



**TIMKEN**

**WIND  
ENERGY  
AFTERMARKET  
SOLUTIONS**

# The Timken Experience: **QUALITY AND PERFORMANCE**

The Timken name stands for quality, reliability and durability. We provide wind turbine owners and operators with smart, cost-effective wind-energy solutions that help improve turbine performance, extend equipment life and lower total cost of ownership.

## **MAIN SHAFT BEARING**

### **COMMON PROBLEM:**

Life Limiting Wear

### **PRODUCT UPGRADES:**

Wear Resistant SRB,  
Lube Systems Solutions,  
OIS Condition Monitoring

### **SERVICE SOLUTIONS:**

Uptower Inspection





## PLANETARY BEARINGS

### COMMON PROBLEMS:

Debris Damage & Uneven Loading

### PRODUCT UPGRADES:

Enhanced Gearbox Bearings,  
OIS Condition Monitoring



## HIGH SPEED & INTERMEDIATE BEARINGS

### COMMON PROBLEM:

Axial Cracks

### PRODUCT UPGRADES:

Enhanced Gearbox Bearings,  
OIS Condition Monitoring



# PRODUCT UPGRADES

## Wear-Resistant Spherical Bearings for Main Shafts

Timken® Wear-Resistant DLC-coated bearings significantly reduce wear and can result in more life under poor lubrication environments, low lambda conditions and debris contamination. Combined with a split cage to compensate for uneven loads and enhanced internal geometry to better accommodate thrust loads, we design Timken® spherical roller bearings for superior performance in 3-point mount turbines.

## Enhanced High Speed Gearbox Bearings

To help protect against brittle flaking, axial cracking and roller skidding Timken recommends case-carburized, wear-resistant cylindrical roller bearings and Timken tapered roller bearings.

## Enhanced Gearbox Planet Bearings

A combination of case-carburized steel, Wear-Resistant DLC-coated engineered surfaces and matched internal clearance cylindrical roller bearing sets help protect against uneven loading and debris damage in gearbox planetary positions.

## Lubrication Solutions

Timken grease formulas help increase performance and bearing life in critical wind applications. Automatic lubrication systems reliably deliver the grease.

## OIS Condition Monitoring

Timken offers the Online Intelligence System (OIS) condition monitoring platform for both direct drive and modular wind turbines. Available as a portable system or for permanent installations, the OIS combines advanced vibration analysis and shock pulse techniques to deliver superior damage detection at both low and high speeds.

## Bearing Heaters

Timken offers an assortment of high-quality induction heaters suitable for up-tower and shop use. They quickly and safely heat and radially expand gears, rings, couplings, bearings and other components for easy installation and removal.



*This label distinguishes  
Timken upgraded products  
in wind energy applications.*

# TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance mechanical components, including bearings, belts, chain, gears and related mechanical power transmission products and services.

Stronger. Commitment. Stronger. Value. Stronger. Worldwide. Stronger. Together. | Stronger. By Design.

[www.timken.com](http://www.timken.com)