



## SEALED ROLL NECK BEARINGS

### ADVANCING TECHNOLOGY FOR THE METALS INDUSTRY

Today's flat product mills operate at higher speeds with productivity demands that seemed impossible just a few years ago. To keep pace, you need tougher, longer-lasting bearings that work harder under extreme conditions to meet your production goals.

Designed to meet the demands of both hot and cold rolling mills, Timken® sealed roll neck bearings are available in a wide range of sizes from 7 inches-28 inches (180 mm-710 mm) bore.

### ADVANCED SEALS INCREASE MILL UPTIME

Timken engineering experience and knowledge of roll neck applications are reflected in the new sealed roll neck bearing design. Not only is sealing performance improved, but the seals are designed to be easier to mount and dismount. In addition to the case-carburized components that are characteristic of all Timken roll neck bearings, the new design includes improved surface finishes and special rolling contact profiles.



# TIMKEN® SEALED ROLL NECK BEARINGS HELP REDUCE YOUR TOTAL COST OF OWNERSHIP

Timken application and service engineers work directly with mill operators to continuously improve bearings and the systems where they operate. This close collaboration has yielded bearing enhancements and more robust seals that provide benefits mill operators can measure in terms of lower cost-per-ton-rolled.

## LONGER BEARING LIFE

Contaminants and water ingress can shorten bearing life. Timken redesigned the bearing seals to provide a more effective barrier against these damaging substances and to better maintain the required lubricant film. Enhanced roller profiles and surface finishes also help extend bearing life under extreme operating conditions.

## REDUCED MAINTENANCE COSTS

A new main seal design better retains grease within the bearing, helping to reduce grease consumption and disposal costs. The new seals are easy to install and remove, minimizing bearing inspection and maintenance time. Additionally, the risk of strip staining and rolling solution contamination is reduced.

## LESS MILL DOWNTIME

The integrated main seal design protects the bearing, and its compact size optimizes bearing capacity in a given envelope. The recent increase in dynamic load ratings confirms Timken sealed roll neck bearings can handle higher loads with improved overall reliability.

### **Main seal:**

*Provides positive sealing; easy installation and removal, no special tools required.*

### **Improved surface finishes:**

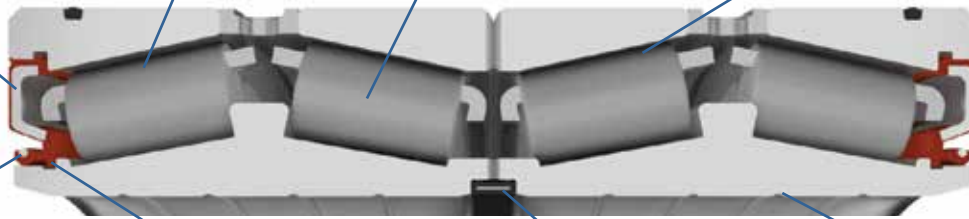
*Enhance performance in marginal lubrication.*

### **High bearing capacity:**

*Provides longer predicted useful life; handles heavy radial and axial loads.*

### **Enhanced roller profiling:**

*Helps ensure even load distribution at the roller-race contacts, even under system misalignment.*



**Primary seal lip:** *Redesigned geometry improves operation under severe conditions of speed, misalignment and eccentricity.*

**Secondary seal lip:** *Helps keep grease in, without increasing bearing torque or heat generation.*

**Bore seal:** *Designed to vent bearing cavity, alleviating internal pressure; easy to install.*

**Spiral bore groove:** *Provides additional lubrication access to the roll neck; blended radii help avoid neck damage.*

Options include: Center double cup; solid cup spacers; pre-greased assembly.

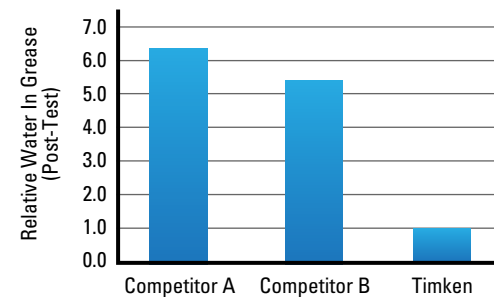
## EXTENSIVE TESTING PROVES PERFORMANCE OF NEW SEALS

With more than 55 patents in seal technology, Timken understands how to make seals that can help block contaminants, even with system misalignment and/or eccentricity. Timken sealing engineers developed and rigorously tested the Timken sealed roll neck bearing seals in advanced testing facilities and rolling mills to deliver measurable performance differences.

## CHOOSE TIMKEN FOR ALL YOUR NEEDS

Backed by 100 years of mill experience, Timken offers bearings, chain, couplings, lubrication, seals, repair services, maintenance practices, gear drive repair, condition monitoring and training for the rolling mill and continuous casting industries. Turn to Timken for expertise in bearings and industrial motion solutions. To learn more, visit [www.timken.com](http://www.timken.com).

## WATER INGRESS TEST RESULTS



*Statistically small sample size in dynamic lab test simulating rolling mill conditions. Actual experience may vary.*

# 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 bearings, gear drives, automated lubrication systems, belts, brakes, clutches, chain, couplings, linear motion products and related industrial motion rebuild and repair services.

**Stronger. By Design.**

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