WIND ENERGY BEARINGS
GEARBOX & YAW DRIVE

Wind turbine technology continues to pursue increased equipment efficiency, higher reliability and longer service. Innovative bearing designs from NTN are instrumental in these improvements and in extending the use of wind technology for a cleaner future.

Experience
NTN has been servicing the Wind Energy industry in Europe, Asia and the United States for many years. NTN’s wide range of product offerings coupled with its unique relationships with major wind turbine manufacturers, puts it in prime position to service your wind-gearbox bearing needs.

Reliability
As an essential part of the nacelle, the gearbox must function at peak performance to turn wind into power. When replacement is necessary, NTN tapered and cylindrical bearings are designed to reduce downtime with their easy assembly. Specialized designs allow for both high speed and high load carrying capabilities while maintaining a high level of reliability.

Functionality
NTN bearings can be found in all gearbox applications. From low-speed and high-speed planetary gear drives in main gearboxes to high-speed gear and output shafts, NTN’s sophisticated designs can meet your requirements.

Features & Benefits
- OEM approved
- Patent pending designs carry high loads without sacrificing high-speed performance
- Optimized load distribution and reduced rolling element friction at high speeds extend bearing life
- Compact designs for constrained applications
- Super finished rollers and raceways
- Designed to follow GL Guidelines
- High reliability and longer service life
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Cylindrical Roller Bearings

In addition to standard cylindrical roller bearings, NTN has developed technology that combines the high load capacity of a full complement bearing with the high rotational speed capabilities of a caged design. Placing the rolling element separator between the rollers, the high capacity cylindrical roller bearing attained a rated life 1.5 times longer than a conventional bearing.

Tapered Roller Bearings

A world leader in tapered roller bearings, NTN’s world-class quality and experience along with its unmatched product offerings of both metric and inch sizes assures complete coverage in wind turbine gearbox applications.

Angular Contact Ball Bearings

Yaw gearboxes are generally small yet capable of conveying large amounts of torque so the bearings used must be compact and have high load capacities. NTN’s vast product portfolio has all applications covered with angular contact ball bearings.

Cylindrical Roller Bearing Comparison

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<tr>
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<th>Standard Bearing</th>
<th>Full Complement Bearing</th>
<th>High Capacity Bearing</th>
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<tbody>
<tr>
<td>High Speed Capability</td>
<td>✓</td>
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<tr>
<td>High Load Capability</td>
<td>✓</td>
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Contact your local NTN Representative for more information.
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