreign matter, load capacity of the world’s highest level
Longer bearing life, higher reliability and easier handling!

Features

[1] Worlds highest load capacity
   • Adoption of the ULTAGE EA type internal design

[2] Compact design that minimizes space taken up by seals in an assembly
   • Use of a special contact-type rubber seal design prevents the ingress of contaminants.
   • Contact pressure of the seal on the bearing remains unchanged in spite of alignment operation on the bearing; the seal maintains its dust-prevention performance during misalignment conditions.

[3] Long-life grease used as standard

Structure

Applications

• Raw material transportation conveyors
  (in steel mills, thermal power generation stations, mines, etc.)

• Parts possibly attacked by salty air
  (transportation equipment in harbors; and construction machinery, etc.)
ULTAGE Sealed Four-Row Tapered Roller Bearing for Rolling Mill Roll-Necks

Through optimized bearing design, we have greatly improved load resistance, load capacity and sealing performance, helping extend bearing replacement cycles and improving reliability of the bearing during rolling mill operation!

Features (compared to previous models)

[1] Worlds highest-load capacity design
   • Bearing rating life improved by as much as 1.8 times.
[2] New crowning form improves load distribution
   • Heavy load resistance more than doubled (world’s best)
[3] Improved Seal Performance
   • Water resistance more than doubled

Structure

Applications

• Steel mill roll-neck bearings
IC Tag Integrated Bearing

The industry’s first! Electronic data can be recorded inside the bearing itself. Enhanced reliability about regular inspection information, and simplification of otherwise time-consuming information management procedure!

Features

[1] Confirmation of quality data reading can be conducted from the bearing itself.
[2] Users can write and read usage history to the bearing itself.

Applications

• Construction machinery, mining equipment, aircraft, wind power generation facilities, rolling stock, etc.
(suitable for applications that require regular maintenance)

Structure (examples of applications and typical contents of data being displayed)

[Image of use]

[Examples of data sets used for bearing life management]
(Bearing quality information)

1. Product name
2. Bore dia., outside dia., precision of bearing width, gap information, etc.
3. Serial No.
4. Manufacture date, inspection date, shipping date

(User management information)

1. ID No. of machine that is equipped with the bearing in question
2. Date where the bearing is installed to the machine
3. Date where inspection takes place
4. Accumulated operating hours
Large Bearing with Integrated Rotary Sensor

First in the industry!

NTN has created large bearings with incorporated rotary sensors!
Using this, a fewer number of parts and components are needed for installing a rotary sensor and the time needed for installing and adjusting the sensor is virtually eliminated.

Features

[1] Rotary sensor is built into the bearing.

[2] A unique design has been adopted to prevent possible disconnection of electric wire between the shaft and inner ring even if creeping (slipping) occurs between the shaft and inner ring.

[3] Can be used immersed in oil.
• Even in oil at 120˚C, the sensor reliably detects the bearing speed (can depend on oil type and additives).

• Even in severe vibrating conditions with vibration acceleration of 10 G, the sensor reliably detects the bearing speed.

Applications

• Construction machinery, steelworks facilities, wind power generation facilities, ventilators, etc.
New Standard Cam Follower

Compared to conventional cam followers, this product boasts longer life and lower torque even in severe applications.

Features (compared to previous models)

[1] Longer rolling fatigue life achieved.
   • More than double the fatigue life when compared to previous designs (with prefill of high-performance grease)

[2] Non-relubrication type is prefilled with high-performance grease, boasting greater wear resistance and much lower starting torque at low temperatures.
   • 35% reduction in starting torque (at -20°C)

[3] Installation and lubrication methods remain the same as those of current standard products (fully compatible)

Applications and series model numbers

- Transportation equipment, machine tools, printing presses, press machines, etc.
- NTN KR (V) 16–26 series models
  With cages of outer ring outside diameters φ16–26 mm (stud diameter φ6–10 mm), or full complement type roller cam followers

Structure

- Non-relubrication type
- Prefilled high-performance grease
- Relubrication type
- Crowned rollers have undergone special heat treatment, increasing rolling contact fatigue life
Rotary Sensor-Integrated Sliding Bearing

Combining resin sliding bearings and sensors helps simplify the installation of the bearings into the machine. The design promotes reliability in monitoring of running state of the machine, helping reduce time needed for maintenance work on the machine.

**Features**

1. **Unitized sliding bearing and rotary (magnetic) sensor**
   - Easy handling and compact size
2. **Greater freedom in designing wiring route**
   - Selectable orientation of the connector during mounting.
3. **Wide input voltage range (3–26 V)**
   - Compatible with diverse machinery and specifications
4. **Greater freedom for forms of bearings and product outer diameters**
   - Customized design possible

**Applications**

- Rotary drives in office automation equipment, measuring equipment, etc.

**Structure**
Monodrive Two-way Feeder with Spring Separation Mechanism

Enhances functionality of automatic spring parts feeding system. Reduces necessary floor space while realizing reliable parts feeding!

Features

As automatic feeding system for tangled springs

[1] Compact
  • Required floor space is about half (compared to bowl type models).
  • Newly-developed spring separation mechanism has been integrated into a compact monodrive two-way feeder.

[2] Stable supply
  • Tangled springs are rapidly and reliably separated and transported by the separation mechanism.

Applications

• Automatic feeding equipment for small diameter coil springs (diameters of up to 2–5 mm)

Structure

Tangled springs

Separated springs

Spring separator
Compact, Variable Frequency Controller for Parts Feeders

Numerous functions are combined to contribute to a reduction in necessary floor space and improvement in production efficiency

Features

[1] Reduced floor space (compared to previous models)
• Volume: 1/3 (K-ECG25)–2/3 (K-ECH45)

[2] Numerous functions
• Resonance point tracking function (included in high-performance types)
  → Up to 30% reduction in electricity consumption
• Constant amplitude function (included in high-performance types)
  → Transportation speed remains unchanged regardless of variation in the volume of loaded work pieces.
• Works depleted detection, and inching operation functions (included in all types)

Comparison of parts feeder product types

<table>
<thead>
<tr>
<th>Model</th>
<th>Size mm</th>
<th>Weight kg</th>
<th>Applicable units</th>
<th>Constant amplitude &amp; resonance point tracking functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-ECF25</td>
<td>W60×H140×D142</td>
<td>About 1.1</td>
<td>K10–K20, N25, L20S, 05–S30, etc.</td>
<td>No (standard type)</td>
</tr>
<tr>
<td>K-ECG25</td>
<td>W82×H140×D142</td>
<td>About 1.2</td>
<td>K20-1, N25–N40, G50</td>
<td>Yes (high-performance type)</td>
</tr>
<tr>
<td>K-ECH45</td>
<td>W82×H140×D142</td>
<td>About 1.7</td>
<td></td>
<td>No (standard type)</td>
</tr>
<tr>
<td>K-ECJ45</td>
<td>W82×H140×D142</td>
<td>About 1.7</td>
<td></td>
<td>Yes (high-performance type)</td>
</tr>
</tbody>
</table>

Note: For details about applicable parts feeder unit being controlled, please refer to NTN’s relevant parts feeder catalog.