



Timken provides customers with value-added solutions that help to improve operating efficiency and lower maintenance costs. We offer a range of products, services and programs to help our customers solve their most challenging issues.

In addition to our full line of bearings, we offer a wide variety of services, including chock and roll repair, chock-bearing maintenance programs, bearing repair, reliability services and condition-monitoring systems.

For more information about the full line of Timken products and services, contact your Timken representative or visit us at www.timken.com.



TIMKEN

Where You Turn

Bearings • Steel •
Power Transmission Systems •
Precision Components • Seals •
Lubrication • Industrial Services •
Remanufacture and Repair

www.timken.com

Timken® and Where You Turn®
are registered trademarks of
The Timken Company.

© 2010 The Timken Company
Printed in U.S.A.
2.5M 07-10: 29 Order No. 10369

Full-Service Chock Rebuild and Manufacturing



- Save up to 50 percent over the cost of new chocks
- Designed to return chocks to original specifications
- Turn to Timken for manufacture and repair of chocks and components





To remain competitive, mills must maintain high productivity at the lowest cost possible. Implementing a sound maintenance program and finding ways to extend component life can help.

Timken produces new and remanufactured chocks for metal mills as well as other industrial applications. Through our dedicated repair facility, we remanufacture virtually any type of chock for hot or cold mills. We repair chocks from 10 to 70 inches (26 to 177 centimeters) in diameter, with weights up to 58,000 pounds (26,000 kilograms).

The Timken Process:

Rebuilding critical mechanical components like chocks and housings requires rigorous procedures so that parts are returned to original design specification. A detailed job sheet follows every order from pre-inspection to final shipment.

1 STRIPPING AND CLEANING

During this process, the chock is disassembled. The component parts are then thoroughly cleaned.

2 PRELIMINARY INSPECTION

During the preliminary inspection, Timken technicians visually inspect the chock and take dimensional measurements. We also mag-particle inspect and spectroanalyze to check for cracks and other forms of damage.

Based on the results of these inspections, we submit a scope of work with the estimated repair cost. We send you a scope of work, a preliminary inspection report and an estimate for approval.



3 PREPARATION FOR WELDING

After the quote is approved, we follow a routing schedule that will take the chock through the entire repair process. Initially, the chock goes through a thermal degrease cycle where it is heated before being allowed to still-air cool.

Once cool, all tapped bolt holes are drilled out and welded solid. We then repair all observed cracks.

4 WELDING

Prior to welding, we heat the chocks and keep them at a controlled heat throughout the welding process. We preheat at higher temperatures chocks made of higher carbon or alloy content, per our standard procedures manual.

The chock undergoes continuous welding until completion. When the cracks are repaired, or where weld filler build-up requires no finishing, welds are ground smooth. Utilizing a combination of automated and manual processes, our experts work to return the chock to original design specifications.





5 STRESS RELIEF

Precise time and temperature control in our annealing furnaces allows the steel to release any stresses that might have developed during the welding stage. We preheat the chocks and then put them in the annealing furnace where they are heated.

The chock then undergoes a controlled cooling process. If requested, we can provide the recorded time-temperature graphs of the stress relief to the customer.

6 FINISH MACHINING

At this point, all rough and built-up surfaces undergo the finish machining operation. All finish machining is within drawing tolerances and to the required finishes shown on your drawings.

Our machinists verify that all surfaces will be in the proper plane in relation to the bore centerline.

During finish machining, we refinish all tapped holes. We also open all lubrication holes and cross-porting holes, including those in the chock bore. Chocks are detailed complete to remove all burrs or sharp edges.



7 PREPARING FOR SHIPPING

We perform a final inspection for quality assurance, including dimensional and mag-particle checks for cracks, documenting all results. Finally, we plug or plastic cap all pipe-tapped holes. We also coat machined surfaces and paint non-machined surfaces to customer specifications. Final inspection reports will be made available to the customer. A final inspection report will be provided to the customer.



Our chock manufacturing and rebuild operations use advanced technological processes that help maximize mill productivity. We can rebuild damaged chocks to save you up to 50 percent compared to the cost of scrapping them and buying new.