

Spherical Bearings Optimize Paper Mill Performance

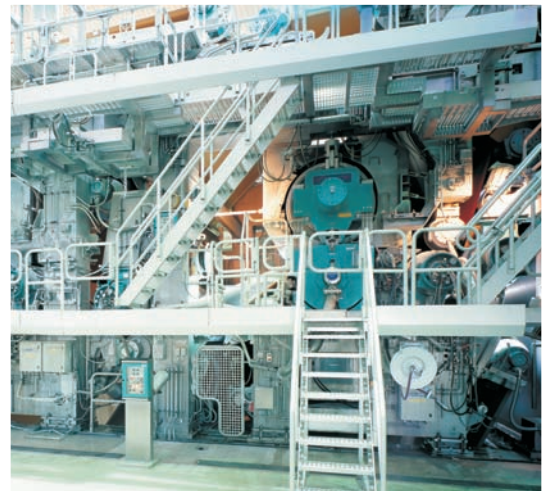
W906A Modification

Engineered to survive high stress paper mill applications

Timken offers a broad line of case-hardened Torrington® spherical roller bearings for large paper machine rolls. These bearings are heat treated to provide compressive, residual stress in the inner rings and rollers. This allows the bearings to manage heavy tensile stresses found in high-nip paper mill applications.

The unique operating conditions of press, suction and calender rolls subject bearings to high surface stresses on the inner ring raceway and rollers. Through-hardened bearings are vulnerable to cracking at these contact points. Further complications can come from stresses that develop during routine bearing installation. These problems can lead directly to premature bearing damage and costly machine downtime.

Torrington compressive, residual-stress bearings incorporate case-hardened inner rings and rollers that offer a layer of compression to counteract these high tensile stresses. This advanced metallurgy minimizes unplanned downtime and improves overall productivity.



Benefits

Case-hardened components:

- > provide fracture resistance that helps prevent costly journal damage.
- > demonstrate the ability to tolerate damage caused by contamination.
- > yield up to three times longer L10 life than traditional through-hardened bearing steel in high-stress applications.

Maximized capacity:

- > extends bearing service life in normal operating conditions.
- > permits greater roller length and diameter for some of the highest load capacities because of improved internal geometry.
- > improves performance because components have smoother finishes.
- > is achieved because one-piece machined bronze cages enhance lubrication and strengthen the total design.

Superior precision is achieved because:

- > radial runout is a quarter of the runout of other competitive designs.
- > improved runout reduces vibration and contributes to greater caliper control.
- > advanced manufacturing controls exceed the RBEC 5 precision levels for runout.

Paper mill products and services

Timken produces a broad range of bearing types and sizes for the pulp and paper industry – from the wood yard through finishing operations. In addition, Timken offers economical bearing remanufacturing to extend the service life of paper mill bearings that have been worn or damaged through use.

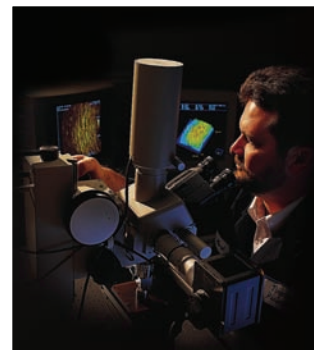
Bearings for paper mills

- > Housed units
- > Ball bearings
- > Triple ring bearings
- > Cylindrical roller bearings
- > Tapered roller bearings
- > Spherical roller bearings
- > Spherical plain bearings
- > Heavy-duty thrust bearings



Engineering support and training

Our dedicated paper mill engineering team partners with customers to determine optimal bearing design for specific applications. Sophisticated contact stress and deflection analysis refines bearing performance. Engineers also recommend appropriate sealing arrangements, lubrication type, quantity and intervals. Timken field service engineers work throughout the world to assist customers through professional experience and advanced analytical and communication tools.



To learn more about the W906A modification, attend the new Paper Industry Bearing Training. To register, visit www.timken.com/training.



Compressive, residual-stress bearings help minimize the severe stresses imposed on the inner ring and rollers in many paper mill applications.

- > The new standard in select tapered bore paper sizes
- > Supported by a team of Timken application and service engineering experts
- > Spherical roller bearings are available in a broad range of types and sizes

Paper mill applications for W906A modification

- > Press rolls
- > Coater rolls
- > Granite rolls
- > Suction rolls
- > Yankee dryers
- > Calender rolls
- > Embossing rolls
- > Variable crown rolls
- > Super calender rolls
- > Temperature controlled rolls



Timken® Torrington® compressive, residual-stress bearings W906A modification code

230 Series	231 Series	232 Series	239 Series
23072KYMBW906AC3	23172KYMBW906AC3	23260KYMBW906AC3	239/600KYMBW906AC3
23076K	23176K	23264K	239/630K
23080K	23180K	23268K	239/710K
23088K	23184K	23272K	239/750K
23096K	23188K	23276K	239/850K
230/500K	23192K	23280K	
230/530K	23196K	23284K	
230/560K	231/500K	23292K	
230/600K	231/530K	23296K	
230/630K	231/560K	232/500K	
230/670K	231/630K	232/530K	
230/850K	231/670K	232/560K	
		232/670K	

Torrington's superior stress profile is now standard on the above spherical roller bearing sizes. To order, simply add the designation W906A to the bearing code, i.e. 231/530KYMBW906AC3. Other tapered bore sizes that aren't standardized and some straight bore bearings can be supplied with the W906A modification as customer needs require.

For your nearest Timken sales representative,
call 1-800 223-1954.

www.timken.com/training

> Paper Industry Bearing Training

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