GR™ Series Bearings: Smooth (low torque) and subtle (low noise).
Allows for device operation in a quiet environment that is user friendly.
Low-torque bearings offer high efficiency and energy savings for home electrical appliances and are compliant with environmental needs.
Recently, various energy conservation laws and regulations have had a positive influence on the development of high-powered electrical appliances that are more energy efficient. Accordingly, NSK has developed the GR Series bearing. We chose green as the theme color for product imaging. The color green represents our commitment to the environment, which is reflected in the high efficiency of motors that utilize the GR Series bearings, including fan motors for air conditioners and vacuum cleaner motors.

Features

1. A 40% to 50% reduction of dynamic torque over conventional bearings (see Fig. 1). In particular, high efficiency of low torque at high-speed has been confirmed (see Fig. 2).

2. Greater quietness has been obtained over conventional bearings by incorporating NSK’s lithium soap-based grease, and the highly accurate manufacturing of inner and outer rings and steel balls (see Fig. 3).

Bore size, outer diameter, and width of the bearing are based on ISO standards. Low torque and low noise is achieved by changing internal specifications of the bearing.

Applications

This product is applicable to various fields where highly efficient motors.

- Fan motors for air conditioners
- Vacuum cleaner motors
- Air filtration system motors
- CPU cooling fan motors
GR™ Series Bearing

Fig. 1 Comparison of dynamic torque

Axial load: 29 N, Speed: 1800 rpm,
Bore: ø8 mm, Outer diameter: ø22 mm,
Lithium based grease: 30% packed

Conventional bearing
(N:5)

GR bearing
(N:5)

Ratio of dynamic torque

Fig. 2 Comparison of high-speed durability

Speed: 60000 rpm, Fa: 49 N,
Bore: ø8 mm, Outer diameter: ø22 mm,
Urea based grease: 30% packed

Conventional bearing
(N:2)

GR bearing
(N:3)

Ratio of durability life

Fig. 3 Comparison of noise

Axial load: 29 N, Speed: 1800 rpm,
Bore: ø8 mm, Outer diameter: ø22 mm,
Lithium based grease: 30% packed

Conventional bearing
(N:10)

GR bearing
(N:10)

Ratio of noise

List of GR Series

<table>
<thead>
<tr>
<th>Bearing number</th>
<th>Boundary dimensions (mm)</th>
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<tbody>
<tr>
<td></td>
<td>Bore</td>
</tr>
<tr>
<td>GR693</td>
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<td>GR6202</td>
<td>15</td>
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</tbody>
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Note: Please contact your nearest NSK branch office for further details or visit us online at: http://home2.nsk.com.